CHAPTER – II

REVIEW OF LITERATURE

2.1 PROLOGUE

Information technology has profoundly changed the way we do business during the recent years. Business process reengineering (BPR) offers one method for managing this change while at the same time making it possible to achieve dramatic gains in business performance. The concept of e-banking is a delivery channel for banking services. Banks have used electronic channels for years to communicate and transact business with both domestic and international corporate customers. With the development of the Internet and the World Wide Web (WWW) in the latter half of the 1990s, banks are increasingly using electronic channels for receiving instructions and delivering their products and services to their customers. This form of banking is generally referred to as e-banking or Internet banking or modern banking, although the range of products and services provided by banks over the electronic channel vary widely in content, capability and sophistication. E-banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. The definition of e-banking varies amongst researches partially because electronic banking refers to several types of services through which bank customers can request information and carry out most retail banking services via computer, television or mobile phone (Daniel, 1999). Salehi et al., (2008) describes e-banking as an electronic connection between bank and customer in order to prepare, manage and control financial transactions.
Ratinder (2011) studied BPR in State Bank of Patiala. In India, the changing dynamics of Indian economy have brought many reforms in financial sectors especially in banking and insurance sector. To meet new competitive challenges due to technology induction in banks and change in the customers’ perspective forced organizations began to reconsider about their ways of doing business operations. Consolidations, amalgamations, pressures to reduce operating costs stressed banking community to adopt tools like BPR in order to bring strategic benefits to organizations. State Bank of Patiala (SBOP) has initiated BPR initiatives on the lines and under the umbrella of State Bank of India (SBI). The study attempts to determine whether there is an improvement in the competitive measures of cost management, customer service, quality and productivity of bank under study. In India, no such study on BPR in banking specifically with reference to State Bank of Patiala has been found so far. Hence the, present study contributes to the research in banking with regard to BPR.

Datta and Kundu (2011) discussed e-banking initiatives in Indian public sector banks (PSBs) which can be considered as a successful case of BPR implementation. An attempt has been made to study e-banking solutions adopted by Indian PSBs and to evaluate their performance in improving the level of customer satisfaction and the business performance of the PSBs. The study is based on secondary data on selected Indian public and private sector banks. The research shows that there is a growth in the usage of ATMs and in the volume of electronic funds transfer, which reflects that customers prefer electronic delivery channel more than traditional branch banking. The growth of productivity indicators of reengineered banking process is higher than that of the partially
computerized banks and banks following traditional mode of operation. This research work attempts to assert that information technology (IT) application has a prospective future in India.

Malarvizhi (2011) discussed about modern banking as a major invention that has changed the business of banking. Banks all over the world are reorienting their strategies towards new opportunities offered by modern banking. The recent trend shows that most ‘brick and mortar’ banks are shifting from a ‘product-centric’ model as they develop their new modern-banking capabilities. With this background, an attempt was made with the objectives, to present an overview of e-banking services offered by both public and private sector banks in Coimbatore city; to examine the socio-economic profile of e-banking user; to study the extent awareness and the usage of modern-banking services and to ascertain customer’s satisfaction about various modern-banking services. The data was collected with the help of a well-structured and pre-tested interview schedule, administered to 100 e-banking users from November 2008 to January 2009. The data collected was tabulated and analyzed by using simple percentage, Chi-square test and Garrett ranking technique. From the findings of the study, it was revealed that customers are satisfied with the services provided by the public sector banks than the private sector banks. The study suggests that, Customers have to be educated in the use of new technology. On the whole, e-banking increases operational efficiencies and reduces costs, besides giving a platform for offering valued added services to the customer, thereby fulfilling all the essential prerequisites for a flourishing banking industry. In a nutshell, to meet the emerging challenges banks
have to undertake a series of changes in original, structure, functions, practices and marketing to popularize e-banking.

Bhattacharjee (2011) discussed that due to adoption of privatization and globalization policies, the nationalized commercial banks of India come under pressure in their business. One of the reasons is the presence of private-banking companies in this endeavor. Maintaining a good relationship with the customers is the primary functions of the banking business and to increase the profitability of the banking unit, it is necessary to lay emphasis on the business, which is located in rural, and semi urban areas, in particular. So, the banking units have to satisfy the customer of semi urban areas along with the customers of urban and metropolitan cities. Keeping in mind the above fact, the present study has been undertaken to examine whether the customers of semi urban areas are satisfied with the banking services especially in the modern era. The study includes 60 customers of Barpeta district of Assam, a semi urban area who is the customer of different nationalized commercial banks of India. The data are classified and interpreted with the help of tabulation and graphs. The result shows that the customers are not satisfied with the banking services at all, and especially with the ATM services. Therefore, awareness programs should conducted periodically regarding the use of other e-technology devices to make smooth and prompt business transaction. Moreover, the top management of banking unit to ensure better quality services should necessarily adopt some remedial measures.

Elisha (2010) studied the impact of e-banking in Nigeria’s economy using Kaiser-Meyar-Olkin (KMO) approach and Barlett’s Test of Sphericity which support the use of factor analysis in order to extract independent variables.
associated with e-banking. The paper explores the major factors responsible for internet banking based on respondents’ perception on various e-banking applications. It also provides a framework of the factors which are taken to assess the e-banking perception. Due to emergence of global economy, e- business has increasingly become a necessary component of business strategy and a strong catalyst for economic development. E-banking has become popular because of its convenience and flexibility, and transaction related benefits like speed, efficiency, accessibility, etc. The results of this study show that e-banking serves several advantages to Nigerian banking sector. The customers (respondents) perception is that e-banking provides convenience and flexible advantages. It also provides transaction related benefits like easy transfer, speedy transaction, less cost and time saving. However, the study shows that the Nigerian customers have security, access, but not enough knowledge regarding e-banking services rendering by the banking sector in Nigeria. The study suggests that critical infrastructure like power and telecommunication should be provided and with high level of stability to ensure the application of e-banking in Nigeria. Also, the relative skewed nature of a bank’s location mostly in urban area should be addressed to ensure spread and accessibility by rural dwellers.

Uppal (2010) studied the extent of mobile-banking in Indian banking industry during 2000-2007. The study concludes that among all e-channels, ATM is the most effective while mobile-banking does not hold a strong position in public and old private sector but in new private sector banks and foreign banks m banking is good enough with nearly 50 percentage branches providing m-banking services. M-banking customers are also the highest in e-banks, which have
positive impact on net profits and business per employee of these banks. Among all, foreign banks are on the top position followed by new private sector banks in providing m-banking services and their efficiency is much higher as compared to other groups. The study also suggests some strategies to improve m-banking services.

Mahdi and Mehrdad (2010) used chi-square to determine the impact of e-banking in Iran and their findings from the views point of customers is that, e-banking cause higher advantages to Iranians. In other words, Iran banks provide services that bring satisfaction to customers with particular reference to the use of e-banking. In a similar study, Jayawardhena and Foley (2000) explored e-banking as a new delivery channel, arguing that e-banking may help to overcome the inherent disadvantages of traditional banks. It is very clear that if e-banking was conducted successfully, it wanted lead to a big volume of transaction. Further, Birch and Young (1997) argued that the internet may be exploited as a new delivery channel by the financial services industry to completely reorganize the structure of banks. It means that conducting e-banking in Iran leads to more usage of ATM. The authors came to the conclusion that active ATM in banking sectors will cause cash circulation decrease. The efficiency of banking sector will increase, if (a) client banking cost decreases (less cash fees to pay), (b) shop keeper / service provider cost will decrease, and (c) bank cost decreases (cash storage, less checking and processing costs). Costumers do not enough knowledge related to e banking. Accordingly, the null hypothesis is rejected. The authors believe that a lack of information on e-banking in Iran may cause less efficiency
of Iranian banks. To achieve high efficiency both bankers as well as Iranian legislators should introduce e-banking services at a mass level.

Mishra et al. (2010) studied the-banking industry of India, which is now progressing successfully with regard to customer base and performance. Service quality, customer satisfaction, customer retention, customer loyalty and delight are now the major challenges in gripping the-banking sector. Service quality plays a major role in getting customer satisfaction and creating brand loyalty in banking sector. Most of the literature reviews referred in the paper reveals that as compared to public sector, private sector bank customers’ level of satisfaction is comparatively more in India. Human element acts an important role in perceived service quality as well as satisfaction. Public sector banks need to redefine the customer service parameter in order to compete with the nationalized private sector banks both in profitability and corporate image. This study is just a small step in understanding the multi dimensional construct of service quality and its implications in competitive environment. This paper attempts to extract few dimensions of service quality as perceived by bank customers and compares five major dimensions already extracted in past literature.

