CHAPTER NO.VIII
MODERN TECHNOLOGY IN BANKING SECTOR FOR PROFITABLE, EFFICIENT & USEFUL OPERATIONS

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- Abbreviation used in chapter
- ATM :- Automated Teller Machine
- ETF :- Electronic Transfer of Funds
- K.C.C. Scheme :- Kissan Credit Cards Scheme
- UBCC:-Urban Business Credit Card
- IT:- Information Technology
- ISO :- International Organization for Standardization
- MICR cheques :- Magnetic Ink Character Recognition
- BACS :-Bankers Automated Clearing Services
- CHAPS:- Clearing House Automated Payment Systems
- CDs :- Cash Dispensers
- PCS :- Point-of-Sale
- SWIFT :- Society for Worldwide Inter Financial Telecommunications
- PIN :- Permanent identification number
- SWIFT :- Society of the Worldwide Interbank Financial Telecommunication
- HOPS:-Heart Online Processing System NRI
- NABARD:- National Bank for Agriculture and Rural development
- DLTC: District Level Technical Committee
- SLTC :- State Level Technical Committee
Introduction:-

Today, ‘Banking’ is being redefined as “Trading on information related to Money and Markets”. This definition has emanated from emergence and use of Information Technology (IT) in financial products and services not only in developed countries, but also in developing ones.

Thus, Global village has become a market place for promoting product and services requiring market research, market information and marketing approach in different predefined market segments. Timely information and marketing skills is felt need particularly by service institutions such as banks.

Banks all over the world have been using Information Technology from 1960 onwards, and today it is unconceivable to think of Banking without support from IT. In the light of globalization of economies and interdependence of countries on each other, there will be limitations to provide protection from the Government to the different industries – service or manufacturing. Although every government in the world will provide some sort of protection in national interest. In all walks of life, all industries will be expected to face competition from multi-nationals guided by International Standards (e.g. ISO 9000 Indian banks would be required to combat the competition with appropriate IT strategies.

Phase of introduction of Information Technology in our banks is over. It has to come to stay and it is going to decide not only efficiency of banking but its survival depending on how one manages Information Technology? Staff union agreement of October 1993 has paved a way to latest technology in every area and at all levels of management barring perhaps, rural and semi – urban branches. Information Technology has now being accepted as a strategic response and therefore we have to prepare ourselves for future challenges. In recent years, the global scene of banking and financial business is undergoing rapid transformation. Apart from deregulation and liberalization, information technology has been mainly responsible for bringing about this change. These changes are more pronounced in the field of banking and
finance, as the stake of manufacturers of Information Technology product is very high in this field. Old ways and methods of work are rapidly yielding ways to new technologies, for example: records ledgers etc. are now available only on machine readable form. The possibilities of controlling the new emerging environment are increasing – thanks to the availability of new knowledge and skill. Hence dependence on past experience an intuition is becoming somewhat irrelevant in the face of emerging complex and new situations in the organizations world over.

Banking is gradually changing its course. The use of computers and the fast developing information technology has started altering the destiny of banks. Previously, Indian Banks were eager to provide services by offering business through branch expansion, but this later gave rise to a great mass of information & how to interpret this mass of information into a meaningful analysis was another problem in which latest technology is a help.

**Definitions of Banking**

1) **Macleod:** “The essential business of a banker is to buy money and debts, by creating other debts. A banker is therefore, essentially a dealer in debts or credit”.

2) **Sir Jon Paget:** “No person or body corporate or otherwise, can be a banker who does not take deposit accounts, take current accounts, issue and pay cheques drawn upon himself and collect cheques, crossed and uncrossed for the customers.

3) **Prof Sayers:** “Banks are institutions whose debts usually referred to as ‘bank deposits are commonly accepted in final settlement of other people’s debts”.

A) **Recent Technology in Banking:-**

The growth of banking concept has been dramatic in recent times. While banks have been instrumental for various technological innovations, they have also been adapting the breakthrough to further their service by adding newer dimensions.

Apart from the extensive use of computers for accounting purposes and communications network, banks have introduced innovative concepts like Magnetic Ink Character Recognition (MICR) cheques, Bankers Automated Clearing Services (BACS), Clearing House Automated Payment Systems
(CHAPS), Cash Dispensers (CDs), Automated Teller Machines (ATMs) etc. which proffer instant operational convenience, including cash withdrawals. Point-of-Sale (PCS) terminals facilitate instant retail banking transactions, laser Cards have enhanced the utility of credit cards also the formation of Society for Worldwide Inter Financial Telecommunications (SWIFT) coordinates international banking transactions through Satellite communications.

