"Banks realized consumers still need that face-to-face interaction. Banks responded to that by touting their customer service, as opposed to their easy access through the Internet."

Melissa Gannon
Summary, conclusions, suggestions, and scope for further research are given in this chapter.

7.1 Introduction

Bank is a financial intermediary. It is a medium through which money flows. It channels the financial resources and helps in the development of business and industry. Commercial banks muster most of the money from the general public and cater to the short term needs of business and industry. In the process they render a number of services to the customers. In the past all these services were rendered manually by the banks. But now invention of computers and development of information technology have made possible to render some of these services through machines. Rendering services through machines is less costly to the banks and more convenient to the customers.

Banking has passed through different stages of development. Depending upon the stage of development different aspects of banking have gained currency at different times. Once, any discussion on banking used to revolve round Unit Banking vs. Branch Banking, Traditional Commercial Banking vs. Mixed Banking, and Social Control vs. Nationalisation etc. Now most of the discussion on banking revolves round computerisation, use of information technology, core banking solutions, online banking, anytime banking, etc.

The world has been swept by computers and information technology. This is the computer age, internet age; and information age. Information is now treated as an important resource. In fact it is the most important resource. Those who are in possession of information are the most powerful people. Under these circumstances competition and customers’ expectations increase. Information generation requires data collection,
storage, processing, manipulation, retrieval and presentation, which is possible only through electronic data processing machines.

Commercial banks in India have been doing the traditional banking business (i.e., accepting deposits and lending them to people) for a long time. Even now the traditional banking system accounts for more than 60 per cent of the banking operations in the rural and semi-urban areas in the country. Due to traditional nature of the business, employee resistance and the policy of protectionism, computers have made a slow entry into Indian banking industry. Liberalisation, Privatisation and Globalisation have opened up the frontiers to foreign banks. New generation private sector banks have made an entry with a variety of new products and services. As a result competition increased enormously. To withstand competition from the foreign and new private sector banks the public sector and old private sector commercial banks too have speeded up the process of computerisation, started offering new banking products and services, and started preferring cost effective alternative delivery channels.

Customer satisfaction is an important factor for retaining the existing customers and for attracting the new customers. Now the customers’ expectations have increased enormously. They expect a variety of products and services from banks round the clock. Hence the banks should be more dynamic and use more efficient and cost effective channels to provide services to the customers. Technology plays a key role in enabling the people to fulfil their potential and to deliver great results for the business. Information Technology is the real achievement of man’s intelligence. As banks look to replace legacy systems for reducing costs and to free up employees to bring new products and
services to market faster, they depend on new infrastructure based on information technology.

The liberalization brought in 1991 has swept the economic landscape of the country. Banking sector is no exception. The changes in banking in the last decade are unparalleled when compared to the entire period of banking history in India. Profitability, which remained a taboo for bankers for years since independence, has become a buzzword today. Our banks, modeled on British banks, which erected awesome building to scare the public in the gab of being a sentinel of public money, today go for boutique banking for to be as close to public as possible. Thus, competition fuelled by technology drives banking industry today.

It is becoming increasingly clear that "Technology" alone can make bankers sail through the competition. Computerization of branches, introduction of cash management products, remote access logins for corporates, mobile banking, internet banking and ATM banking are a few ways by which bankers use technology today to beat the competition. People do most of their financial business through computers from home. They can pay bills, buy stocks and maintain their budgets.

The global scene of banking and financing is changing very fast. The liberalization and globalization of Indian economy has challenged the entire banking system in India. Competition has increased from new breed of private sector banks, foreign banks, and non banking financial companies. Foreign Banks are using improved technology in their day-to-day operations. Customers' expectations have increased and started demanding quick, efficient and quality service. Need for achieving the international standards has arisen. Banks in India, with a view to competing with their
foreign counterparts, have decided to computerize their operations. "Improvement in Customer Service" has become the buzzword in the Indian Banking. Every effort, including computerization of banking operations, is being made today to improve customer service.

Demand side pressure due to increasing access to low cost electronic services, emergence of open standards for banking functionality, growing customer awareness and need for transparency, entry of global players into the fray, close integration of bank services with web-based E-commerce or even disintermediation of services through direct electronic payments (E-Cash), more convenient international transactions due to the fact that the Internet along with general deregulation trends eliminate geographic boundaries, move from one stop shopping to 'Banking Portfolio' i.e. unbundled product purchases etc. are some of the emerging challenges of banking.