Hugar and Vaz (2010) observed that India is on the threshold of a stark global competition, especially so for the-banking sector with the likelihood of the economy opening global banks soon. The Indian public sector banks, which have come face-to-face with competition just since last decade, are found wanting both with regard to performance as well as their customer orientation. This paper, first, evaluates the need for CRM implementation in the Indian public sector banks (PSBs) through the study of secondary as well as primary data. With the insight
received from the exercise, and the review of other implementation models found in CRM and related Information Technology literature, an optimum model for CRM implementation for Indian PSBs has been suggested in the second part.

Abdullah and Rozario (2009) studied the influence of service and product quality towards customer satisfaction. 149 respondents from one of the well-known hotel in Kuala Lumpur, Malaysia were selected as a sample. Psychometric testing is conducted to determine the reliability and validity of the questionnaire. The study finds positive significant relationship between place/ambience and service quality with customer satisfaction. Although, relationship between food quality and customer satisfaction is significant, it is in the negative direction. Future researchers can concentrate on determining attributes that influence customer satisfaction when cost/price is not a factor and reasons for place/ambience is currently becoming the leading factor in determining customer satisfaction.

Azouzi (2009) aimed to check if the current and prompt technological revolution altering the whole world has crucial impacts on the Tunisian banking sector. Based on empirical analysis, the study concludes that panoply of factors is affecting the customer’s attitude toward e-banking. For instance, age, gender and educational qualifications seem to be important, they split up the group into electronic banking adopters and traditional banking defenders, and so, they have significant influence on the customers’ adoption of e-banking. It also shows that despite the presidential incentives and in spite of being fully aware of the e-banking benefits, numerous respondents still prefer conventional banking. Fear of loss because of transaction errors or hackers plays a significant role in alienating
Tunisian customers from online banking. Finally, the study highlights the limitations and suggests some research perspectives.

Hua (2009) investigated the online-banking acceptance in China by conducting an experiment to investigate how users’ perception about online-banking is affected by the perceived ease of use of website and the privacy policy provided by the online-banking website. The 110 undergraduate students in Chinese University were involved in the investigation. The study finds that both perceived ease of use and privacy policy have a significant impact on user’s adoption of online banking. The study also investigates relative importance of perceived ease of use, privacy, and security. Perceived ease of use is of less importance than privacy and security. Security is the most important factor influencing the user’s adoption. The study also discusses the implications of these results and limitations.

Oghenerukeybe (2009) described a user study performed to investigate user’s perception of factors influencing the effective implementation of existing SI objectives and to evaluate the effectiveness of SI in banking web browsers using the Communication-Human Information Processing Model (C-HIP) model. This is a model proposed in the field of warning sciences. Findings reveal that SI is not very effective at alerting and shielding users from revealing sensitive information to spoofed sites. 27% participants did not understand the full meaning of the SI noticed in the-banking sites while the attention of some users was not captured, for they ignored the warnings completely. Even with the presence of SI, 18.3% participants still go ahead to submit sensitive information. These outcomes
may help the management of banks develop effective security strategies for the future of electronic banking in Nigeria.

Riquelme, Mekkaoui and Rios (2009) identified which customer service and online attributes predict overall satisfaction. They determine whether satisfied customers use more online-banking features than less satisfied customers and the characteristics of less satisfied customers. The sample of 185 customers is drawn from one of the main banks in Kuwait, the Middle East. Multiple regression and discriminant analysis are used to analyze the data. The findings suggest that satisfaction can be generated through improving courtesy, content, timeliness and product, services offered, and the majority of the customers in the sample are satisfied or very satisfied with the service and online systems attributes. The study explores that companies that offer a wide product portfolio and relevant website content accompanied by prompt and courteous response create satisfaction online.

Thulani, Tofara and Langton (2009) explored the extent of adoption and usage of internet banking by commercial banks in Zimbabwe. The study concludes that while the majority of the banks in Zimbabwe have adopted internet banking, usage levels have remained relatively low, as not many customers are using this innovation in Zimbabwe. Compatibility with existing legacy systems, cost of implementation and security concerns are the challenges faced by banks in the adoption of IB. The implications of the study are that banks in Zimbabwe should vigorously promote the usage of IB among customers while Government and the Reserve Bank of Zimbabwe should increase investments targeted at infrastructure development to encourage banks and individuals alike to adopt the innovation.
Ramalingam (2009) studied the usage pattern of credit card holders of SBI, ICICI and ABN banks of Kanchipuram town in Tamil Nadu. The study concludes that higher income group and married persons utilize the cards to the maximum mainly for impulse purchases and Citibank cards are more popular because of dominance in advertising. The study also reveals that Master and Visa cards are the leading card brands in India and suggests that the banks should improve overall functioning to provide satisfied credit card services.

Manoj and Pankaj (2009) point out that Customer Relationship Management (CRM) is no longer a new term but a reality for many organisations. Banking is a prime candidate for CRM transformation, as competition in this sector increases; an excellence in service becomes a critical success factor. The study discovers the factors that influence CRM in Indian Banking Sector and evaluates the current CRM implementation process. Respondents are from both private and public sector banks. Findings of this study have relevance for managers as these findings provide them with the current scenario of CRM. Further, managers learn to identify CRM-related factors that could contribute to CRM implementation.

Ahmed (2009) has stated in an article entitled that, ‘online-banking face to face interaction between bank and customer is not seen’. This creates huge service gap for banks to serve and maintain customer relations in online environment. The aim of this article is to investigate how banks use "Electronic Customer Relationship Management" tool to maintain their customer relations by using the internet and what benefits are derived by using this e-CRM tool and how successfully this tool is implemented in a bank. A qualitative study was conducted.
comprising two cases of banks, one from Sweden and another from Denmark, to get the inside of e-CRM practices. The findings indicate that banks use e-CRM mostly for mass customization, customer profiling, self-service, one-to-one interaction and automatic locks in the flow of financial data like security prices, which ultimately results in reduced cost of operation and increased customer loyalty and more profits. Similarly, staff training and customer feedback are considered as backbone for successful implementation of e-CRM strategy.

John (2009) conducted a research whose aim is to investigate the competitive and globalized banking era. Customers constitute one of the most important and valuable assets of a bank. A bank’s technological development is interpreted as the intensive use of information technology and facilitating massive collection of information and their direct and integral processing. The aim of this paper is to present the functions of Customer Relationship Management (CRM) functions, as applied in the banking sector, examined from a bank-marketing point of view. The study was carried out in 2007 with a convenient sample of three hundred respondents within the area of Athens, Greece through the distribution of structured questionnaire to bank customers. The main finding of the study reveals that a majority of customers are satisfied with their bank. Most bank customers believe that the use of new technologies help their communication with banks. They trust the bank employees for obtaining information on the existing banking products and services, while for new programs they prefer to choose alternative channels, such as the internet, phone services, brochures and press releases. The Greek banking market has adopted CRM solutions in recent years, as banks have realized the need to maintain their customer base and to
better use their resources in order to promote their products and services. In general, there is a positive attitude towards CRM.

Adeyemi and Aremu (2008) studied the impact of reengineering on organizational performance and to uncover how business process reengineering can help organizations to effect innovative and strategic changes in the organization. She concludes business process reengineering has become useful weapon for any corporate that organization that is seeking for improvement in its current organizational performance and intends to achieve cost leadership strategy in its operating industry and environment. It recommended that reengineering process remains an effective tool for organizations striving to operate as effectively and efficiently as possible. Organizations are required to reengineer their business processes in order to achieve breakthrough performance and long-term strategy for their growth and performance.

Singhal and Padhmanabhan (2008) examined the major factors responsible for internet banking based on customer perception on various internet applications. The study also tries to examine whether there is any relation with the demographic variable (e.g. gender) and respondents’ perception about internet banking; and, whether the user and non-user perception differs. The study employs both primary data as well as secondary data. Secondary data was collected from different published sources. Primary data was collected by structured survey. The analysis done by using factor analysis indicate that ‘utility request’, ‘security’, ‘utility transaction’, ‘ticket booking’ and ‘fund transfer’ are major factors. Out of total respondents, more than 50% agreed that internet
banking was convenient and flexible and it offers various transaction related benefits.

Poon and Tan (2008) examined the factors affecting the growth of e-banking in Malaysia from consumer perspective. A Likert scale questionnaire survey was applied. The results show that there are seven factors influencing the growth of e-banking convenience of usage (including internet acceptability and ease of use), cost of services, trust in bank (bank’s credibility), security concerns, awareness, reluctance of customer and government support. The results indicate that all the factors are significant with respect to the consumers’ willingness in using e-banking services. The questionnaire was administered to 200 respondents. It was one of the fastest rising services and was a powerful tool for improving customer satisfaction as well as increasing cross-selling opportunities. Hence, the author suggested, that banks should keep track of the ever-changing banking industry and the latest updates of internet technology to envisage future competition. Despite all the frenzy about e-banking, banks should neglect their branch networks, as face-to-face communication is still vital.