(1) **Teller (Cashier) System:**

The teller system expedites receipts and payments and is time-saving. To attract customers in an age of competition, this can become an added attraction for the customers. Widening of markets, greater division of labour and rapid urbanization have been witnessed in India as necessary concomitants of economic growth, with these developments, banks have come to occupy an important role in business transaction. However banks have to observe certain procedures and take certain precaution to safeguard the interests of their customers from fraudulent practices. These procedures involve delays which are resented by customers as they are also very busy and for them too “time is money” to circumscribe this difficulty, banks invented the teller system.

At specified branches, some banks have introduced this teller system under which receipts of small sums and payments are expedited normally, when a cheque or a withdrawal slip is presented, it passes through a process of ledger checking, entries, signatures and ultimately the cashier makes the payment. Under this system one cashier who is designated as the teller is empowered to make payments of cheques etc. up to a certain limit, immediately. He does not consult the ledger or examine the specimen signature. In case of doubts, he may take these precautions but otherwise, receipts and payments are effected very promptly, but for this purpose a limit is prescribed. He is also authorized to effect encashment of travelers’ cheques, gift cheques and demand drafts.

In some banks, one set of specimen signatures and customers account is kept with the teller. Here the accounts are maintained on cards. Which the teller can quickly consult. He can also verify the specimen signature of the customer seeking withdrawal, and then he makes the payment. After this, the
withdrawal slip or cheques is sent to the ledger clerk who makes entries into the ledger.

(2) **Automatic Teller Machine (ATM):**

Automated Teller Machines (ATMs) have gained prominence as a delivery channel for banking transactions in India. Banks have been deploying ATMs to increase their reach. As at the end of December 2007, the number of ATMs deployed in India were 32,342. From first day of April 2009, entire ATM network is now available to customers from any bank for transactions for no fee at all, irrespective of the banks in which they have their accounts, Now Customers will not be levied any fee on cash withdrawals using ATM and debit cards issued by other banks. This will in turn increase usage of ATMs in India. More people are now moving towards using the automated teller machines (ATM) for their banking needs. According to a survey by Banknet India, 95% people now prefer this modern channel to traditional mode of banking. Almost 60% people use an ATM at least once a week. Increased ATM usage has also helped by the fact that customers have now the flexibility of using ATMs of other banks. ATMs are now seen to be more than mere cash dispensing machines.

The ATM market in India is not yet saturated. Though the concentration of ATMs is greater in metros, the demand is increasing for other cities and even rural areas. ATM's per million people is approximately 33 units which is very low. Experts forecast that the growth rate (CAGR) is expected to grow 18 percent up by 2013. Banks going into a self service model can have huge saving potential and may also increase the convenience for the customers.

Automatic Teller Machine began to be introduced in the period 1969 – 1984 all over the world. ATM literally means electronic cash dispensing machine which is open round the clock, and 365 days a year. The banks give an ATM card to the user and allot a separate and distinctive identification number for each customer. This is also known as permanent identification number (PIN) it may also allocate a limit of say Rs. 5000 to every customer. In case bank having inter connectivity among 9 branches or ATMs elsewhere, customers can operate ATM card anywhere. This service may or may not be free.
The buttons on the ATM screen help the customer to instruct the machine. Inserting the card in the machine operates the machine. Normally, a language selection screen appears next on the screen. The customer now selects his preferred language. After having done so, ATM now welcomes him and asks to type PIN. Now the account selection screen appears. After having selected this, transaction screen appears. Now the customer is required to enter an amount, which is in multiples of Rs. 100, ATM now dispenses the cash and informs the customer that the transaction is complete. ATM provides customers alternatives with self service, convenience, quicker and hassle free banking. This is very user friendly machine and obviously is in great demand. Global ATM service is seen as the next logical step in the future of ATM service.

(3) Electronic Transfer of Funds or EFT:-

Electronic began to appear the international banking scenario since 1969. We can see evolution of EFT in two stages from 1969 – 1984 and in later. In the first phase ATMs were introduced and private international fund transfer mechanism like SWIFTI, chemlink were introduced. Here the money is transmitted by messages.

The SWIFT is an abbreviation of the Society of the Worldwide Interbank Financial Telecommunication. It is a cooperative society registered in Brussels and is owned by 250 banks in Europe and North America. It operates in India also through selected banks. This system enables international member banks to transact money business between them quickly. Transmission of international coded transfer messages take place in literally seconds.

In later stages electronic tellers were introduced private international agencies like SWIFT also introduced SWIFT2 system. It also introduced concepts like home banking and telebanking.

The world is trying to move towards a cashless system. Banks in Japan have evolved an audio – response system, for its clients. It operates through a system called Heart Online Processing System (HOPS) which covers almost all major banking function like deposits, loans, foreign exchange etc. This has improved the customer service and efficiency. Inter – bank transactions in Japan are settled by a system called Zoning through data telecommunication.
Similar or more advanced developments were seen in France and Swiss Banks, supported by new financial services and high tech products.

