Role of IT in Indian Banking Sector

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Abstract: *Ever since the nationalization of banks in India, this sector has been growing without Leaps and bounces and catering to the needs of various segments of the society. In recent times, the Banking Sector has been making rapid straights by using information technology as a platform and endeavoring to scale higher heights. An attempt has been made in this paper to examine various innovative instruments that have been introduced by Banks in recent times. Liberalization and Information technology has attracted many foreign banks to India, thereby opening up new markets, new products and efficient delivery channels for the banking industry. In the development of Indian Economy, Banking sector plays a very important and crucial role. With the use of technology there had been an increase in penetration, productivity and efficiency. It has not only increased the cost effectiveness but also has helped in making small value transactions viable. It also enhances choices, creates new markets, and improves productivity and efficiency. It has been noticed that financial markets have turned into a buyer's markets in India. Commercial Banks in India are now becoming a one-stop Supermarket. The focus is shifting from mass banking to class banking with the introduction of value added and customized products. Technology allows banks to create what looks like a branch in a business building's lobby without having to hire manpower for manual operations. The branches are running on the concept of 24 X 7 working, made possible by the use of Tele banking, ATMs, Internet banking, Mobile banking and E - banking. These technology driven delivery channels are being used to reach out to maximum number of customers at lower cost and in most efficient manner. The beauty of these banking innovations is that it puts both banker and customer in a win- win situation. Effective use of technology has a multiplier effect on growth and development.*

Keywords: *Banking Sector, Risk Management, Automated Systems and Processes, Mobile Banking, EFT and Knowledge Management.*

I. INTRODUCTION

With the globalization trends world over it is difficult for any nation big or small, developed or developing, to remain isolated from what is happening around. For a country like India, which is one of the most promising emerging markets, such isolation is nearly impossible. More particularly in the area of Information technology, where India has definitely an edge over its competitors, remaining away or uniformity of the world trends is untenable. Financial sector in general and banking industry in particular is the largest spender and beneficiary from information technology. This endeavours to relate the international trends in it with the Indian banking industry.

The last lot includes possibly all foreign banks and newly established Private sector banks, which have fully computerized all the operations. With these variations in the level of information technology in Indian banks, it is useful to take account of the trends in Information technology internationally as also to see the comparative position with Indian banks. The present article starts with the banks perception when they get into IT up gradation. All the trends in IT sector are then discussed to see their relevance to the status of Indian banks.

IT Considerations

Since the early nineties, each Indian bank has done some IT improvement effort. The first and foremost compulsion is the fierce competition. While deciding on the required architecture for the IT consideration is given to following realities.

1. Meeting Internal Requirement: The requirements of the banks are different individually depending upon their nature and volume of business; focus on a particular segment, spread of branches and a like. Many a time's banks do have the required information but it is scattered. The operating units seldom know the purpose of gathering the information by their higher authorities.

2. Effective in Data Handling: As stated earlier the banks have most of the needed data but are distributed. Further the cost of collection of data and putting the same to use is prohibitively high. The accuracy and timeliness of data generation becomes the causalities in the process. Best of the intentions on computerization are wished away because there is non-visible reduction in cost /efforts/time required for the required data gathering.

3. Extending Customer Services: Addressing to rising customers expectations is significant particularly in the background of increased competition. In case bank A is unable to provide the required service at a competitive price and in an accurate manner with speed. There is always a bank IT at its next-door waiting to hire the customer. Awareness of customers about the availability of services and their pricing as also available options have brought into sharp focus the issue of customer satisfaction.

4. **Creative Support for New Product Development:** It has become necessary for the banks to vitalize the process of product development. Marketing functionaries needs a lot of information not only from the outside sources but also from within the banks. Banks are looking to retail segment as the future market places for sales efforts. Having full-fledged information of existing customer is the key for this purpose. The emergences of data requirement and an appropriate architecture to support the same are significant issues to be handled in this regard.

5. **End-user Development of the Non-technical Staff:** Banking being a service industry, it is the staffs at counters that deliver the products. In Indian scenario, virtual banking is likely to have a few more years to establish. The dependence on counter staff is unavoidable. The staffs are large in number and the majority is non-technical. The customer satisfaction levels at the counter determine the ultimate benefit of IT offensive. Giving due consideration to this aspect in choosing architecture in necessary.

Trends in Information Technology

Certain trends have been visualized of information technology in banking sector all over the world.