Hugar and Vaz (2008) evaluated the customer orientation in public sector banks 5 public sector, 3 new private sector and 3 foreign banks were selected. The study concludes that new private sector banks have more ATMs at the end of March 2006 followed by SBI group where 77.5% branches are fully computerized and 18.2% are partially computerized. Business per employee and profits per employee are higher in foreign banks where SBI has received more number of complaints followed by ICICI. The study also suggests adopting CRM by public sector banks to stand strong in competitive environment.
Kaleem and Ahmad (2008) aim to collect bank employees’ perceptions of the potential benefits and risks associated with electronic banking in Pakistan. The study shows that public bank employees who have professional degrees consider ‘minimizing transaction costs’ and ‘reduction in HR requirements’ as the most and the least important benefits of electronic banking respectively. Private bank employees having Masters or Bachelor degrees, and less than 10 years experience, perceive ‘time saving and minimizing inconvenience’ as the major benefits of electronic banking. Branch managers viewed ‘facilitates quick response’ as the most important benefit of electronic banking. Bankers in all segments consider ‘government access to data’ as the biggest risk associated with electronic banking. The empirical analysis suggests that bankers in Pakistan perceive electronic banking as tool for minimizing inconvenience, reducing transaction costs and saving time.

Migdadi (2008) identified that the quality of internet banking service encounter of the retail banks in Jordan, and to identify the quality dimensions that should be improved or sustained. The study evaluates the banks' web sites by using the web site quantitative evaluation method (QEM) in March 2008 for sixteen retail banks in Jordan. The results indicate that the banks in Jordan have significant positive quality of the internet banking service encounter. Further, the banks' web sites are rich in their content and significant in navigation, but the speed of home page download and web site accessibility should be developed in the future.

Munusamy and Fong (2008) examined the level of customer satisfaction with regard to IBBM’s training services. The study investigates the dimensions of
service quality that have significant effect on customer satisfaction in IBBM’s training services. The study finds that the dimensions of service quality and customer knowledge are positively correlated to customer satisfaction among IBBM’s corporate clients. However, only four factors, namely, competence, credibility, accessibility, and tangibles have significant effect on customer satisfaction. Therefore, the management of IBBM should focus efforts on upgrading areas of competence, credibility, accessibility and tangibles in order to continually increase customer satisfaction for continued profitability and success in training business.

Murali et al., (2008) evaluated consumer perception on quality of e-services and internet banking adoption in Malaysia. The data is collected from 150 retail-banking customers of the Klang Valley area. Results show that internet banking users and non-users have different expectations towards e-service quality preferences. Not all of the dimensions are preferable by the respondents. The study also discusses implications and recommendations to improve internet banking service quality in Malaysia.

Qureshi, Zafar and Khan (2008) evaluated the customer acceptance of online banking. The study concludes on the grounds majority of customers are accepting online-banking culture because of many favorable factors, usefulness, security and privacy which are the main perusing factors to accept online-banking system in Pakistan. The other factor is amount of information, which is provided to the customers through effectual means like advertisement via print, and electronic media about online-banking is useful in customer acceptance of online-banking in Pakistan. These factors have a strong and positive effect on customers
to accept online-banking system. Online-banking system is getting appreciation in different parts of the country due to which almost 50 percentage of the customers have shifted from traditional banking system to online-banking system.

Uppal (2008) analyzed the quality of e-banking services in the changing environment. The sample size of bank customers is 25. The data is collected through pre-tested and well-structured questionnaire in Ludhiana, Punjab in May 2006. The study concludes that the customers of e-banks are satisfied with different e-channels and their services in the spread of e-banking services. It also suggests some measures to make e-banking service more effective in the future. The present study is mainly concerned with the Indian banking industry in general and in particular those banks that are producing service through e-channels i.e. e-banks.

Hemalatha (2008), from the analysis of the initiation of financial deregulation and globalization, states that the arrival of new techno-savvy market players with customer centric business model, posed a great challenge to the Public Sector Banks (PSB) in India, who have been in banking business for more than a century. These banks quickly realized the need for technology based banking solutions as the only way to be in business and hence have started introducing technology-based solutions at a faster pace, without reforming their information security management at similar pace, thus exposing themselves to information system related security threats. In this paper, using case study research design and methods an investigative study conducted on the preparedness and the currently prevalent IT security management practices of PSBs is discussed. The potential vulnerabilities that exist in the system with specific
reference to data leaks, suggestions to safeguard these banks from such threats are presented.

Vanniarajan and Nathan (2008) compared the SERVPERF scale on various service quality factors and analyze their impact on the customer’s satisfaction. A systematic random sampling technique is adopted. The findings of the study identify the reliability, responsiveness, assurance, tangibles and empathy as the various service quality factors. The study shows that there are significant variations regarding the respective effects of these observed dimensions on satisfaction and that satisfaction leads to different types of behavioral intentions. Providing reliable-banking transaction with promises of reliability, responsiveness and assurance seem to be the most appealing service criterion to the target consumers.

Amin Hanudin (2007) studied the technology acceptance of internet banking among undergraduate students in Malaysia based on modified version of Technology Acceptance Model (TAM) and develops a technology acceptance model for internet banking. The results suggest that perceived usefulness (PU), perceived ease of use (PEOU) and perceived credibility (PC) have a significant relationship with behavioral intention. Further, these measures are good determinants for undergraduate acceptance for internet banking. Results also suggest that PU and PEOU have a significant relationship with computer self-efficacy (CSE). The study is useful in providing the understanding of the TAM among undergraduates from Malaysians’ perspective.

Eboli and Mazzulla (2007) proposed a tool for measuring customer satisfaction in public transport. Specifically, a structural equation model
formulated to explore the impact of the relationship between global customer satisfaction and service quality attributes. The public transport service analyzed is the bus service habitually used by the students of University of Calabria to reach the campus from the urban area of Cosenza (southern Italy). To calibrate the model, some data collected in a survey addressed to a sample of students is used. The proposed model can be useful both to transport agencies and planners to analyze the correlation between service quality attributes and identify the more convenient attributes for improving the supplied service.

Khan (2007) examined the service quality of education sector and internet banking by employing SERVQUAL. The data is collected through questionnaire from students, alumni, parents and recruiters of technical institutions for education quality and from internet banking customers for internet banking quality. The study employs factor analysis to differentiate the dimensions of service quality into different factors and concludes that all type customers are more concerned with academic factor to improve the education service quality while in the case of internet banking customers are satisfied with reliability of services but not very much satisfied with user friendliness dimensions. The results indicate that privacy/security and fulfillment do not contribute significantly towards the overall service quality and the males and females differ in their views towards service quality dimensions. The study also suggests some measures to improve service quality and explore future areas of further research.

Madhavankutty (2007) concluded that the-banking system in India has attained enough maturity and is ready to address prudential management practices as comprehensively as possible, which an integral part of policy is making.
Banking in India is poised to enter yet another phase of reforms once the door opens further to foreign players in 2009. This requires further improvement in technology management, human resource management and the ability to foresee rapid changes in the financial landscape and adopt quickly. At present, there is a huge hiatus between the top management earnings of state owned banks and private, as well as foreign banks. Banks have to lay down sound risk management strategies and internal capital adequacy assessment committees to ensure that they do not diverge from the prudential requirements.

Mishra and Jain (2007) studied various dimensions of customer satisfaction in nationalized and private sector banks. Two-stage factor analysis is computed to arrive at the dimensions of customer satisfaction. The study analyzes ten factors and five dimensions of customer satisfaction for nationalized and private sector banks respectively. The study concludes that satisfaction of the customers is an invaluable asset for the modern organizations, providing unmatched competitive edge. It helps in building long-term relationship as well as brand equity. The best approach to customer retention is to deliver high level of customer satisfaction that result in strong customer loyalty.

Bharathi (2007), in his article entitled, “Indian Bank: Banking on Growth” revealed that as the banking sector is on the threshold of exponential growth, consolidation, reforms and compliance remain the dominant factors for the Indian banks boardroom agenda. He mentioned that India is the second fastest growing economy in the world. Truly so, a robust banking system would be instrumental for enhancing the levels of activities of the economy. The author highlighted that due to liberalization, improving economic conditions, changing consumer
demographics and growing market opportunities; the Indian banking sector is growing at a steady pace and has been currently ranked among the most preferred banking destination in the world. This sector has emerged as a key facilitator for sustaining the growth momentum of Indian economy. According to the analyst 500 ranking based on net sales, SBI topped the league chart by maintaining the 6th position from the previous year. India’s top private sector bank, ICICI, has moved up three places from 12th to 9th position. Besides this, PNB and CANARA banks have climbed by one position each and occupied the 24th and 27th position respectively.