Existing brick and mortar banks go out of business if they do not respond to the above said challenges. The Internet and its underlying technologies change and transform not just banking, but all aspects of finance and commerce. It represents much more than a new distribution opportunity. It will enable nimble players to leverage their brick and mortar presence to improve customer satisfaction and gain share. It will force lethargic players who are struck with legacy cost basis, out of business since they are unable to bring to play in the new context.

Reserve Bank of India had to constitute a number of committees for making recommendations on various aspects relating to banking. Of them, three committees, constituted under the chairmanship of Dr. C.Rangarajan, Sri W.F.Saraf and, Smt. K.S.Shere, have analyzed the topic of computerization in banking industry and suggested
certain changes which are to be introduced in various acts and provisions which govern banking industry. Till 1980s, Indian Banks have not made any substantial progress in modernizing their operations, particularly in the area of computer networking. The first attempt in this direction was made in the year 1983, when a Committee on Computerization and Mechanization in Banks headed by Dr. C.Rangarajan was set up. The Committee had recommended a three-tier approach to computerization in banks. The three tiers defined were

- Branches
- Regional Offices / Zonal Offices, and
- Head Office / Central Office.

Initially, emphasis was laid on the transactions processed at the branch level. Systems were introduced in the selected bank branches in urban and metropolitan areas. The progress of mechanization and computerization of branches was very slow. Hence, another committee on computerization in banks was constituted in September, 1988 under the Chairmanship of Dr. C.Rangarajan to take stock of the situation and to draw up a perspective plan for computerization of the Indian Banking Industry for the period 1990-1994. The committee had recommended for moving away from the present system of stand-alone type of computerization and laid great emphasis on setting up of intra/inter-branch and inter-bank connectivity. The committee also recommended for computerization of all operations at the branches and formulated certain guidelines.

Banks may partly or fully computerize/mechanize some/all operations at branches specified below:
(a) Branches located in Urban, Metropolitan centres and those falling within the urban agglomerations and peripheral territories which are treated as main centers for the purpose of HRA / CCA with average daily number of vouchers of 750 or more per day calculated on an average of 52 preceding weeks.

(b) Branches not covered by above said criterion but categorized as specialized branches carrying out special functions such as Industrial Finance / Corporate Banking, Foreign Exchange, Overseas Banking, Non-resident Indian Banking, Credit Card Transactions, Merchant Banking, Capital Market etc.

(c) Non-business branches / offices carrying out “Special Functions” such as clearing transactions, regional collections, drafts payable, central accounting etc.

(d) Offices which are established as spin off or extension counter of parent branches which are otherwise eligible branches.

Every Bank, every year, may partly or fully computerize / mechanize its branches.

The second committee on computerization in Banks set the tone in Indian Banking Industry, for computerization of operations at branches. Today, there are a number of banks, which have fully computerized their important branches covering about 80 to 85 per cent of their total business. This has resulted in improvement in the customer service to certain extent but at the same time has created certain problems like redeployment of staff and branch profitability on account of huge capital expenditure etc. However, banks are making efforts for solving these problems.

Not much research has been carried on computerization of banking industry in India. Few of the studies available on the subject have been reviewed in the first chapter.
The review has unraveled the need for conducting a systematic study on computerization of commercial banks in the country.

Electronics and information technologies are rapidly changing the banking industry. In the world of banking, the developments in IT had an enormous effect on flexible payment methods and more user-friendly banking services. The number of transactions and the amounts involved have increased enormously during the last decade. This study describes whether the customers are satisfied with the alternate delivery channels introduced by the Commercial Banks.

7.2 Objectives of the Study

Objectives of the study are:

a) To study the exposure of bank customers to technology-based delivery channels.

b) To study awareness among the customers, usage of different channels by the customers and channel preferences of the customers.

c) To study the problems faced by the customers in using the technology-based delivery channels.

d) To study the time taken for different transactions by the customers before and after computerization.

e) To study the perceptions of the bank employees on computerization of banks.

f) To suggest the measures to be taken by different parties for improving the utility, usage and cost effectiveness of technology-based delivery channels by solving the problems associated with their usage.
7.3 Sample and Data Collection

As it is not possible to cover either entire country or a state the study has been geographically limited to one district. Because of familiarity and convenience the researcher has purposefully selected Anantapur District in Andhra Pradesh. Hence all the bank customers and employees in Anantapur district of Andhra Pradesh form the universe. As it is neither possible nor necessary to survey all the customers and employees, a sample of 350 customers and 150 employees of different commercial banks operating in the district have been selected by using random sampling method.