Foreign Banks in India have an added advantage as they have access to foreign funds and latest technology.

In India many new private sector banks have also brought in the concept of ‘Anywhere Banking’. Here, the customer is not treated like branch customer but a bank customer. Thus a Delhi branch customer can operate his account in Mumbai without any problem as the data base is centrally maintained.

(4) Computerized External Business:-

The rapid growth of international banking during the eighties and nineties is due to a number of factors such as growth of world – trade, emergence of petro – dollars, greater use of Euro – currency deposits and above all globalization of economies. The growing number NRIs abroad have also contributed to this growth. All these global effects are being percolated at local levels where UCBs work.

Recently it is observed that UCB branches are facing many problems both operational and basic. Operational problems are those which arise in operations with customers in different situations. Basic problems – include capital inadequacy, Lack of innovations etc. one of the operational problems is loss of customers due to inefficient contacts. Thus it is shown by declining profitability of business. This difficulty is experienced mainly in areas where the business is on growing scale. The Banking Business is threatened by the revolution in banking brought about by electronic equipment’s and innovations introduced by large multinational local banks. The challenge posed by rapid mechanization and other innovations in banking practices is so great that UCBs will have to be on their toes to stand in competitions with the commercial banks. For greater efficiency and better cost effectiveness, the UCBs will have to mechanize their branches. Again, they will have to review their position because commercial banks are competing among themselves, in areas where business and salary class population prevails; Efforts will have to be made by UCBs to attract the local customers. Again in the interest of rationalization, some winding up will also be needed. i.e. non viable branches
or UCBs will have to be closed down. Similarly coordination rather than competition will have to be encouraged among local branches of Indian banks.

The problem of inadequacy of capital for investing by UCBs in computer networking is also needs serious consideration. Recently, UCBs have started long term funding in by augmenting deposits collected from the many thousands of customers. Thus it raises cost and therefore use of computerized business is going to be cost effective. In view of computerized and highly mechanized banking business in urban areas, the UCBs will have to follow a strategy which needs to be well thought – out and properly implemented such a strategy could include.

i) UCBs will have to rationalize and consolidate their branch network by closing down non – viable branches and more importantly by exploring new areas of expansion.

ii) UCBs can work out a coordination plan of working together their financial and managerial resources by using computer network with great advantage.

iii) Development of social expertise and management capabilities will have to be undertaken. This is done through they can introduce marketing innovations and provide a number of innovative customer services.

5) Bank Credit Cards:-

In the process of evolution of money after proper currency, several forms of bank money or credit money come into existence. The quality of these forms of money is convenience in carrying and effecting the transaction. In this process of evolution which incidentally is a continuous process one latest form to enter into the Indian financial system is the credit card. It is an instrument devised by a bank to provide credit facilities to its holder for purchasing goods and services. Sometimes it is referred to as “plastic money” because it is made of plastic which is durable and convenient to carry. A bank credit card is issued by a bank to persons whose incomes are assured and above a certain limit. These cards are acceptable to business establishment whose names notified by the bank to the card holder. Thus a credit cards facility is a tripartite arrangement involving (a) the Issuing Bank (b) The Card Holder and (c) The Member Establishments.
6) **Kissan Credit Cards Scheme (K.C.C. Scheme):**

Union Finance Minister in his budget speech for the year 1998 – 99 had desired that the banks should issue Kissan Credit Cards to the farmers on the basis of their land holdings, so that the farmers may use it for ready purchase of agricultural inputs such as seeds, fertilizers, pesticides etc. and draw cash for their production needs. NABARD was asked to formulate a model scheme in this regard for uniform adoption by banks.

Accordingly, NABARD has since formulated a model Kissan Credit Card Scheme in consultation with major banks. The scheme has been recommended to banks for adoption. The Kisan card is useful to those UCBs which are dealing in rural areas and endeavor to finance the farmers. On line with this card, the UCB may introduce the Urban Business Credit Card for the use of urban customers of UCBs.

**The Salient Features of the Urban Business Credit Card (UBCC)**

(i) UBCC Scheme aims at adequate and timely support. From the Banking system to the UCB customers for their consumption or business needs including purchase of inputs in a flexible and cost effective manner.

(ii) The scheme would primarily later to the short term requirements of the customers. Under the scheme banks may provide the “UBCC” to customers who are eligible for repayment of credit of Rs. 5000/- and above. The credit extended under the “UBCC” scheme would be in the nature of a revolving cash credit and provide for any number of withdrawals of repayments within the limit.