The author highlighted that the banks are gearing up for a number of challenges confronting the IBS to extend financial services to all sections of the society like financial inclusion, Capital Adequacy (Basel-I and Basel- II) Standard requirements, to effectively compete with foreign banks and Consolidation movement to achieve global competitiveness.

Seelanatha (2007) examined the changes in banking sector during 1989 – 2004 in terms of efficiency, productivity and market structure in Sri Lanka by employing DEA and Malmquist Productivity Index (MPI). The study shows negative trend in efficiency during the first half of the study period and a slight positive trend during the end of the second half and concludes that deregulation may have failed to improve efficiency. Technical efficiency in intermediation has positive relationships with profitability, operational risk, liquidity etc. and negative relationship with product quality and line of business. The study also concludes that the banks’ relative market power and technical efficiency have
significant influence on ROA and suggests some recommendations to improve the
efficiency.

Uppal and Kaur (2007) analyzed the efficiency of all the bank groups in
the post banking sector reforms era. The period of study is related to second post
banking sector reforms (1999-2000 to 2004-05). The study concludes that the
efficiency of all the bank groups has increased in the second post banking sector
reforms period but these-banking sector reforms are more beneficial for new
private sector banks and foreign banks. This study also suggests some measures
for the improvement of efficiency of Indian nationalized banks.

Agboola (2006) examined electronic payment systems and tele-banking
services in banks of Nigeria and data is collected through questionnaires from
bank workers during 2005. Findings reveal that connectivity via use of Local Area
Network (LAN) and wide area network has facilitated electronic transfer of funds.
35 banks have fully networked their system to ease communication of account
information. The use of Smart Cards, Point of Sales System and Computerized
Credit Ratings are not very popular as less than half of the studied banks have
fully adopted them. ATM, Electronic Home and Office-banking and Telephone-
banking are the least fully adopted technologies due to low level of economic
development, epileptic supply of power, high cost, fear of fraudulent practices and
lack of facilities necessary for their operation. The study concludes that tele-
banking is capable of broadening the customer relationship, retain customer
loyalty and enable banks to gain commanding height of market share if their
attendant problems are taken care of.
Ramudu and Rao (2006) examined while making a fundamental analysis of Indian banking industry, revealed that ever since the Indian economy opened its doors to MNCs, the Indian banking sector has been witnessing bizarre changes in terms of new products and services and shift competition as well. The sorts of IPOs that have been taking place in banking sector are amazing. In the light of these recent developments, a careful analysis of the profitability of Indian banking sector is inevitable.

The researchers have selected three major banks in India, viz. SBI, ICICI, and HDFC. While analyzing profitability of these banks they used different variables of profitability like OPM, NPM, ROE, EPS, PEB, DPS and DPR. They analyzed the data for a period of 5 years from 2001 to 2005. For analysis of data and interpreting the results, they used different statistical tools like Arithmetic Mean, Compounded Annual Growth Rate (CAGR) and one-way analysis of variance (ANOVA).

The study aims at examining the economic sustainability of SBI, ICICI and HDFC. The study concluded that SBI performed better in terms of Earning per Share and Payout Ratio, and its CAGR in most of the parameters was also higher than ICICI and HDFC. On the other hand, HDFC performed better in terms of OPM, NOM, ROE and PER. As far as the pay-out-ratio was concerned, ICICI paid the highest portion of its earnings despite the fact that its earning capacity was not better than that of other two banks. The CAGR in all the parameters of SBI was more than that of ICICI and HDFC.

Rathod and Kulkarni (2006) studied the emerging trends in banking sector with special reference to ING Vysya Bank. They divided their study on banking in
India into three phases, viz. pre-nationalization era (1948-68), post-nationalization era (1969-91) and LPG era (1991 onwards) characterized by high–tech banking, core banking, e-banking, internet banking, RTGS, product innovation, enhanced customer services, implementation of Basel-I and II, consolidation and universalization, adoption of risk management technique and marketing concept. They highlighted the fact that globalization has posed numerous challenges to the Indian banking system. Globalization has opportunities accompanied by threats (challenges) also. The global challenges in banking include enhancement of customer services, innovation in technology, improvements in risk management system and diversifying products. The banks in India should prepare themselves to face these challenges so that they become more competitive to act as global players.

The author undertook the case study of various products offered and other financial services of ING Vysya Bank in the changing financial needs of the customers. They concluded that the Indian banking has changed rapidly in the LPG era. It is facing challenges in the changing scenario by offering various products to the customers. Trends in banking have benefited the customers as well as the banks also. In the post-reform era, banks are competing among themselves to satisfy customer needs and want to prove their efficiency. The performance trends in Indian banking show that many banks are competent enough to meet the global challenges.

Tondon (2006) examined in his article, the impact of globalization on Indian banking. The management of financial sector has been oriented towards gradual balancing between efficiency and stability and the changing shares of
public and private ownership. The development of financial market has been largely healthy. The author highlighted the challenges in the-banking sector and the roadmap ahead. The-banking sector in India is getting redefined - it is faced with challenges and opportunities, especially beyond 2009 when they would be fully exposed to competition. The major challenges to which Indian banking sector are bracing themselves to be ready through adoption of newer technology, strengthening their capital base to become Basel-II compliant, reducing their NPA, bringing down operating costs, enhancing corporate governance, undertaking organization restructuring, and sharpening their customer-centric initiatives. The consolidation of Indian banks through mergers and acquisitions (M&A) route to effectively compete with large global banks may not be far off. The author revealed that implementation of Basel-II norms is posing new challenges and impaired assets continue to be a major area of concern. Banks are under increasing pressure to improve their profitability to meet the high operating costs and to store up the capital.

The author also made comparisons of Indian banking system with China and rest of the world. He compared the Bank of China with their Indian counterpart and rest of the world in terms of Size, Return on Assets and Non-Performing Assets (NPAs). The author believed that the structure of Indian banking system is expected to undergo a transformation, led by consolidation, convergence and technology. Indian banking sector is moving from large number of small banks to small number of large banks and committed towards enhancing banking competence and efficiency and getting integrated with global banking.
Finally, the author concluded that the growing international influence offers Indian banks three-fold benefit: the opportunity to service the cross border needs of Indian companies, serving the multinational for their local banking needs and create its footprints globally. Notwithstanding intense competition, the expansionary phase of the economy is expected to provide ample opportunities for the growth of the-banking industry. The growth trajectory, adherence to global best practices and risk management norms are likely to catapult the Indian banks into the global map, making them a force to reckon with. The journey is going to be long and arduous and success lies in focus flexibility and efficient execution.

Ahuja et al., (2006) studied the perceptions of 160 customers of Indore in respect of credit cards and especially their growth in India. The study concludes that ICICI in India is the largest card issuer with customer base of above 3 millions. But only 14% of Indians are using these cards and they are of 40 -50 years of age. There are about 2/3rd of males as compared to 1/3rd females and 89 % customers possessing higher education level whereas from occupational point of view, the majority of card holders are businessmen or servicemen and 71% are using to make payments like hotels bills, club bills etc. 36% use at least twice a month. The study concludes that banks should give equal attention to female customers also with special rebates and other benefits, and secondly ensures their safety from malpractices involved in its usage.

Akter and Ghosh (2006) examined the gap between expectations and perceptions of customers in Dhaka city of Bangladesh regarding banking services with a special focus on SERVQUAL model. The study concludes that in four dimensions like reliability, empathy, tangibility, assurance, the gap between
perceptions and expectations is significant except responsiveness. It is insignificant, as banks do not extend that level of services, which will satisfy the customers’ expectations. The study also suggests some recommendations to minimize this gap.

Mohan (2006) in their paper entitled “Reforms Productivity and Efficiency in Banking: The Indian Experience” observed that the objective of reforms in general is to accelerate the growth momentum of the economy, defined in terms of per capital income. Not surprisingly, therefore, performance of the-banking sector has repercussions across the length and breadth of the economy. Financial intermediation is essential to the promotion of both extensive and intensive growth. Thus, development of the financial system is essential to the generation of higher productivity and economic growth. The author highlighted how productivity in banking influences the rest of the economy. Recent research has provided robust evidence supporting the view that financial developments contribute economic growth. A basic indicator of financial development is the contribution of finance related activities to GDP and the process of financial deepening. The author believed that financial deepening is easier to measure. Analyzing productivity and efficiency changes in banking is more complex and needs to be viewed in relation to the changing contours of the-banking industry in India.