1. **Outsourcing:** Outsourcing is one of the most talked about as also a controversial issue. The drivers for getting in to outsourcing are many to include gaps in IT expectations and the reality, demystification of computerization in general and IT in particulars, trend towards focusing on core competencies, increased legitimacy of outsourcing and intention of getting out of worries and sort of up gradation of hardware and software versions. Not that the practice is new as earlier it was refused to as 'buying time' or 'service bureau'. What is needed is the clear of outsourcing, beside a definite plan to be more competitive after outsourcing. It is necessary to have checks and balances to monitor vendor performance. Cost aspects merit consideration, as also a decision on the part of the process to be outsourced shall be significance. Exit route and resource on the amount of failure after outsourcing are the other issue to be looked onto. Notwithstanding these risks, outsourcing has come to say.

2. **Integration:** One of the IT trend is moving from hierarchy to team approach. The purpose is to see an alternative to retooling, to react speedily and to develop capabilities rather than exploiting them. Such integration is necessary so as to address to prevalent situations:

a. Functions needing data and not getting from others.

b. Sending data to those who do not want to require them.

c. Global data exist but do not travel to required business functions.

Indian banks seem to follow this trend through the sincere redesign as described earlier. Instead of vertically divided pyramid type organizational set-ups, banks are now being to have separate group like finance, international consumer banking, industrial/commercial credit etc.

3. **From Solo to Partnership:** With the development of IT, two things are taking place simultaneously. The work force as a percentage of total staff is going down and spending on IT as percentage of total spending is going up. The forms of partnership can include binding by superior service, accommodation in service sharing network, equal partnership and situations, where survival is threatened. At times, the partnership becomes necessary to get out of areas where there is no competitive advantage. Low development cost or wider geographical coverage is the aspects that create such partnership. Instances are not frequent, where joint ventures have been found with the IT vendors.

4. **Distinctive Edge:** It is always said that many use but a few make use of IT. Historically, the emphasis is on using IT for large volumes like payrolls, balancing the books, the consolidation etc. That realization on having IT as matter of competitive edge has come about very lately. It is recognized that customer service is not an easy thing to provide, but IT is used as a mean. It does give value additions and erases barriers for competitors to enter. Banks understand that the cost of cultivating the new customer is 5 to 6 times of retaining the old one. Customer normally switches banks due to poor service. The appreciation of these facts has compelled the banks world over to look upon IT as an instrument to create distinctive edge over competitors. The private sector banks that were established in 1990's as a part of finance sector reforms did make good of IT to have an edge over the others. The foreign banks operating in India have also been able to market IT superiority as a distinctive edge. The public sector banks are still to make use of IT in this regard, although they are blessed with huge information base all across the country. While steps are mooted in this direction by leading public sector banks, more offensive postures are necessary.

5. **IT as Profit Centre:** In the embryonic phases, IT was looked upon a means to get rid of high processing cost and time and to convert the manual operation with high volume/low complexity in two mechanical ones. With the evolutionary the process, it was seen as the best means of generating, MIS. The same approach gave the status of DSS to IT. All along, IT has been recognized as the service function in Indian Banks. However, the new trend that is emerging is considering IT as a profit centre. The cost benefit analysis of having IT or otherwise in one part. But having IT set up to generate income for the organization is the new beginning. Getting jobs from outside the bank for processing data and the like are the current trends. The outsourcing done by others is the business, cater to by these organizations the trend of this kind

is not deserved in Indian situation particularly banks. The Banks have been able to just manage what is to consider as their responsibility as IT, within the individual banks.

6. **Prospering in Down Market:** The trend suggests that when there is a down turn in the market place, Pro-active corporations take the benefit of available unutilized resources to upgrade and revisit technology issues. This is seen as the right time to establish the R & D centre for IT. There are false notions about technology and its capability. Some misconceptions include:

- Best-fit possible technology is implemented.
- System solution is good enough and there is need to look into user expectations.
- Innovations are generally successful.
- Success is related only to novel ideas.
- Technology is the sole determinant of business success, and
- Measures and standards i.e. audit and inspection issues stand in the way of innovation.

   The time available to debate on similar issues is ample and these false notions get clarified during the down market. Eventually, the decision makers reach a consensus that IT is not a panacea but it is an enabler that too when well supported by BRP (Business Process Reengineering), human resources initiatives, physical infrastructure and responsive organization set up.

7. **Leading to Downsizing:** The IT initiative is making the organization lean and flat. For IT functionaries downsizing means transferring computing power from mainframe to the personal computer and workstations. Downsizing is a typical issue faced with associated problems. Absence of top management commitment, lack of understanding of the prevalent IT infrastructure, doing too much and too fast and undertaking the exercise without a framework for controlling the downsizing operations are primarily the situations that create adversities in downsizing. In any case the trend of downsizing is very much existent in the IT environment.

8. **Getting Competitive Intelligence:** IT is now seen as a resource for gathering and dissemination of executive information system (EIS). The purpose is to minimize that the bombarding and focusing on the relevance, accuracy and timeliness of the information particularly about the competitors such information enhances follow up and tracks early warning on competitor move and also customer expectations.