(iii) While fixing the limit, the bank may take into account the entire credit requirements of the customer for the full year including the credit requirements of the businessmen for the ancillary activities related to business such as maintenance of industrial machinery, implements, electricity charges etc.

(iv) The UCBB card should normally be valid for 3 years subject to an annual review. The credit limit under the card will be fixed on the basis of the operational property holding service or business type and scales of finance as recommended by the district level, technical committee (DLTC)/State Level Technical Committee (SLTC).

(v) Banks may apply the same rates of interests as are applicable to other loans and the security / margin norms etc. It should be in conformity with the instructions issued by RBI and NABARD from time to time.

(vi) The UBCC facility being in the nature of cash credit accommodation for consumption or business purpose, the prudential norms as applicable to such facilities would apply to K.C.C. accounts.
M.I.C.R. Cheques:–
A new type of cheques devised for spreading up the clearing process, is the Magnetic Ink Character Recognition (MICR) cheques. Actually, it is not a different type of cheque in the sense that any of the three types viz., Bearer Cheque, Order Cheque and Crossed Cheque; can be made over to MICR types being a new variety of cheque. It is necessary to take a note of this types of cheque.

The Reserve Bank of India has introduced mechanized cheques processing system using MICR technology initially in certain settled cities. The cheques are processed at high speed on machines under this system. Banks issue cheques drafts and other instruments in MICR format using a special quality of paper and given format and layout of printing on MICR cheques the bottom line is code line containing information printed in Magnetic Ink is required for mechanical processing. The code line contains the information as follows:

i) First six numbers suggest the cheques numbers.
ii) The next three numbers are the city code numbers.
iii) The last three numbers indicate the branch code numbers.

After some space there is a number indicative of whether the transaction is for a saving or current account. MICR cheques are not to be folded. Signature rubber stamp etc. are written /affixed above the code line. These cheques do not have counter foils. They provided for record slip at the end instead of counter foils.

Recent Trends in Indian Banking:–
UCBs extend financial assistance or the credit facilities in many ways. Although all credit facilities are basically loan facilities. Different methods of financing are adopted depending upon the period of finance, purpose of finance, quantum of balance etc. Similarly, the repayment of loan is also arranged in specific way to suit customers / borrowers requirement.

UCBs developed enormously after independence, particularly after nationalization of banks there has been a multi-dimensional development. Nationalization of banks provided an impetus to the banking development and the banks started functioning with social responsibility. The UCBs have also been functioning on line with commercial bank/nationalized banks.
1. Type of Financing:-

Banks usually lend for short term it is because their source of funds for financing comes from deposits which are usually for a maximum period of 3 to 5 years, however, presently banks are encouraged to provide finance for long term projects like infrastructure industry. Hence when a bank, say lend for 10 years against a 4 years deposits, there is a problem of continuing the loan after 4 years, it is possible that the bank will continue to get deposits every year. Yet, the fact today is a 10 year loan has been made based on a 4 year deposit which is risky affair in such a situation, few banks will come together and under an agreement each one of them will take up the loan portfolio in turn. For a fixed period of time till the loan matures.

(i) Revolving Credit Facilities:
Under a revolving credit facilities a bank fixes up a credit limit to a borrower for certain period, say Rs. 10 crore for 3 years period. The borrower will get a maximum credit facility of Rs.10 crore at any point of time once the loan is repaid. The borrowers facility automatically get renewed up Rs. 10 crore during the 3 years period any number of times in other words, the credit facility revolves around with a maximum of Rs.10 crore outstanding at any point of time over a 3 year period in principle, under a revolving facility there is no formal repayment period. The borrower is allowed to draw, repay and again draw throughout the loan period.

(ii) Ever greening of Loan:
Sometimes a bank provides a second finance facility to a borrower to help him to pay back the original loan. Why should a bank do it when the banks exposure to the customer remains same & it is because when a borrower defaults on payment of interest principal to the bank as per prudential norms, the loan account will become an NPA and the bank has to make provisions? To avoid such an unpleasant situation and to show a rosy picture of banks loan portfolio. Sometimes bank do resort to ever greening. RBI does not permit these types of replacement credit. But the UCBs are managing the same, especially in the interest of Board members.

(iii) Syndicated Loan:
It is loan facility provided to a single borrower by a group of banks. As the loan is extended by a group of lenders. The size of syndicated loan is normally large and a single tender / banker may not have been in a position to extend such a facility. It could also be that a single lender may not like to have such a large exposure to a single borrower. Syndicated loans are arranged to finance projects needing large some of money where the credit risk is also high. These loans are for financing medium to long term requirements. Since, the bankers, involved in providing such loan facility are many; usually coordination work is done by a lead manager. Who act as an intermediary between the tenders and the borrower? One interesting point in syndicated loan arrangement is that the borrower indicates his requirements of loan some and the prospective lenders have to offer as to what extent they are prepared to extend the facility.