The required primary data have been collected from the selected customers and employees through two different questionnaires/schedules consisting of structured and unstructured questions/statements. The questionnaires/schedules used in the survey have been given in Appendix A and B. In addition to that, periodical discussions were held with the executives of different banks. The relevant/required secondary data have been collected from publications of the Reserve Bank of India (RBI) and other research publications.

In this study the terms ‘computerisation’ and ‘technology’ have been used interchangeably, and little distinction has been maintained between the terms ‘computerisation’ and ‘information technology’ as they generally go together. The terms automation and mechanisation also have been used here and there to give similar meaning. In this study ‘customers’ means ‘bank customers’ and ‘employees’ means ‘bank employees’. For obvious reasons names of the banks and identity of the selected employees have been kept confidential.
7.4 Conclusions

Computerisation and information technology have swept the Globe. They have positive influence on bank management in general and management of delivery channels in particular. Electronic and net based facilities like ATMs, Net Banking, and Mobile Banking have given a whole new face to the banking business. Banks, allover the world, have realized the need for adapting themselves to the changes that are taking place in the modus operandi of delivering the services to the customers. Maintenance of customer loyalty forces the banks to constantly seek innovative ways and means to give convenience to customers. Foreign and new private sector banks have led the way for automation of financial services and other banks have followed. The top managements of the banks are viewing computerization and information technology as business enablers and as vital parts of strategic bank management.

As stated earlier 350 customers and 150 bank employees have been selected at random for the purpose of the study. The data have been collected from them through two different questionnaires/schedules. The data so collected have been analysed, using appropriate statistical measures and have been presented in the form of tables along with the analysis in chapters five and six. In addition to that the information obtained from the respondents through observation and oral interview methods also has been given in those chapters wherever relevant. On the basis of the analyses given in those chapters the following conclusions can be drawn.

(a) Quality of the services offered occupies the first place in a customer choosing the bank. It is followed by availability of technology-based delivery channels. In fact quality of the services offered also depends upon technology used by
the bank. Hence it can be said that now-a-days customers are technology conscious. Without the technology and technological upgradation it is difficult for the banks to survive.

(b) Selected customers of the banks mostly use savings bank and fixed deposits account products.

(c) Branch is the traditional delivery channel of a bank. Though alternative delivery channels are available many customers still prefer to visit the bank branch for receiving service. Different people visit the branch for different purposes. Even now a great majority of the customers visit the bank for making deposits and for withdrawing cash. Next most used delivery channel is ATM. Net banking and phone banking and mobile banking are not very much used. Hence there is lot scope for increase usage those channels in future.

(d) As many as 80.00 per cent of the respondents use alternate technology-based delivery channels and the remaining 20.00 per cent of the respondents do not use them. Majority of them are of the opinion that ATM is the best technology-based delivery channel and net banking is the next most popular technology-based delivery channel. They are followed by phone banking and mobile banking.

(e) For ‘range of the services’ and ‘efficiency of the services’ branch is the most preferred channel, whereas for comfort, speed and cost, ATM is preferred. From this it can be inferred that those banks who do not computerize and who do not set up ATMs do not have a bright future.
(f) A comparison of the time taken by the respondents, for carrying on different transactions like cash withdrawals, getting a cheque book, opening a new account, closing an account, raising over draft, and making a fixed deposit; decreased after the introduction of technology-based delivery channels when compared to the time taken before their introduction.

(g) Impact of technology is more on size of the bank than on the other aspects of the banks. It is followed by geographical reach, strategic relationships, customer perception, new business developments, business practices, product innovation, and brand equity in that order.

(h) Hindering factors in the use of technology in the order of intensity are:

Unfamiliarity with technology, lack of human interface, security concerns, lack of access to technology and lack of privacy.

(i) Customers are the great beneficiaries of computerization/use of IT in banks.

(j) Frequency of the banking transactions performed by the respondents differs. A majority of the respondents (51.71 per cent) transact bank business once, twice or trice in a month.