   As far as Indian banks are concerned individually, they have to compete with other banking industry participants as also with other players in the financial sector. The competition from for insurance and government notes and saving, mutual funds and the like is always forthcoming particularly because of attendant tax benefits. Collection of required information and using the same for business purpose is constrained by the availability of the information, its volume and diversity. As such it may take some time for this trend to be visible in Indian banking scenario.

Recent Developments in Banking Sector

1. **Internet:** Internet is a networking of computers. In this marketing message can be transferred and received worldwide. The data can be sent and received in any part of the world. In no time, internet facility can do many a job for us. It includes the following:

- This net can work as electronic mailing system.
- It can have access to the distant database, which may be a newspaper of foreign country.
- We can exchange our ideas through Internet. We can make contact with anyone who is a linked with internet.
- On internet, we can exchange letters, figures/diagrams and music recording.
- Internet is a fast developing net and is of utmost important for public sector undertaking, Education Institutions, Research Organization etc.

2. **Society for Worldwide Inter-bank Financial Telecommunications (SWIFT):** SWIFT, as a co-operative society was formed in May 1973 with 239 participating banks from 15 countries with its headquarters at Brussels. It started functioning in May 1977. RBI and 27 other public sector banks as well as 8 foreign banks in India have obtained the membership of the SWIFT. SWIFT provides have rapid, secure, reliable and cost effective mode of transmitting the financial messages worldwide. At present more than 3000 banks are the members of the network. To cater to the growth in messages, SWIFT was upgrade in the 80s and this version is called SWIFT-II. Banks in India are hooked to SWIFT-II system. SWIFT is a method of the sophisticated message transmission of international repute. This is highly cost effective, reliable and safe means of fund transfer.

- This network also facilitates the transfer of messages relating to fixed deposit, interest payment, debit-credit statements, foreign exchange etc.
- This service is available throughout the year, 24 hours a day.
- This system ensure against any loss of mutilation against transmission.
- It serves almost all financial institution and selected range of other users.

- It is clear from the above benefit of SWIFT that it is very beneficial in effective customer service. SWIFT has extended its range to users like brokers, trust and other agents.

3. **Automated Teller Machine (ATM):** ATM is an electronic machine, which is operated by the customer himself to make deposits, withdrawals and other financial transactions. ATM is a step in improvement in customer service. ATM facility is available to the customer 24 hours a day. The customer is issued an ATM card. This is a plastic card, which bears the customer's name. This card is magnetically coded and can be read by this machine. Each cardholder is provided with a secret personal identification number (PIN). When the customer wants to use the card, he has to insert his plastic card in the slot of the machine. After the card is a recognized by the machine, the customer enters his personal identification number. After establishing the authentication of the customers, the ATM follows the customer to enter the amount to be withdrawn by him. After processing that transaction and finding sufficient balances in his account, the output slot of ATM give the required cash to him. When the transaction is completed, the ATM ejects the customer's card.

4. **Cash Dispensers:** Cash withdrawal is the basic service rendered by the bank branches. The cash payment is made by the cashier or teller of the cash dispenses is an alternate to time saving. The operations by this machine are cheaper than manual operations and this machine is cheaper and fast than that of ATM. The customer is provided with a plastic card, which is magnetically coated. After completing the formalities, the machine allows the machine the transactions for required amount.

5. **Electronic Clearing Service:** In 1994, RBI appointed a committee to review the mechanization in the banks and also to review the electronic clearing service. The committee recommended in its report that electronic clearing service-credit clearing facility should be made available to all corporate bodies/Government institutions for making repetitive low value payment like dividend, interest, refund, salary, pension or commission, it was also recommended by the committee Electronic Clearing Service-Debit clearing may be introduced for pre-authorized debits for payments of utility bills, insurance premium and instalments to leasing and financing companies. RBI has been necessary step to introduce these schemes, initially in Chennai, Mumbai, Calcutta and New Delhi.

6. **Bank net:** Bank net is a first national level network in India, which was commissioned in February 1991. It is communication network established by RBI on the basis of recommendation of the committee appointed by it under the chairmanship of the executive director T.N.A. Lyre. Bank net has two phases: Bank net-I and Bank net- II.

7. **Chip Card:** The customer of the bank is provided with a special type of credit card which bears customer's name, code etc. The credit amount of the customer account is written on the card with magnetic methods. The computer can read these magnetic spots. When the customer uses this card, the credit amount written on the card starts decreasing. After use of number of times, at one stage, the balance becomes nil on the card. At that juncture, the card is of no use. The customer has to deposit cash in his account for re-use of the card. Again the credit amount is written on the card by magnetic means.