(iv) **Bridge Loan:**
Bridge loan is a short term temporary loan extended by financial institutions to help the borrower to meet the immediate expenditure pending disposal of requests for long term funds or regular loans. For example, when a borrower’s application for project finance is pending for final sanction the bank may extend a bridge loan to the borrower to meet urgent expenses. Usually, a bridge loan gets repaid out of the main loan when sanctioned. Bridge loan is relatively risky for the bankers when repayment depends upon an external factor not under the control of lenders! The influential board members frequently endeavor for such loans.

(v) **Consortium finance:**
Under consortium finance a large credit facility may be jointly arranged by a combination of several banks. Usually one of the banks in the group will act as the leader for the credit. The consortium leader will extended a larger share of the credit compared to other banks in consortium. The word consortium here refers to "A combination of many banks who have agreed to extend the credit facility". The share of credit agreed to be extended will be decided by the banks in the beginning. The borrower needs to deal separately with the all banks in
the group. Usually they deal with the consortium leader who takes care of other banks credit. In India, till two years back as per RBI guidelines, large credit facility say Rs. 10 crore and above, should be granted only under consortium arrangement. The reason for such a condition is that a single bank should not have large credit exposure to a single borrower. Many housing projects in Pune are financed by the UCBs under consortium finance.

(vi) Guarantee Services / Non Fund based business:
Non fund based business is not credit facility or a financial assistance. However the banks make sizeable income out of non fund based business mainly from guarantee services. This has explained below -

Banks offer 'Guarantee services" to valued customers. Guarantee service refers to a legal undertaking by the bank to pay certain some of money to a third party or a creditor in the event of the banks client / customer fails to fulfill his part of obligation. The obligation may be to pay some money or to perform certain duties like a contract job. The Guarantees on behalf of their customers in favour of Government’ Department like customs authority saying if the customer does not perform under a contract or does not pay the required sum the bank will pay the money or damages.

(vii) Venture Capital:
A ‘Venture’ is a new risky business. 'Venture Capital' therefore refers to providing start up capital to new and risky business operations. Every new business operations are risky. Then what distinguishes venture capital business operations from other business operations? In Venture Capital business:–

a) The promoters may be new technocrats, who have not proved their business acumen or expertise so far.

b) The idea of new product is yet to be tested in the market. Hence, the venture capitalist (one who provides finance for venture capital business) takes a bigger risk in financing the production of a new product by person who has not proven their business capabilities so far. It can be said that venture capital is the equity investment in young private company. The venture capitalist maybe financial institutions
banks, investment companies or even wealthy individuals. The venture capitalist is prepared to back untried business operations in exchange for a share of future expected profits. The venture capitalists usually provide capital in stages depending upon growth of business operations and not at one stroke. If the business succeed the venture capitalist making big profit from a share in profit and form valve appreciation of investment In Equity Shares.

In India Venture capital business idea caught the minds of financial institutions only in 1990s. The Government allows banks tax concession for venture capital business operations. However, this business started only in small scale in India so far. The reason mainly is the reluctance of banks to provide funds for 'infested and doubtful business operations. However, new software engineers have started in a big way with venture capital assistance. In India SEBI has laid down rules and regulations for venture capital business.

(viii) Factoring Services:
Factoring services originated from the recommendations of Kalyanasundaram committee. SBI was the first to start factoring services and canara bank has floated canbank factors ltd. which was inaugurated on 10th May 1991. Factoring is a portfolio of complementary financial services. Sales ledger administration debt collection services and credit insurance current guidelines on factoring say that

Banks can conduct its business by setting up subsidiaries and invest in factoring companies jointly with other banks.

Such concerns should not engage themselves in financing of other companies and concerns engaged in factoring.

Investment of a bank in the business should not exceed 10% of the paid up capital and reserve of the bank.

Setting up such ventures requires prior clearance from RBI.

The bank should furnish information as required by RBI from time to time.
2) Other Recent Trends in Banking:

(i) Bank Net:

The collecting processing and distribution of information is vital to business growth of banks. Computerization takes care of only the processing. The gathering and distribution on use of telephone, mail, telegraph and telex which leads to delay and high cost due to handling at several stages. Hence a common communications network called "Banknet" operated by banks and financial institutions on a co-operative basis within the country is being set up. The bank net can be put to several uses. Some of the illustrative areas are given here under.

a) Transfer of funds from one place to another distance place or bank.

b) Exchange of statistical information among banks.

c) Foreign exchange business operations.

d) Inter bank applications like settlement of funds between banks.

e) Others.