(k) The traditional delivery channel – branch – is more popular than the other delivery channels among the customers for opening an account (92.57%), for getting a draft/banker’s cheque (91.14%), for operating a demat account (87.43%), for taking a loan (73.43%), for paying utility bills (70%), for transferring funds (63.14%), for reconciling accounts/getting an account statement (59.43%), and for giving stop payment orders (54.86%). For balance enquiry ATM is more popular than the other delivery channels
(53.71%), and for trading in stocks internet banking appears to be more popular than the others (94%). Sometimes more than one channel may have to be used either simultaneously or at different stages of the transaction. For transacting certain kinds of businesses only certain delivery channels may have to be used. Most of the ‘core banking’ transactions are still carried on through branches instead of through technology-based delivery channels like ATM, Net Banking, Mobile Banking. Hence there is a lot of scope for diverting these customers to alternate technology-based banking delivery channels. Enlightening the customers through different means is necessary to increase the usage of other banking delivery channels.

(l) Three factors - lack of knowledge, convenience in counter service, and lack of opportunity to contact directly the bank staff in case of need - create a major hindrance for the development of ATM banking.

(m) Round the clock availability, convenience, time saving and better control over the account, are the advantages of ATM, in that order of priority, as per the perceptions of the customer-respondents. ATMs are available all the time; near their residences, offices and/or in public places. For operating an ATM not much technical knowledge is required and one need not have access to a computer like in the case of internet banking. Hence ATMs have become very popular in recent times. Though ATMs are increasingly set up in India the total number and patronage is not still comparable with some developed countries. Majority of the respondents believe that ATMs will replace traditional banking.
(n) ATM is useful in a variety of ways. In addition to traditional function of cash dispensing in predetermined denominations ATMs can render several other services. All the functions/services may not be available in all the ATMs. The level of knowledge of the customers regarding the services available from ATMs varies. Many of the respondents have rated 'poor' their knowledge relating to ATM services. Very few have rated their knowledge, regarding ATM services, either as good or excellent. From this it can be said that many customers do not have a thorough or complete knowledge of the services rendered by the bank through ATMs.

(o) An overwhelming majority of the respondents (93.71%) are not willing to deposit cash through ATMs. They think that it is better to deposit cash in the counter rather than through ATMs, a few have expressed that they do not know how to use the ATM for depositing cash and a few have complained that it takes more time for getting their accounts credited if they deposit cash through ATMs. Even the remaining respondents do not regularly use ATMs for depositing cash. That is they also use branch teller for depositing cash. The customers generally use bank teller for depositing large amounts. The survey results show that most of the customers deposit less than Rs.5,000 through the ATM. As the amount to be deposited increases the customers generally prefer to use the bank teller to deposit cash. Some people prefer to use ATM when they have to deposit cash after banking hours. All those who have used the ATM for depositing cash are comfortable with it. They do not have any
problems or suspicion over authenticity of the operations. They do not have any suspicion regarding the security of their money.

(p) As per the opinions expressed by a majority of the respondents, problems are also not uncommon with ATMs. The problems generally faced by the respondents are: ATMs running out of cash (26%), ATMs going out of order (24.29%), cash jams (18%), connectivity problem (9.14%) etc. In case of problem the respondents contact the toll free number (57.14%), contact the channel manager (22.86%), and complain in the branch concerned (20%).

(q) Most of the respondents use ATM cards at points of sales and are not prepared to pay any service charges.

(r) A great majority of the employee-respondents are of the opinion that the efficiency of operations in banks has increased because of networking, through ATMs, through the use of EDI, through improved MIS, and net banking.

(s) As per the perceptions of the respondents the greatest advantage of networking is resource sharing. It is followed by work sharing, enhanced speed, cost saving, reliability and accuracy in that order.

(t) Transmission of financial information and making electronic payments are the two most popular uses of EDI in banks. Advantages of EDI are improved efficiency (98%), reduction in paper work (96.67%), speeding up the processes (94.67%), improved performance (92%), reduction in errors (84%) and reduction in cost (83.33%).
(u) Applications of the MIS as perceived and preferred by the respondents are: analysis of financial statements (90%), profit planning (86%), assessment of working capital (83.33%), term loan appraisal (79.33%), credit rating (73.33%), and sickness analysis (67.33%).

(v) As per the opinions of the employee-respondents ATM site is generally chosen on the basis of convenience to the customers.