8. **Phone Banking:** Customers can now dial up the bank's designed telephone number and he by dialling his ID number will be able to get connectivity to bank's designated computer. The software provided in the machine interactive with the computer asking him to dial the code number of service required by him and suitably answers him. By using Automatic voice recorder (AVR) for simple queries and transactions and manned phone terminals for complicated queries and transactions, the customer can actually do entire non-cash relating banking on telephone: Anywhere, Anytime.

9. **Tele-banking:** Tele banking is another innovation, which provided the facility of 24 hour banking to the customer. Tele-banking is based on the voice processing facility available on bank computers. The caller usually a customer calls the bank anytime and can enquire balance in his account or other transaction history. In this system, the computers at bank are connected to a telephone link with the help of a modem. Voice processing facility provided in the software. This software identifies the voice of caller and provides him suitable reply. Some banks also use telephonic answering machine but this is limited to some brief functions. This is only telephone answering system and now Tele-banking. Tele banking is becoming popular since queries at ATM's are now becoming too long.

10. **Internet Banking:** Internet banking enables a customer to do banking transactions through the bank's website on the Internet. It is a system of accessing accounts and general information on bank products and services through a computer while sitting in its office or home. This is also called virtual banking. It is more or less bringing the bank to your computer. In traditional banking one has to approach the branch in person, to withdraw cash or deposit a cheque or request a statement of accounts etc. but internet banking has changed the way of banking. Now one can operate all these type of transactions on his computer through website of bank. All such transactions are encrypted; using sophisticated multi layered security architecture, including firewalls and filters. One can be rest assured that one's transactions are secure and confidential.

11. **Mobile Banking:** Mobile banking facility is an extension of internet banking. The bank is in association with the cellular service providers offers this service. For this service, mobile phone should either be SMS

or WAP enabled. These facilities are available even to those customers with only credit card accounts with the bank.

Electronic Payment Services - E Cheques

Nowadays we are hearing about e-governance, e-mail, e-commerce, e-tail etc. In the same manner, a new technology is being developed in US for introduction of e-cheque, which will eventually replace the conventional paper cheque. India, as harbinger to the introduction of e-cheque, the Negotiable Instruments Act has already been amended to include; Truncated cheque and E-cheque instruments.

Real Time Gross Settlement (RTGS)

Real Time Gross Settlement system, introduced in India since March 2004, is a system through which electronics instructions can be given by banks to transfer funds from their account to the account of another bank. The Real Time Gross Settlement (RTGS) system is maintained and operated by the RBI and provides a means of efficient and faster funds transfer among banks facilitating their financial operations. As the name suggests, funds transfer between banks takes place on a 'Real Time' basis. Therefore, money can reach the beneficiary instantaneously and the beneficiary's bank has the responsibility to credit the beneficiary's account within two hours.

Electronic Funds Transfer (EFT)

Electronic Funds Transfer (EFT) is a system whereby anyone who wants to make payment to another person/company etc. can approach his bank and make cash payment or give instructions/authorization to transfer funds directly from his own account to the bank account of the receiver/beneficiary. Complete details such as the receiver's name, bank account number, account type (savings or current account), bank name, city, branch name etc. should be furnished to the bank at the time of requesting for such transfers so that the amount reaches the beneficiaries' account correctly and faster. RBI (Reserve Bank of India) is the service provider of Electronic Funds Transfer (EFT).

Point of Sale Terminal

Point of Sale Terminal is a computer terminal that is linked online to the computerized customer information files in the bank and magnetically encoded plastic transaction card that identifies the customer to the computer. During a transaction, the customer's account is debited and the retailer's account is credited by the computer for the amount of purchase.

Tele Banking

Tele Banking facilitates the customer to do entire non-cash related banking on telephone. Under this devise Automatic Voice Recorder is used for simpler queries and transactions. For complicated queries and transactions, manned phone terminals are used.

II. CONCLUSION

Indian public sector banks that hold around 75% of market share do have taken initiative in the field of IT. They are moving towards the centralized database and decentralize decisions making process. They possess enviable quality manpower. Awareness and appreciation of IT are very much there. What is needed is a 'big push' the way it was given in the post nationalization period for expansionary activities. IT and India have become synonymous. Whether India becomes a destination for outsourcing or it becomes a development centre is matter of debate. As far as banking industry in India is concerned it can be said that although the Indian banks may not be as technologically advanced trends on the IT front. The strength of Indian banking lie in withering storms and rising up to the expectations from all the quarters catching up with all the global trends is a matter of time.

III. REFERENCES

[1]   www.rbi.org.in
[2]   Reddy, Y.V. (2000), Monetary and Financial Sectors Reforms in India, A Central Banker's Perspective, UBS Publishers, New Delhi.
[3]   Pathrose, P.P. – Hitech, Banking Prospective – 3 Problems, IBA Bulletin, Vol. 13, No. 7.