The transfer of funds includes that customer can draw cash against their deposit at any branch of the bank as envisaged under 'on-line banking' and can also deposit cash at any branch for credit to an account of some other branch. Advance can be allowed at one branch against deposits at some other branch. This concept is known as 'Banking Any Where.'

(ii) Phone Banking:

Phone banking is yet another banking service offered by banks. Under this system like in ATM Card a secret code number is provided to each account holder. A customer wanting to know his bank balance or any other information relating to his bank account should dial up a particular phone number indicated by the Bank, when the number is dialed, a recorded voice will ask you to identify yourself with your account number and code number if the number are tallied, you will get all this information you want to know about your account presently many foreign banks provide this service. You cannot draw cash or deposit cash through phone banking. It is basically an information service.
(iii) **Net Banking or Internet Banking:**

We are now aware of the nature of banking business. Banking is particularly practical a service oriented activity. One of the methods of providing service is through the medium of computer network. Net or internet banking refers to extension of banking services through the network of computers; internet is a worldwide network of computers connected with telephone lines. Under the internet facility millions of computers located at banks offices, hospitals, educational institutions, and commercial establishments at different countries are connected through one another. If you have a personal computer (PC) telephone connection and an instrument called "Modem" with the internet facility you can have access to various colleges and universities offices and obtain important information send and receive messages etc. Similarly banking message can be exchanged between the banks and its customer through the net banking system. Hence in the internet banking a customer can ask for his/her bank balance, give other instructions pertaining to his account, call for his/her statement of account, transfer of money from his/her account pay college fees. Call for cheque book and a number at similar function through net banking without visiting the bank, this system of conducting banking business is known as net or internet banking. ICICI Bank is presently conducting net banking. Other banks are slowly introducing this system in their organizations.

(iv) **Deposit Insurance Scheme:**

To protect the interest of them depositors, the Deposit Insurance Corporation of India was established by an act of parliament in 1962. It provides insurance over on deposits held with the commercial and co-operative banks and the scheme of deposit insurance was introduced with effect from 1\textsuperscript{st} January 1962 in 1978, the credit guarantee corporation of India was merged with the deposit insurance corporation and the corporation has been renamed as "Deposit insurance and credit Guarantee corporation" with effect from 15\textsuperscript{th} July 1978. The corporation provides protection to small depositors by insurance and provides guarantee to the banks for loans extended to small borrowers
presently deposits with banks up to Rs. 1,00,000 per account is guaranteed for repayment by the corporation.

(v) **Gold Deposit Scheme:**

The Government of India has proposed a new gold deposit scheme in the budget for 1999 - 2000, the purpose of the scheme was to mobilize idle gold lying with people/ institutions like temple in India and utilize the same for productive purposes through the banking system. As per the scheme announced in September/October 1999 selected commercial banks are permitted to accept gold deposit from individuals, trust and companies in the form of gold coin, jewellery, gold bars etc., the bank after ascertaining their gold content through the process of assaying will issue interest bearing gold bonds or pass books to the deposits. The depositors to the maturity of the bond will get back some quantity of gold or its equivalent value in rupees. Interest amount will be paid separately, and it is exempted from income tax. Gold value is exempted from wealth tax. One of the purposes of the scheme is to reduce the import of gold from abroad

The scheme is beneficial to holders of gold as it provides safety and security to their gold holdings besides a regular interest income their on. The deposit will be for a period between 3 & 7 years. The gold deposit bond is transferable by endorsement and delivery as in the case with Negotiable Instrument. Nomination facility is also available as in the case with Bank deposits accounts. Specific approvals from reserve bank are required for banks to operate the scheme. The rate of interest, repayment period of deposit and other operational details will be decided by each designated bank State Bank of India is the first designated bank for this purpose. Some more nationalized banks like Canara Bank may also seek RBI permission to operate the scheme.

C) **IMPACT OF MODERN TECHNOLOGY IN BANKING:**

The impact of changing technology on banking activities is not yet felt due to the fact that mechanization and automation in the banking industry is at a relatively less mature state when compared to its counterparts abroad. And so because we are still to come to terms with the comparative advantages in
working on information based system in place of traditional banking systems.

As the financial system crawl towards market based bank ethos, specially nationalized banks are in a panic. The new buzz word is diversification and technology. But is technology a panacea to achieve competitive advantage what are the technology that would change the face of banking in the country in the next decade? What do we do with the existing systems procedures and technology? What are the issues in managing technology in bank in future?

To conclude, it may be said that technology is increasingly becoming important and is being utilized to carry out banking operations in large international banks. In the span of last 25 years, banks which have managed to change in tune with technology and we emerged as leaders. Their progress is by leaps and bounds beyond the boundaries of all imaginations. Technology has been used by them as a tool for controlling business of "yesterday". For conducting business of "today" and for promoting banking products which are required for "tomorrow". It is rightly observed by the presidents of the giant banks that within next five years they will require bankers who can manage technology as well.