The transformation of the banking sector in India has to be viewed in the light of overall economic reforms process along with the rapid changes that have been taking place in the globalized environment within which banks operate. The authors also compared the banks of major Asian countries in terms of spread (net
interest margin), intermediation cost (operating expense), non-interest income and net profit from 1996 to 2004. The authors concluded that over the reform period more and more banks have begun to get listed on the stock exchange, which in its wake has led to greater market discipline as well as governance aspect. The pattern of efficiency and technological change witnessed in Indian banking can be viewed as consistent with expectations in an industry undergoing rapid change in response to the forces of deregulation. As deregulation gathers momentum, commercial banks would need to devise ways of augmenting their income and more importantly their fee-income so as to raise efficiency and productivity levels. In relation to change of economic environment (market prospects), a few pioneering banks might adjust quickly to seize the emerging opportunities, while others respond cautiously.

Al-Tamimi and Jabnoun (2006) compared the service quality and banks’ performance between National and Foreign Banks in the UAE i.e. Abu Dhabi, Dubai and Sharjah. The banks’ performance is analyzed and based on two indicators i.e. ROI and ROA for the time period from 1987 to 2000. The study concludes that there is no significant difference between national banks and foreign banks in overall service quality and also in dimensions of tangibles and empathy but in case of human skills there is a significant difference and foreign banks are found to be superior. The study also concludes that the relationship between service quality and banks’ performance can be in both directions. Either bank should improve service quality to improve their profitability or vice-versa.

Banknet India (2007) conducted an online survey on 316 ATM users during the month of August-September 2006. This survey was limited to India to
get an insight into users’ perceptions. It was concluded from the survey that the most use (56%) of ATM services is for bill payments and pre-paid mobile recharge where 64 percentage respondents feel comfortable with depositing cash/cheques through ATM but they have to wait in long queues and find no money left in the machine. Most of the respondents (81%) claimed to know about fee charged in the other bank ATMs and 20 percentage demands more privacy. Overall, ATMs are preferred over branch banking by 95% of respondents, which shows the increasing popularity of e-banking among the public.

Chopra (2006) highlighted the importance of IT and business re-engineering in achieving the objectives of banks. The paper concludes that PSBs and old private sector banks are slow in imbibing technology in their operations, whereas new private sector banks and foreign banks are early adopters of the technology and increasing the competition. The paper emphasizes that IT along with the business process re-engineering can provide ideal technology environment catering to the stated business objectives.

Consumer Voice (2006) conducted a survey to study the customer satisfaction level of 3100 serving banks, credit and debit cardholders, who are covered during the period September 2005 to November 2005. The survey is conducted in eight cities, where the maximum numbers of respondents come from SBI (17.10%) followed by ICICI Bank (8.80%) and the maximum surveyed customers belong to the age group of 26-34 years. The study reveals that Citibank has the most dissatisfied customers and most of the customers are shifting from public sector banks to private sector banks, mainly due to convenient availability and due to restricted functioning hours of public sector banks. Overall, only 6% of
the respondent’s use internet banking and most of them (16.3%) are registered with HSBC followed by ICICI Bank (12.6%). The study States that Standard Chartered Bank, Vijaya Bank and Syndicate Bank steal the march, but the little known United Western Bank performs impressively, and Citibank is the most over-rated bank.

Jham and Garg (2006) investigated factors that influence Indian customers to adopt ATMs by using factor analysis and focus on the influence of demographic and psychological variables of 296 customers of six selected banks such as SBI, PNB, ICICI, HDFC, ABN and IDBI. Most of the respondents are below the age of 35 years, the users with lesser experience face more problems in comparison to other, and they look for reliability of information. There are problems of dim vision of screen and they use ATMs maximum for withdrawals and rarely for deposits.

Kasman and Kasman (2006) studied the impact of technical change on the costs as well as environmental factors of banking firms operating in 11 Central European Countries by using Fourier-flexible cost function specification for the period 1995-2002. It is concluded that technical progress, on an average, reduced the banks’ total cost in five countries that ranges between 0.48% and 0.25%. The decline in technical change during 2000-02, indicates that the introduction of new technology has been fully utilized starting from 2000. The study again concludes with the association that larger banks are benefited significantly more from cost savings than smaller banks, and suggests the consolidation of smaller banks in order to get more benefits of cost reduction due to technical change.
Krishnaveni and Prabha (2006) recognized the need to develop long-term relationship with customers to prosper in competitive environment. Banks have realized the need to adopt a people oriented approach as compared to solely the profit-oriented approach towards improving customer service. In this study, a sample of 27 banks is selected at random from the list of 49 public and private sector banks. The study reveals that among the different internal service quality dimensions taken up for the study, offering the right information and facilities to the employees will improve internal service quality perceptions better than the other dimensions.

Kukkudi and Deene (2006) studied the impact of ATMs on customer satisfaction with special reference to SBH in Gulbarga district with sample size of 100 respondents. It concludes that ATMs are used mostly by the age group of 25 – 35 years comprising of more male members. 79% uses ATMs weekly where 85% are aware about the restrictions concerning ATMs usage and the numbers of ATMs are sufficient to meet current needs. It suggests popularizing ATMs among the maximum customers.

Kumar (2006) discussed various phases of computerization from automating the accounting process and back office function to the current phase of inter-bank connectivity through Real Time Gross Settlement (RTGS). The study emphasizes on some key IT issues like driving factors, IT budget, process re-engineering, outsourcing etc. It concludes that although IT is introduced in banking, yet when compared to the automation level adopted in some developed countries, it is imperative to further improve and stabilize the mechanization process in Indian banking industry.
Kumar and Arvind (2006) explained the importance, usage and implementation of e-purse in different countries including India. The study highlights some issues related to e-purse as well as its implementation in Indian context as compared to foreign countries. It concludes that e-purse is still at a nascent stage in India as compared to other e-facilities like credit/debit cards, ATMs etc. The study suggests making e-purse more user friendly like credit cards, providing wider base in terms of issuer, location and service providers to facilitate its usage at transportation services, educational institutions, shopping malls etc.

Kumar and Walia (2006) produce information on integrated approach adopted by Indian banks and discuss how Indian banks are aligning their services as per global requirement. The study visualizes that per transaction cost through various channels it is the least, i.e. Rs.0.10 per transaction through internet banking, while Rs.1.00 if transacted manually. The percentage of computerization in all Indian banks is only 24% up to 2003 and 52% branches of public and old private sector banks are computerized whereas 100% computerization is made in new private sector banks and foreign banks, mainly due to less spending. Only 0.5% of its revenue is spent on information technology by the public sector banks where new private sector banks spend 4-5% and foreign banks spend 9% on IT. Very few banks like SBI, Bank of Baroda, and Bank of India etc. are reorienting their strategies to become more focused. The study suggests that given the confidence and competence to public sector banks, Indian banking sector will surely touch new heights in the years to come.
Nair (2006) explored the future challenges of technology in banking and reveals that automation of 20 percentage branches covering 80% business followed by large banks conveniently ignores their rural branches. The study concludes that technology usage has improved the efficiency of operations in banks and reduced the cost as ATM transaction costs 25-30 percentage of a counter transaction and electronic system has made the-banking easy and more attractive but also risky because of ignorance of human touch. It also points out how IT poses a bright future in rural banking.

Phitkariwala (2006) studied the issues related to cheque truncation system to improve customer services in banks. As the number of cheques issued are continuously rising and the cost of banks and business for producing, issuing and maintaining cheque payment system is ever increasing, the cheque transaction system helps to handle this problem very easily. The study suggests that when it is be implemented to the whole country; it will certainly revolutionize the payment mechanism making a big leap towards the efforts of providing better technology based customer services.

Pepreya (2006) suggested that Internet-banking is very useful for prompt payments and provide various facilities to the customers for 24 hours, anywhere anytime. But some risks related to security are involved. Yet every customer wants a number of facilities round the clock. So Internet-banking should be cheap, best affordable and secure from the present risks.

Sakar (2006) studied the performance of 11 Turkish commercial banks listed in Istanbul Stock Exchange by using DEA approach. The study concludes that these are a strong correlation between input variables but it is weak between
input and output variables. The banks with less than 200 branches and 5000 employees have the best DEA variables returns to scale (VRS) scores and banks having less than 3% market shares have higher scores. Overall, the study concludes that efficiency score is 93% though outputs and scale efficiency scores differ widely.

Sakkthivel (2006) provided a specific focus to identify the impact of demographics in influencing Indian internet users in consuming different services online. The survey is conducted with 570 internet users of Bangalore. The study reveals that age and occupation have significant impact on consuming different categories of services online. The study also shows the significance of demographics influence on online consumption of services in the growing Indian market. There are enormous opportunities present for online marketers to tap the potential of rapidly increasingly online market space in India. The understanding and mapping of online consumers through demographics could enable their focus better.