(w) As per the perceptions of the respondents positive impact of computerization is the highest on customer service. It is followed by competitive advantage, profitability, business development, product innovation and geographical reach in that order. On the other hand, it seems, computerization / technology has increased business risk and workload, and has no affect on the size of the bank.

(x) According to the perceptions of the employee-respondents computerization / technology has a positive impact on all the selected functional variables (i.e., earnings quality, efficiency, capital adequacy, asset quality, liquidity, and deployment of resources) of the banks.

(y) The data show that ‘net banking’, ‘ATMs’ and ‘phone banking’ have influenced banks much in rendering financial services (i.e., accepting fixed deposits, mutual funds, bonds, stocks, and Insurance.). Net banking has greater impact on ‘acceptance of fixed deposits’, ‘sale of bonds’, ‘sale of stocks’, and on ‘rendering insurance services’. ATMs and net banking too have considerable impact on raising mutual funds.
(z) The perceived objectives of computerization/information technology are (i) cost reduction, (ii) business development, (iii) profitability, (iv) better customer service, and (v) competitive strategy. The perceived objectives of computerization/information technology in different types of banks vary. Better customer service ranks first in public sector banks and second in the private sector and foreign banks. Profitability ranks first in private sector banks, second in public sector banks and third in foreign banks. Business development ranks first in foreign banks, third in public sector banks and fourth in private sector banks. Cost reduction stands fourth in public sector and foreign banks and last in private sector banks. Competitive strategy stands third in private sector banks and fifth in public sector and foreign banks. On the whole, the objective 'better customer service' tops the list. It is followed by 'profitability', 'business development', 'cost reduction' and 'competitive strategy' in that order.

(aa) Major constraints in computerization/in the use of information technology, as per the opinions of the respondents, in descending order are 'availability of financial resources', 'cost of technology', 'availability of skilled manpower', 'availability of technology', 'infrastructure', 'attitude of the employer' and 'top management policies'.

(bb) Impact of computerization on maintenance of records, online and batch processing, transfer of funds, MICR cheque processing, calculation of interest, processing of cheques, and cross border processing is high.
(cc) As per the perceptions of the employee respondents, the impact of computerization/information technology on “low value–high volume” transactions is higher than the impact on “high value–low volume” transactions.

(dd) Areas of application of computerization/information technology in retail banking, as perceived by the respondents, are: balance checking and updating (86.67%), credit clearance (80%), funds transfer (78.67%), payment of utility bills (61.33%) and stock trading (40%).

(ee) As per the opinions of the respondents, computerization/information technology has influenced ‘investment operations’ (70%), ‘money market operations’ (64%), and ‘maintenance of statutory resources’ (44.67%).

(ff) Majority of the selected employees feel that computerization/information technology has resulted in reduction of jobs in the banks and has resulted in better prospects and growth.

(gg) For employees to cope with the skill requirements of ever changing computer technology, training is given to them on a continuous basis. Nearly three-fourths (73.33 per cent) of the employee respondents have attended some training programme or the other in computer/information technology. Remaining 26.67 per cent of the employee respondents say that they have not attended any training programme in computers/information technology.

(hh) Half of the respondents say that training programmes are held once in a year, approximately one-third (31.33%) respondents say that training
programmes are held once in six months and the remaining (18.67%) respondents say that training programmes are held once in three months.

(ii) As per three-fourths of the respondents (75.33%) training is given in the use of new technology and as per the remaining one-fourth (24.67%) of the respondents training is given to create awareness about the new technology.

(jj) Slightly more than one-third (34.00%) of the respondents carry a 'very good' opinion on computerization, more than one-half (51.33%) of the respondents carry a 'good' opinion, 13.33 per cent of the respondents are 'satisfied' with computerization/IT, and a meager 0.67 per cent each of the respondents either couldn't say anything or feel 'unsatisfied'. Except one all the others carry a positive opinion about the use of computers/information technology in banks.

(kk) According to the selected employees benefits of computerization/information technology are: better management of workload (45.33%), greater efficiency (20.00%), reduced time and effort (15.33%), lesser job pressure (14.00%), greater job satisfaction (4.00%), and monetary benefits (1.33%). The first three benefits are in one way or the other interrelated. The result of them is increased efficiency and productivity. From this it is evident that computerization has resulted in increased efficiency/productivity.