Indian banking industries is the fasters growing industry in the world today. To manage the growth, the bank in India will be acquiring and integrating various information technological advancements in their operations both at branches and at controlling offices. The adoption of type of technology will mainly depend on the objectives and the pace of acquisition will rest upon the infrastructure development and its availability. In developed countries, major consideration for use of technology is for increasing profits, Indian banking industry is labour oriented service industry, and therefore, objectives of using modern technology will be for improving efficiency and effectiveness and not as a tool for replacement of labour. Computer Technology is in an advanced stage but development in communication technology is comparatively lagging behind. Hence introduction of communication linked computer systems will take-some more time.
1) **Customer/Client Server:**

Client Server systems is a relatively new concept in information technology circles in Indian banks but that is not only because the concept per se is new but also because banks have only recently struck an agreement with the unions permitting unfettered computerization. Before this agreement banks were compelled to use only weak standalone systems with limited memory configurations and storage space with the emancipations came new concept like total branch mechanization where in customer could walk in to any of the many windows of the bank to have access to any service that he / she want it for applications like these that client server systems are designed. So in keeping with the latest in technology it is expected that such systems would proliferate at least at the branch level, although these may some teething troubles.

In fact, in branches that till work on stand alone machines the system can be easily implemented with suitable parametric definitions. An upgrade in this direction may turn out to be more cost effective than improving the power of individual ALPMS OR CPs since they could already be perceived as a standalone client. However a change in software and system is a different problem altogether again, it may not always the possible to force an effective upgrade on machines older than about 5 years since it may be cheaper to buy an entirely new set of powerful client server.

One indisputable advantages of the slow progress of computerization in banks is that banks can now go in for a pretty decent technology package with significant like graphical users interfaces etc. for a relatively reasonable price. The advantages of course, holds good only for hardware, in case of software especially for client server systems.

2) **Management:**

Issue in information Technology Management -

i) **Lop Sided use of Technology:**

In many braches using Computerised Office Machines (COMs) we find that service is still slow.

This is not as much due to technology per se as it is due to lack of process control since in most such cases we are likely to find that the process of making a payment or any such service remains the same
even after introduction of the machine. It is important to use technology not only to use technology, not only to make routine jobs simpler, but also to cut away jobs that fail to add value to a business process. The service is not likely to improve much by only installing COMs since the only job that the clerk does not have to do is arrive at the reduced balance after debiting the customers account. All other process remains of course the machine spews out perfect printouts at the end of the day eliminating the need to balance books as was the case in the manual system. But that is no consolation to the customer who fails to understand the recurring delays despite introduction of computers. Thus it is important to employ technology to make jobs similar within the organization and ensure that the technology so employed benefits the customer in terms of speedy or value added service. The upshot is that technology may help bring about changes in process, but control is largely a management problem rather than a technology problem.

(ii) **Designing / Choosing a System:-**

It may be worthwhile to summaries certain key elements system design before going for advanced software development. These points were proposed by Robert Scheifler James Gettys in their complete reference book to ‘X’ window system but could be generalized for any software project if we are not to get confused with the functionality of a system and its bells and whistles. The rules read like this;

- Do not add new Functionality unless and implementation cannot complete a real application without it.
- It is as important to decide what a system is not, as to decide what it is do not serve all the world need.
- The only thing worse than generalizing from one example is generating from no example at all.
- If a problem is not completely understood, it is probably best to provide no solution at all.
- If you get go percent of the desired effect for 10 percent of the work, use the simpler solution.
Provide mechanism rather than policy. In particular, place user-interface policy in the clients’ hand.

(iii) **Getting value for money:**

The problem with determining whether a newly installed computer system in a bank is actually cost effective has something to do with the fundamental intangibility of some benefits of installing such systems. A part from modifying processes sometimes eliminating them altogether. It brings about a general change in attitudes towards traditional banking of course but for certain sophisticated forex terminals it would be impossible to achieve competitive advantage in trading.

However, in these days of distributed processing it does a trifle difficult to measure whether a certain personal computer or terminal provided to a certain work unit has improved its overall efficiency. The question can be easily answered if each unit determines what it wants out of the system and how much it can deliver.

(iv) **Is the upgrade necessary?**

Though having technology gives one an advantage over some one who does not the necessity to continually upgrade satisfactory working system must be dictated a judicious who should decide whether it is more advantageous to skip generations of technology in place of the latest black box available today.