Chetan (2006) studied the role of CRM in marketing of services in selected six banks, three from each public and private sector banks. The study concludes that 76% of the respondents are males and majority of them are government employees. Only 56% respondents feel employee’s behavior friendly towards them and 91% from the private sector banks are very happy with the way the bank employees treat them. Overall, it is concluded that the concept of CRM in the-banking sector has a long way to go in creating sustainable competitive advantage, which is being successfully implemented by most of the private sector banks but public sector banks are still in awaiting for something more.
Tiwari et al., (2006) examined the installation of mobile-banking and mobile financial services provided in Germany and other countries. 50 banks worldwide have been selected, half of them from Germany during May/June, 2005. From Indian banks, Bank of Punjab, HDFC, ICICI are dominating, providing mobile-financial services to their customers. The study explains different ways/methods to provide mobile-services that contain technical part with some case studies. The study concludes that mobile-banking applications are gaining popularity amongst banks and suggests mobile-banking to take the route of online banking.

Sarkar and Singh (2006) attempted to review some of the recent approaches, methodologies and models developed so far in linking BPR application perspectives to such emerging sectors of economy as industries, banking and cooperative enterprises with a view to enhance their organizational and competitive efficiency with low-cost solutions.

Uppal (2006) studied the impact of computerization on the performance of public and private sector banks. The study is based on primary and secondary data. The study concludes that the performance of fully computerized banks (HDFC, PNB, IDBI, ICICI and OBC) is much better than the partially computerized banks. In inter-bank group comparison, all bank groups show significant difference in profitability and productivity. Primary survey concludes that majority of the customers are satisfied with computerization of banking services while urban sector respondents show keen interest in computerization of banking business.
Leeladhar (2006) studied in his paper, “Indian Banking - The Challenges Ahead” revealed that in the recent years, there has been a considerable widening and deepening of the Indian financial system, of which banking is a significant component. The growing role of the financial sector in the allocation of resources has significant potential advantages for the efficiency with which our economy functions. Given the significance of the Indian banking system, one cannot afford to underplay the importance of a strong and resilient banking system. The enhanced role of the-banking sector in Indian economy, the increasing levels of deregulation and the increasing levels of competition have placed numerous demands on banks. Operating in this demanding environment has exposed banks to various challenges like customer service, branch banking, competition, technology, Basel-II implementations, improving risk management systems, implementation of new accounting standards, transparency and disclosures, supervision of financial conglomerates, know your customer (KYC) guidelines and corporate governance. The author concluded that it is crucial for the-banking industry to meet the increasingly complex savings and financial needs of the economy by offering a wider and flexible range of financial products tailored for all types of customers. With the increasing levels of globalization of the Indian banking industry, evolution of universal banks and bundling of financial services, competition in the-banking industry will intensify further. Strong capital positions and balance sheets place banks in a better position to deal with and absorb the economic shocks. Banks need to supplement this with sophisticated and robust risk management practices and the resolve to face competition without diluting the operating standards.
Usha and Richa (2005) studied the performance evaluation of PSBs in the post reform period on the basis of four performances. The study concludes that the performance of Corporation Bank in case of financial and operational parameters is higher where compared to other PSBs under study, but Indian Bank recorded low as scored poor in some parameters, of operational performance. On the other side Vijaya Bank scored well in profitability parameters but UCO Bank scored negative growth in case of all parameters of profitability except operating profits as percentage to working funds, and in case of productivity Union Bank of India ranked good but UCO bank rank lower. Overall, it concludes that Indian Banking System is becoming increasingly mature in terms of transformation of business process and the appetite for risk management.

Awamleh and Fernandes (2005) employed the Diniz (1998) model to evaluate websites of 19 foreign and 16 local banks in the United Arab Emirates. Data is collected from internet banking users in the United Arab Emirates in September 2004 and to examine the data, factor analysis and multiple regression analysis are conducted. Results suggest that although the-banking sector in the United Arab Emirates is a regional leader, internet banking in the United Arab Emirates is yet to be properly utilized as a real added value tool to improve customer relationship and to attain cost advantages. It reveals that convenience and security of internet banking transactions have a significant impact on satisfaction. The study also discusses implications of results and future research areas.

Chakrabarti and Chawla (2005) employed DEA approach to evaluate relative efficiency of Indian banks during 1990-2002. The study concludes that
efficiency in terms of ROA, operating profits, net interest margin, turnover per rupee of employee expense is higher and NPAs are lower in foreign banks. It also reveals that foreign banks are considerably more efficient on value basis than all other bank groups followed by Indian private sector banks but from quantity perspective, Indian private banks seem to be doing the best while foreign banks are the worst performers while the public sector banks are the laggards.

Goi (2005) studied the status of e-banking in Malaysia especially the challenges and opportunities. The study concluded that Malaysia, still has not reached a critical mass to ensure a sustained momentum, which can only be achieved if the nervousness of trading via internet is overcome. Technologies are already here, and it is the desire and willingness that needs to be converted into action. Malaysian banks will have to develop appropriate e-banking strategies to successfully compete both in the local and global marketplace. Proper understanding and planning is required to deploy the strategy or service effectively and safely.

Jui-Chu et al., (2005) studied the cost efficiency of 35 general commercial banks in Taiwan from 1995-2001 with the use of number of ATMs to evaluate the degree of electronization of banks and employ Stochastic Frontier Analysis (SFA). The study compares the banks’ operating efficiency before and after 1997 Asian Financial Crisis. The study concludes that simply increasing the number of ATMs as well as branches does not effectively improve the status of banks’ efficiency. A bank must also engage in other electronic business also. The banks’ cost efficiency index before 1997 Asian Financial Crises is lower than that after the crisis. The average operating performance of banks in Taiwan is going down.
Malhotra and Singh (2005) provided theoretical aspect of internet-banking and observe that internet-banking enables the banks to deliver services at a lower cost than any existing mode of delivery i.e. $0.01 as surveyed conducted in US and convenient for customers. The study reports that internet is not 100% secure as it entails risk of operational security, privacy, reputation, legal etc. The study also analyzes the current state of internet-banking in India and concludes that only 33 banks, representing 37% of total Indian commercial banks are providing transactional banking services in one form or the other where the share of new private sector banks is higher with all banks providing internet services and 4 banks are fully transactional where FBs represent only 15%. At the end it suggests that Indian banks should make effective policies to make it secure to achieve customer confidence, removing all types of risks with proper built-in-safeguard system to manage these risks.

Rao et al., (2005) studied e-Business models and real-life experiments that have been circling around the e-business models in some selected banks chosen, from public sector and private sector banks. The study concluded that most of the banks offering internet banking facility in India have high overall scores indicating high quality of their websites at all the functional and interactivity levels. ICICI Bank, State Bank of India and Bank of India now have mobile ATMs or vans that go along a particular route in a city and are stationed at strategic locations for a few hours every day. Almost all the internet banks have privacy statements and about half of these have a security statement. The model suggests that the performance of the-banking sector has improved considerably. It
is believed that a mathematical approach proposed in this paper will find extensive application in other sectors of the economy also.

Saha and Zhao (2005) analyzed the relationship between service quality and customer satisfaction in internet banking and five service quality dimensions are selected. A qualitative research approach is used to get a better understanding of this issue. A small quantitative survey has been also conducted to support the results obtained from the qualitative study. Nine service quality dimensions i.e. efficiency, reliability, responsiveness, fulfillment, privacy, communication, personalization, technology update and logistic/technical support are identified in this study. The quality performance of all the nine dimensions is shown to have a strong impact on customer satisfaction.

Singh and Kumar (2005) analyzed the efficiency of Indian banking sector from 1991 to 2003 in terms of technical and allocation efficiency with the use of Data Envelopment Analysis (DEA). The study concludes that relative efficiency is the highest in SBI group followed by nationalized banks and foreign banks whereas lower level of labor efficiency is associated with private sector banks. Technical efficiency is also better in public sector banks than the private sector banks and is comparable to foreign banks. Allocation efficiency is the highest in foreign banks. Overall, public sector banks are still better performers than the private sector banks and slightly lower than the foreign banks. Their better efficiency is primarily due to their bigger size, but still they have scope of further improvement by following appropriate pricing and product strategies and modern marketing practices.
Singla and Arora (2005) studied the comparative performance of Canara Bank and Indian Bank for 4 years from 2000-01 to 2003-04 with the help of various profitability and productivity ratios. The study reveals that both the banks have improved their financial performance during the study period and Canara Bank has an upper hand in growth of deposit, advances and average working funds. In the case of net NPAs to net advances ratio, it is decreasing in both the banks but more in Indian banks where it decreased from 10.60% in 2000-2001 to 2.71% in 2003-04, while it was 2.89% in Canara Bank in 2003-04. In case of productivity, it is rising in both the banks yet it is much higher in Canara Bank.