(ll) As per the opinions of the respondents impact of computerization is 'lesser risk' (38%), 'job enrichment' (30.67%), 'increased responsibility' (22%), 'job enlargement' (8.67%), and 'increased complexity of processes' (0.67%).
As per the opinions of the respondents, security problems arise because of 'computer virus' (60.67%), 'tampering' (21.33%), 'fraud' (15.33%), 'impersonation' (14%), 'eavesdropping' (8.67%), and 'others' (6.67%).

All the respondents feel that IT security measures are necessary in banks. Not all but a majority (78 per cent) of the respondents feel that there is IT security system in their banks. IT security systems, now existing in their banks, are, 'data decipherment' (52.67%), 'firewalls' (49.33%), 'digital signatures' (45.33%) and 'cryptography' (38.67%). All or more than one type of security systems may be existing in the banks.

The security requirements of computerization/IT system in banks are: confidentiality of data (48%), integrity of data (38.67%), non repudiation (6.67%), anonymity of transactions (5.33%) and copyright protection (1.33%).

Implications of failure of Computer/IT system in banks may be summarized as: loss of customers (53.33%), loss of image/reputation (27.33%), financial loss (11.33%) and loss of property (8.00%).

7.5. Suggestions

On the basis of the above conclusions following suggestions can be given.

(a) Now-a-days customers are technology conscious. They prefer quality of service. Without computerization, without continuous upgradation of technology and without introduction of innovative technology-based delivery channels, it is very difficult for the banks to survive. Hence banks have to take all the care to see that latest technology is used, innovative technology-based delivery channels are introduced and quality of the services is improved.
(b) For transacting certain kinds of businesses only certain delivery channels may have to be used. Most of the 'core banking' transactions are still carried through branches instead of through technology-based delivery channels like ATM, Net Banking, and Mobile Banking. Hence there is a lot of scope for diverting these customers to alternate technology-based banking delivery channels. Enlightening the customers through different means is necessary to increase the usage of other banking delivery channels.

(c) Though a majority customers use technology-based delivery channels still there are a few (about 20 per cent), who do not use technology-based delivery channels. Banks have to see that all the customers make use of technology-based delivery channels by further popularizing them.

(d) Relatively ATM banking is of recent origin in India. Within a short period ATMs have become very popular. The survey results show that ATM banking is still in growth phase. As per the basic marketing principle, any product or service in growth phase should be supplemented with heavy publicity. ATMs too require publicity.

(e) India's population has now crossed the 1.3 billion mark, while the estimated number of ATMs in India is a little over 35,000 (by 2009) i.e., a little over 1 ATM per million population. ATM services in India are yet to find a firm ground. This low level of penetration offers a great potential for expansion of ATM services in India.

(f) Banks have to strive to popularize more the ATM banking, net banking, phone banking and mobile banking by removing their defects, by improving their
utility and by educating the customers in this regard. They are cheaper when compared to the traditional delivery channels i.e., branch and mail.

(g) Selected customers of the banks mostly use savings bank and fixed deposit account products. Hence banks should not neglect opening and operating those accounts. This helps in achieving the objective of financial inclusion.

(h) Familiarity with technology is associated with education and training. Nowadays computer education is imparted at the school level itself. So there is scope for improved familiarity with technology among the customers.

(i) Lack of human interface is another hindering factor for the use of technology-based delivery channels. For this purpose accessibility of the bank staff should be increased through dedicated telephone lines, automated voice systems and call centres.

(j) Security concerns create a feeling of insecurity in the minds of the customers and drive them away from the use of technology-based delivery channels. Hence banks have to take all the care to increase security, to improve privacy and to infuse confidence in the minds of customers. Customers should be educated on a continuous basis in this regard.

(k) Lack of knowledge, convenience in counter service, and ‘lack of opportunity to contact directly the bank staff in case of need’ create a major hindrance for the development of ATM banking. To overcome these problems banks should appoint persons who take care of all the ATM related issues. These caretakers should be trained in handling ATM related customer grievances.
(l) To reduce the rush at branches and to reduce the cost of rendering the services, the banks can introduce as many ATM functions as possible and educate the customers on the availability and usage of those services. Local languages along with English, may be used for the purpose. Also provide Grahak Mitra and Grahak Dost services on the ATMs.

(m) The banks can approach vendors of ATMs for incorporating more and more functionalities in ATMs and satisfy the customer needs.