(v) **Hidden costs of Downsizing:**

Downsizing may appear to be a relatively irrelevant concept to the banking community in the country but the ideas to be gained from an evaluation of its economics are relevant. Simply, speaking downsizing means migration of applications from host based systems serving terminal networks to local area networks of workstations, PCs and serves. It may be mentioned as irrelevant because it is now that applications built to run on the existing mainframes have stabilized for such applications technically there is no real need to convert or downsize unless there is a plan to do away with the mainframe altogether.
However, experts warn of hidden cost of personal computing which may be relevant to designers of new systems; these costs are classified under application development costs, system management costs, storage bottlenecks, networking redesign to take care of increasing traffic etc. They point out that it would require a tremendous organizational commitment to go into distributed processing.

(vi) **Hidden costs of Client Server Computing:**

Client Server sever technology is relatively nascent even through its promises may seem to meet the requirement for bank computerization projects. Experts warn of hidden minefields in sudden migration to such systems and caution against time and cost overruns. When a bank commits to a computing system, the management inherits not only the physical cost of purchasing and owning the system but also the hidden costs that combs with it. In case of client server systems, the strains on the financial coffers increase even after the purchased system settles into place.

It is possible that everyone from clerical to management staff face the prospect of re-learning the systems consideration staff time will be lost during the transitional phase. After the initial phase the system would need to be maintained by skilled labour due to the complex nature of computing architecture. Application investments may need to start from scratch due to the properties of system architecture. Developing distributed applications may be far from easy. Application developers who were previously concerned just with systems analysis and programming must contend with a slew of new skills such as networking.

(vii) **Infrastructural Issues:**

Secondary costs become very important issues in the Indian context, since the existing infrastructures of branches may not be conducive to computerization once branches are totally computerized there would be no manual systems to turn to and thus there would be no room for failures. To computerize branches, it may sometimes be necessary to shift to entirely new premises if re-modeling the existing set up turns out to be unviable or impractical. Availability of stable
power is always a primary issue in such projects. IT would become a critical issue when branches are networked. Generators may have to be provided in places where power shutdowns are frequent. It may be tempting to computerize rural branches where the volume of business is high but such projects may have to wait until sufficient quality of power and vendor support is continuously available at site, in the initial stages of networking it may be prudent to have alternative server systems to back up in case of crash.

(viii) Change in Management culture:

The strangest malady of computerization in many organizations is the lack of the receptivity of many senior level personnel to the automated culture. The apparent distrust of automated processes spreads down to the roots of the organization leaving people to think that the machine is the sole purview of the technocratic elite. Senior people feel that they are too good to brother with keyboards and typing and thus insist on hardcopies on which they perform calculator checks. The junior staff naturally, feels that they may be held solely responsible for anything going wrong and do not touch the machine thus in many places computers secure under the lock and key of senior staff remain underutilized or unutilized.

It is little understood that the modern personal computer is a pretty sturdy machine and can be handled as one would handle a photocopier or VCR. To propagate the culture, managers should encourage their staff to experiment. Most training programmes never would tell you how to use the machine for day to day jobs. This must be learnt by experimenting and innovating, and thus everybody must be encouraged to use the machine and come up with new ideas for simplifying work. We have plenty of examples of bankers writing innovative software with little formal knowledge of programming such people should not only be encouraged but also rewarded. The onus of spreading computer culture must come from the senior level staff of banks. To propagate the culture, staff may be also given interest free loans to acquire computers.
D) Need to Accept Recent Technology by Banking Organizations

1) **Open Market:** The world wide market is opened due to General Agreement on Trade and Tariff (GATT) and due to formation World Trade Organization. India had also adopted the new economic policy with the features of liberalization, privatization and globalization on 26th July 1991.

2) **Recession in all fields:** Due to open economy there is recession in all the fields like Industries, Agriculture, Services, etc. it affects the financial institutions badly. It is a major set back lo all the fields including banks.

3) **Insecure feelings:** Due to several scams and scandals in various banks, there is fear of insecurity in the minds of bankers.

4) **Dependence on Global Events:** Now-a-days share market gold rates etc. are depending upon global events. War situation pulls the market.

5) **Increasing Competition:** Foreign ban:::; are entering in Indian Market. The bankers in India must have to prepare themselves to face the competition. So the recent technology is necessary for the Indian Banks.

6) **Acceptance of Narsimham Committee Report:** Both the reports of Narsimham Committee have been accepted by Central Government. Rules regarding transparency in transactions, NPA rules etc. imposes to adopt new technologies.

E) **Fundamentals of Modern Banking Systems:**

1) Strengthening of prudential norms and keep market discipline.

2) Adoption of international benchmarks as appropriate to our situation.

3) Management of Organizational change and consolidation within the financial systems.

4) Human Resource Development as the catalyst of the transformation.

5) Upgradation of the technological infrastructure of the financial system.
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