Prasuna (2004) analyzed the performance of Indian banking sector based on annual results of the financial year 2003-04 by using CAMEL model to assess capital adequacy, asset quality, management and earnings and liquidity of 65 banks whose annual results are available. The study concluded that overall performance is better in 2003-04 as compared to 2002-03 the total income of nationalized banks increased by 7.7%, private sector banks recorded 9.81% growth whereas foreign banks have grown by 9.41%. Similarly, the banks have improved their capital adequacy and sound asset quality with reduced NPAs. Liquidity position is observed as better in all the banks. It is concluded that the coming fiscal will prove to be a transition phase for Indian banks, as they will have to align their strategic focus on increasing interest rates.

Singh (2004) empirically studied the appraisal of customer services of PSBs in terms of level of customer service and satisfaction determined by brand, location and design, variety of services, rates and changes, systems etc. The study concludes that staff behavior is very polite and services are provided even in the
late hours. The study reveals that 62% respondents answer that immediate credit is not given for outstation cheques, 93% feel that they do not hold periodical meetings and services are not provided according to the given schedules. It concludes that services of private sector banks are better than the services of public sector banks.

Pathak (2003) compared the financial performance of private sector banks since 1994-95, explained that the private sector banks have delivered a new banking experience. Looking to the growing popularity of services provided by them, their public sector counterparts have started emulating them. He studied the performance of these banks in terms of financial parameters like deposits, advances, profits; return on assets and productivity. In this paper, the author made an attempt to probe into the financial operation of these institutions. A sample of 5 banks has been taken for financial analysis. The financial track record of all these banks was evaluated, and their financial performance was compared. The working of all the constituents was satisfactory but the HDFC Bank emerged as a top performer, followed closely by the ICICI Bank.

Casu and Malyneux (2003) evaluated the productive efficiency of European banks during 1993-1997 by using efficiency measures derived from Data Envelope Analysis (DEA). The study concludes that since the EU’s Single Market Programme, there has been a small improvement in bank efficiency level and there are marked differences in bank efficiency levels across EU countries, which are mainly because of country specific aspects of the-banking technology.

Costanzo et al. (2003) analyzed a case of telephone-banking as a strategy adopted by first and second movers of innovations taking place in UK financial
services industry. The study reveals that the successful innovators (First Direct) have adopted the logic of value innovation while the second movers have followed conventional logic. 90 percentage first direct customers are satisfied while in case of other banks, not more than 70% customers are satisfied. The study concludes that differentiation in financial market place is not achieved with the implementation of distribution channels or just technology but bringing to the market unprecedented value helps.

Das (2003) developed an objective method for ranking the Nationalized Banks. In this study, four aspects of banks’ performance, viz., business performance, efficiency, safety and soundness and labor productivity during 2000-01 and 1999-2000 for all 17 NBs have been analyzed. The study concludes that during 2000-01, overall, Corporation Bank has emerged as the topmost bank followed by Andhra Bank and OBC whereas in business performance, PNB is the topmost, followed by Bank of India and Union Bank of India. In terms of efficiency, Corporation Bank, in safety and soundness, Andhra Bank, and in labor productivity, Corporation Bank is the topmost and the listed banks ranked higher than the unlisted ones.

Dhillon et al. (2003) studied the impact of relationship marketing and trends of customer relationship in selected PSBs (SBI) and private sector banks (ICICI) in Chandigarh. The study concludes that ICICI bank is doing well in credibility, access, communication, understanding the customers, tangibles, reliability, responsiveness, competence and courtesy as their mean value is greater than that of SBI but from security point of view, SBI is better. The study suggests
that PSBs can also improve their image by relationship marketing and further this relationship marketing will be helpful in transforming the Indian banking system.

Shin and Donald (2002) investigated the BPR methods best suited for financial institutions. Based on a case study conducted in Chase Manhattan Bank, this research attempts to provide guidelines for BPR projects in financial institutions that will help them achieve dramatic performance gains. Chase BPR projects include four phases encompassing a wide scope of activities: energize, focus, invent, and launch. As seen in Chase BPR projects such as e-fund disbursement cards and service charge reengineering, these efforts resulted in new products and services in addition to producing dramatic increases in revenue and operating savings.

Mishra (2003) examined whether allocative efficiency of Indian banking system has improved after the introduction of financial sector reforms in the early 1990s. Efficiency for 23 states of India is also compared and finds improvement in overall allocative efficiency of majority states in the post reforms period. The study also concludes that improved efficiency is more marked for the service sector than for industry across the states as agriculture and industry sector witness a decline in allocative efficiency.

Olga (2003) concluded that development of e-banking in Estonia is expected to be good as 43 percentage of population use internet and 57% use internet for banking business mostly for domestic payments, pre-defined payments and account statement. On the basis of interviews with specialists responsible for e banks developments, the study also concludes that the number of internet banking transactions are increasing because of lesser cost i.e. 15 cents for
internet banking as compared to $1.07 for branch banking. Almost all the banks have invested in expanding IT systems and e-banking services as successful strategy for future development as they use price concessions, sale of bank services packages and non-banking services.

Financial Express (2003) stated that State Bank of India has appointed US-based consultant McKinsey & Co to undertake a business process re-engineering (BPR) exercise for the bank. McKinsey has also been asked to identify core-banking solutions for SBI. The re-engineering, the sources explained, was a much-required exercise and also overdue as the bank had already undertaken a mammoth Rs 600 core-plus information technology (IT) upgradation project, for which it has roped in Tata Consultancy Services (TCS).

Delvin (2002) claimed that the views of BPR subscribing to Hammer’s (1991) well-known definition are too limited because they suggest BPR is about making changes to process and that technology plays only an enabling role. This is inconsistent with the wider views exhibited in industry practice. Evidence for these claims is given here through analysis of published BPR cases of industry practice. He stated that process is always the primary focus of redesign, and structure has been reengineered, thus supporting our argument for a wider view of BPR. Therefore, to be conscious of the sources and the impact of our belief systems on industry practice. Reengineering may differ greatly depending on a company’s strategic direction.

Bisht et al., (2002) studied the impact of liberalization on the Indian banking sector. They established the fact that the present banking structure is the outcome of a process of expansion, re-organization and consolidation which have
been going on for many years and passed through three important phases - Pre-nationalization, Post-nationalization and Post-liberalization. With the advent of internet, one can distinctly perceive the arrival of fourth phase, which led to mass structural changes in banking by replacing brick and mortar branches with the electronic delivery channels to provide more options to the customers. Traditional banking has become a thing of the past; and technology has changed the rule of the game.

Bhinde et al. (2002) examined in their paper, took the critical overview of on-going banking sector reforms. They found that traditional face of banking has undergone a change from one of the more inter-mediator to that of provider of quick, cost effective, and efficient services. Indian banking sector is currently facing challenges of consolidation, re-capitalization, implementation of prudential norms, legal framework, corporate governance, Basel-II norms. Reforms process cannot be entirely painless. Along with achievements, there are pitfalls as well. So, regulators have to strike a balance between the two. There is constant challenge for the authorities, in identifying newer risks, achieving harmful incentives, and strengthening the-banking sector to keep pace with changes in environment and technology.

Elyasiani and Rezvanian (2002) contrasted the production technologies and cost characteristics of foreign owned banks (FOBs) and domestic owned banks (DOB) within a cost minimization context. In the study, labor, capital and borrowed funds are inputs and consumer loans, real estate loans, investment securities and other earning assets are output. The study concludes that cost structures are not identical in FOBs and DOBs, but scale and scope economy
measures, relative to own-group cost structure are not widely different and no clear pattern can be established between measures and ownership type. An increase in production of investment securities has no effect on average cost of production and hence there is no threat of dominance or shift in financial decision making from USA to outside world through cost channel.

Sureshchandar et al. (2002) adopted a different approach and view customer satisfaction as a multi-dimensional construct just as service quality, but argues that customer satisfaction should be operationalized along the same factors (and the corresponding items) on which service quality is operationalized. Based on this approach, the link between service quality and customer satisfaction has been investigated. The results indicate that the two constructs are indeed independent but are closely related, implying that an increase in one is likely to lead to an increase in another.

Bamber and Hughes (2001) employed ABC system in Buckeye National Bank, which has suffered falling profits despite a shift in customers. The study analyzes the cost through traditional and ABC system where cost is compared for paying checks, providing teller services and responding to customer account inquiries for retail and business customers separately. The study concludes that original cost shows that retail customers are cheap as costs $1.90 as compared to business customers ($51.30) which suggests an increase in retail customers base but ABC system witnesses that retail customers cost $11.15 while business customers cost $23.55 because retail customers use much more than 10 percentage of three activities. The study suggests employing ABC system as it tells the actual factor of cost to control.
Swamy (2001) analyzed the comparative performance of different bank groups in India over the period 1995 to 2000 and studies the impact of deregulation and competition in a liberalized economy. The study concludes that share of public sector banks in assets of all scheduled commercial banks is the highest but recorded a steady decline whereas new private sector banks have succeeded to enhance their share in assets witnessed deterioration in the profit performance. Although, public sector banks have succeeded in reducing cost and NPAs but still have high costs and NPAs as compared to new private sector and foreign banks, which reflect the favorable effect of technology adoption by private banks. Overall, profit performance of foreign banks is superior mainly due to greater share of income generated from fee-based activities.