(n) A large proportion of the customers are comfortable using ATMs for withdrawing cash. These customers should be educated so as to increase the usage of remaining ATM services.

(o) Customers are not comfortable in depositing money through ATMs due to security reasons and other problems like restrictions on denominations, number of notes etc. To increase this functionality banks should build additional security features in ATMs for depositing cash, should remove restrictions imposed at present on deposits through this channel and should popularize this functionality widely.

(p) All the issues, causing problems to the customers, are to be addressed by the banks or else the very purpose of ATM banking gets defeated. Confidence on the technology will be lost. To overcome these problems maintain an IP phone, which runs on ATM network, in every ATM centre, and run a call centre to receive these calls and take immediate action. Also send text messages to the mobiles of branch manager and cash replenishment teams.
when cash in the ATM is about to exhaust. Customer Relation Programmes can also help in finding out solutions to the problems faced by the customers.

(q) Customer feedback forms should be provided at the ATM centres and the customers should be asked to drop them in a 'complaints and suggestions' box, these forms should be looked at and necessary action should be taken. Once proper action is taken customer should be informed.

(r) Most of the respondents use their ATM cards at Points of Sales. So banks can freely give a point of sales machine to the stores and in turn stores open a current account in the same bank. This helps banks to improve their SME business portfolio and also cheap CASA deposits.

(s) Many of the employees are of the opinion that computerization may result in loss of jobs and job opportunities in banks. So banks should not retrench people.

(t) For employees to cope with the skill requirements of ever changing computer technology, training should be given to the staff on a continuous basis.

(u) Efficiency and productivity increase because of computerization. These benefits should not be ignored by the banks under any circumstances.

(v) Proper care should be taken to avoid fraud, misappropriation of funds etc., and to protect the computers from virus. Adequate IT security measures are to be taken in the banks.

(w) The bank branch staff must be motivated to actively participate in facilitating migration of customers to alternate delivery channels.
(x) The main hindrances for the growth of ATM banking are Security and Proximity. To improve the security, banks can go for biometric and iris recognition equipped ATMs and to do away with the problems related to proximity they should install as many ATMs as possible. With GOI removing the excise duty on ATMs, they can even procure ATM machines at cheaper rates.

(y) Regarding ATMs, banks should ensure that:

- machines are in working condition, do not run out of cash and do not show wrong balances in customers' accounts,
- printer is in working condition,
- good quality notes are used to avoid cash jams,
- ATMs are located at right places and are not used for distributing fake notes,
- proper lighting and adequate security is provided at the ATMs,
- offsite ATMs are not used as places to sit, chat, sleep, play cards and to do such untoward activities,
- help line numbers and a list of ATMs located nearby are displayed prominently at the ATM centres, and
- A board explaining how the ATM is to be operated is installed in the ATM booth,

(z) Each and every staff member should be made aware of the basics regarding functioning of the alternate delivery channels for to enable them to guide the customers in case of need.
(aa) Hardware and software problems should be attended to without any delays.

(bb) Excess staff should be redeployed and a fresh manpower planning must be taken up. The very purpose of computerization gets defeated if no such optimization steps are taken. Computerisation must be looked upon not as an ornamental piece but as a tool for business development and growth. In addition to this, a cost benefit analysis must be made at every stage. The surplus staff can be better utilized to solve the customer problems.

(cc) The banks should develop the strategy of issuing letters or notices to their customers whenever they introduce a new feature in the form of products and services so that the customers are regularly in touch with the current happenings, new products and services.

7.6 Concluding Remarks and Scope for Further Research

Banking is important and bank management is complicated. Use of technology makes the bank management much more complicated. Technology (here technology is used to include computerisation and information technology) widens the information base, facilitates innovation, increases the cost-effectiveness and makes the bank more competitive. On the other hand introduction of technology may adversely affect the profits and perceptions. Hence there is need for studying, on a continuous basis, the cost effectiveness of technology and perceptions of human resources. Human resources include not only employees but also customers. This study to some extent helps in understanding the extent of computerisation of banking industry in India, introduction of innovative products and alternate technology-based delivery channels by banks,
perceptions of the customers and employees on some of the aspects relating to use of technology, usefulness of technology and the resultant alternate technology-based delivery channels etc. This research is only beginning but not the end; it is only something but not everything. There is still lot of scope for probing into / conducting research in the areas of cost effectiveness and perceptions.