Chowdhary and Pareek (2000) studied the impact of IT on service sector and focused on issues and challenges faced by the service sector. The study explores many key areas like mass customization of services, customer education etc. that help in improving the customers satisfaction level in services sector. In the study, it is said that every area of service sector is now providing online services such as online reservations for railway tickets, airway bookings, hotels, online admissions and other competitive tests etc. that have resulted in increased productivity, cost savings, higher employee satisfaction and increased level of customer services. The study concludes that IT leveraged services marketing is the order of the day and will remain in future too.

Heggade (2000) analyzed the range of customer services provided by the banks along with their impact on customer-banker relations. The study deals with Indian banks in general and banks of Dakshana Kenara District in particular.
bank customers, 50 bank managers, 50 bank officers and clerks selected through stratified sampling were surveyed through questionnaires and interviews. The study concludes that public sector banks, although improved, are far behind their counterparts mainly because they are operating mostly on labor-intensive basis rather than computerization of their operations and electronic system. The study also reveals that banking habits of people in this district are good and majority of the customers are satisfied with banks’ customer services. A modest degree of customers ’shifting between different public sector banks and different public and private sector banks has been observed. Employees in majority are satisfied with office space and communication facilities. The study also highlights some problems and suggests possible measures to solve the problems.

Mankidy (2000) analyzed that banks have moved away from traditional functions of acceptance of deposits and disbursal of loans to a variety of products suited to the changing needs of today’s customers. The paper reveals that computerization has been a slow process but bank employees and trade unions have slowly come to terms with the inevitability of the change. Banking industry, like most other industries the world over, is currently undergoing a major transformation process. Customer expectations have also simultaneously increased manifold with the result that banks clients. They demand a multitude of products and services from their banks. It is realized early enough that, to function effectively in an increasingly competitive environment, banks have to adopt newer ways of operations and in this context use of information technology will be imperative.
Sachdeva (2000) examined the global environment of e-commerce in different countries such as US, Europe, Singapore and India. The study analyzes the increase in user percentage of various e-channels of e-commerce like internet, computers, mobiles etc. from 1999 to 2003. It is concluded that the number of e-channel users is increasing. The study concludes that India is far behind in using e-commerce at global graph. India should start to implement e-commerce at large scale to gain the mastery of e-commerce. The main emphasis is on general view of e-commerce related aspects where analysis of implementation problems would be an added advantage.

Padamsai (2000) evaluated the profitability, productivity and efficiency of Indian five big public sector banks i.e. SBI, PNB, BOB, BOI, Canara Bank. These are big five banks among the Indian nationalized commercial banks and have places in world’s top 40 banks also. Six parameters such as deposits, advances, investments, profits, net NPAs and CAR of five banks have been analyzed separately for all the selected countries and the various parameters of productivity, profitability and efficiency are compared by naming it as B-Efficiency Model. The study concludes that productivity and profitability of five big banks has increased throughout the post-reforms period in terms of selected ratios of each parameter, but on account of efficiency, the performance of the top five banks is very dismissal as inefficiency has increased during the study period. It suggests that if the government sells its share in the profit making banks, it will be able to bail out the weak banks.

Sen (1997) highlighted the use of modern technology as being increasingly seen as an essential ingredient not only of good customer service, but also of good
housekeeping. He also stated that Public Sector Banks are far behind in the usage of modern technology but Foreign Banks and newly established Private Sector Banks are fairly advanced in the use of technology and their customers are enjoying number of additional benefits.

Doreswamy (1996) discussed about changes, which are happening in banking industry with the introduction of information technology. He also discussed threats as well as opportunities to the banks in future. He concluded that in the emerging competitive environment, customer expectations and the imperative need for toning up operational efficiency to lead to better bottom line, banks have hardly an alternative.

Chowdhury (1996) attempted to study selective problems, which arise due to implementation of information technology in banks such as problem of computerization, standardization of software, infrastructure and power supply. He stated that customer wanted banking facilities to be provided at his office/house and banks have realized that the traditional hours of operation within the branch do not satisfy customers. Therefore, banks have to start electronic delivery systems such as ATM, Tele Banking, Credit Cards, Debit Cards and Smart Cards.

Drucker (1995) analyzed the need for ABC system in banking sector. The study explores that the banks are identifying new applications like activity based pricing, integrating ABC and performance management. The study also highlights the need for process losing information, better ongoing measures of performance, and linkages from ABC foundation to other initiations, new challenges like regular updates, focus on data integrity, use of nonbanking concepts etc. in implementation of ABC system. Resurfacing of time based approach, awareness
and management of key capacity drivers; flexible models are suggested to close
the gaps. The study concludes that financial institutes can continue to invest in
technology and human resources that will lead to even more successful ABC
initiatives, and ultimately, sustained performance improvement of their
organizations.

Sanjay (1995) examined why the productivity of banks is low and whether
it is due to social measures or not. Comparative productivity and profitability of
public sector banks, nationalized banks and private sector banks are analyzed with
the help of various ratios through average, correlation, regression, and factor
analysis. It also studies the relative significance of adverse profitability. The study
concludes that the productivity of public sector banks show greater decline as
compared to that of private sector banks, which further reduces their profits.
While analyzing the various parameters of cost, it is concluded that lack of proper
cost control measures in public sector banks is a major factor adversely affecting
their profitability.

Garg (1994) compared the profitability of Indian scheduled commercial
banks with foreign banks for the period of 1970 to 1990. The study revealed that
Indian scheduled commercial banks have achieved remarkable progress in last
two decades under study, particularly in branch expansion in rural areas, deposits
mobilization and credit deployment to priority sector and small borrowers but
their profits have not kept pace with their growth and hence, their share in profits
have come down, whereas foreign banks with a much smaller geographical spread
and resources base, earn almost as much as by way of profits as 20 nationalized
banks put together. It is concluded that there is a lot of difference in the pattern of
advances and investments and even lending rates of Indian and foreign banks. The study suggests giving more autonomy to Indian commercial banks in their functioning.

Sharma (1993) studied the need of computerization in Indian banking system. The study reveals that computerization has become almost inevitable in the present changing environment to keep pace with the advanced technology, innovations etc. Computerization has made the banking activities easy, saving time, cheap and convenient with use of credit cards and ATMs. At the end, it concluded that computerization has accelerated the productivity and efficiency of banks. Even when there are some problems, we can convert the defects of such systems by expanding banking and computer education, and then modern computerized banking can be introduced to bring better quality of life with minimum possible expenditure.

Suresh (1986) studied the cost and profitability of Indian commercial banks from 1970 to 1982. The study provided a broad pattern of cost of different services in relation to total cost, the cost per unit of monetary output, cost per physical transaction, and cost per account for each of the services rendered by the banks. The comparison of services costs revealed some interesting variations mainly due to hike in export credit interest rate, fall in establishment expenditure etc. and concludes that monetary policy measures have significant impact on profitability of all the banks. Secondly, the study analyzes the profitability of bank groups and observes a declining trend. Foreign banks fare better than the Indian banks in terms of most profitability ratios. Their performance, particularly in 1977 are much better than various Indian bank groups. The study suggests that banks
should evolve a profit planning machinery so as to ensure efficient management of funds through financial produce and appropriate methods. The studies conclude that transformation is taking place and IT is playing vital role in bringing this transformation. No doubt, studies have been conducted in various aspects of transformation and its impact on banks performance in foreign countries, but in Indian context, not a single comprehensive study is conducted on this aspect. However, research papers and articles have been written on some aspects of information technology and transformation.

Hence, it is the need of the hour to explore the related aspects of transformation, its impact on Indian banks and further opportunities and challenges to better manage transformation with IT. The present study is devoted to how transformation is taking place in Indian banks, role of e-channels in banks’ efficiency and what the customers and banks employees observe about eservices of the banks. The study also analyses the service quality in partially and fully IT oriented banks. On the basis of empirical analysis, the study surveys the problems of banks in managing transformation through IT and suggests some possible measures to manage the problems in a better way. The study ends with the conclusion that e-banking is a challenging opportunity for both public and old private sector banks.

2.2 CHAPTER SUMMARY

The current research work is a conceptual study regarding the various issues and challenges faced by the banking industry and also explore the various opportunities by using information technology in managing transformation in banking industry. The study highlights the extent of awareness in society
regarding the use of BPR in banks. As the results of the study are favorable for BPR, public sector banks and old private sector banks should also rapidly adopt BPR for managing transformation, in order to will solve many problems of the public sector banks.