RESEARCH ARTICLE

IMPACT OF INFORMATION TECHNOLOGY (IT) ON THE BANKING SECTOR

Thyaga Raju N

Department of Commerce, SRI A.B.R Government Degree College, Repalle, GUNTUR Dt-5222265. AP

A R T I C L E   I N F O

A B S T R A C T

Banking environment has become highly competitive today. Information technology refers to the acquisition, processing, storage and dissemination of all types of information using computer technology and telecommunication systems. Information technology architecture is an integrated framework for acquiring and evolving IT to achieve strategic goals. These technologies are used for the input, storage, processing and communication of information. Information technology includes ancillary equipment, software, firmware and similar procedures, services etc. Modern high throughput technologies are providing vast amounts of the sequences, expression and functional data for genes and protein. Recent developments of banking sector in india are Internet, Society for worldwide inter-bank financial telecommunications (SWIFT), Automated Teller Machine (ATM), Cash dispensers, Electronic clearing service, Bank Net, Chip card, Phone banking, Tele-banking, Internet banking, Mobile banking, Any where banking, Voice mail, E-banking Etc., The basic need of Information Technology (IT) in Banking Sector are Meeting Internal Requirements, Effective in Data Handling, Extending Customer Services, Creative Support for New Product Development, End-user Development of the Non-technical Staff. Emerging trends of information technology in banking sector are Outsourcing, Integration, Distinctive Edge, IT as Profit Centre, Prospering in Down Market. Challenges faced by indian banking scenario in india are Meet customer expectations on service and facility offered by the bank, Customer retention, Managing the spread and sustain the operating profit, Retaining the current market share in the industry and the improving the same, Completion from other players in the banking industry. Other Information Technology enables sophisticated product development, better market infrastructure, implementation of reliable techniques for control of risks and helps the financial intermediaries to reach geographically distant and diversified markets. Internet has significantly influenced delivery channels of the banks. Internet has emerged as an important medium for delivery of banking products and services. Information, communication and networking, achieving inter branch connectivity, moving towards Real Time gross settlement (RTGS) environment the forecasting of liquidity by building real time databases, The shift from traditional banking to e-banking is changing customer's expectations. 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.

INTRODUCTION

Banking environment has become highly competitive today. To be able to survive and grow in the changing market environment banks are going for the latest technologies, which is being perceived as an 'enabling resource' that can help in developing learner and more flexible structure that can respond quickly to the dynamics of a fast changing market scenario. It is also viewed as an instrument of cost reduction and effective communication with people and institutions associated with the banking business. The financial reforms, deregulation globalisation etc. coupled with rapid revolution in communication technologies and evolution of novel concept of convergence of communication technologies like Internet, Mobile/Cell phones etc. Technology has continuously played on important role in the working of banking institutions and the services provided by them. Safekeeping of public money, transfer of money, issuing drafts, exploring investment opportunities and lending drafts, exploring investment being provided. Information Technology enables sophisticated product development, better market infrastructure, implementation of reliable techniques for control of risks and helps the financial intermediaries to reach geographically distant and diversified markets. Information technology refers to the acquisition, processing, storage and dissemination of all types of information using

computer technology and telecommunication systems. Information technology architecture is an integrated framework for acquiring and evolving IT to achieve strategic goals. These technologies are used for the input, storage, processing and communication of information. Information technology includes ancillary equipment, software, firmware and similar procedures, services etc. Modern high throughput technologies are providing vast amounts of the sequences, expression and functional data for genes and protein. One of the most difficult challenges is turning this enormous pool of information into useful scientific insight and novel therapeutic products.

Recent Developments of Banking Sector in India

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 Institution, Research Organization etc.

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 27other 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 message 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.

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 24hours 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.

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.

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.

Bank Net

Bank net is a first national level network in India, which was commissioner 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. The Applications of Bank Net are the message of banking transaction can be transferred in the form of codes from the city to the other, Quick settlement of transactions and advices, Improvement in customer service-withdrawal of funds is possible from any member branch, Easy transfer of data and other statements t RBI, Useful in foreign exchange dealings, Access to SWIFT through Bank net is easily possible.

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. 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.

Phone Banking

Customers can now dial up the bank's designed telephone number and he by dialing 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.

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 not Tele-banking. Tele banking is becoming popular since queries at ATM's are now becoming too long.

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.

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.

Any where Banking

With expansion of technology, it is now possible to obtain financial details from the bank from remote locations. Basic transaction can be effected from faraway places. Automated Teller Machines are playing an important role in providing remote services to the customers. Withdrawals from other stations have been possible due to inter-station connectivity of ATM's. The Rangarajan committee had also suggested the installation of ATM at non-branch locations, airports, hotels, Railway stations, Office Computers, Remote Banking is being further extended to the customer's office and home.

Voice Mail

Talking of answering systems, there are several banks mainly foreign banks now offering very advanced touch tone telephone answering service which route the customer call directly to the department concerned and allow the customer to leave a message for the concerned desk or department, if the person is not available.

E-Banking

In India e-banking is of recent origin. The traditional model for growth has been through branch banking. Only in the early 1990s has there been a start in the non-branch banking services. The new private sector banks and the foreign banks are handicapped by the lack of a strong branch network in comparison with the public sector banks. Many banks have modernized their services with the facilities of computer and electronic equipments. The electronics revolution has made it possible to provide ease and flexibility in banking operations to the benefit of the customer. The e-banking has made the customer say good-bye to huge account registers and large paper bank accounts. The e-banks, which may call as easy bank offers the following services to its customers like Credit Cards/Debit Cards, ATM, E-Cheques, EFT (Electronic Funds Transfer), DeMAT Accounts, Mobile Banking, Telephone Banking, Internet Banking, EDI (Electronic Data Interchange).

Need of Information Technology (IT) in Banking Sector

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.

Meeting Internal Requirements

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 to have the required information but it is scattered. The operating units seldom know the purpose of gathering the information by their higher authorities.

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.

Extending Customer Services

Addressing to rising customer's 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.

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.

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.

Emerging Trends of Information Technology in Banking Sector

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'. 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.

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 do develop capabilities rather than exploiting them. Such integration is necessary so as address to prevalent situations.

- ✓ Functions needing data and not getting from others.
- ✓ Sending data to those who do not want to require them.
- ✓ 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.

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 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 I 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.

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 of 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.

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 used 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.

Leading to Downsizing

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.

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 timelines 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.

Impact of Information Teechnology on Indian Banking System

The banking system is slowly shifting from the Traditional Banking towards relationship banking. Traditionally the relationship between the bank and its customers has been on a one-to-one level via the branch network. This was put into operation with clearing and decision making responsibilities concentrated at the individual branch level. The head office had responsibility for the overall clearing network, the size of the branch network and the training of staff in the branch network. The bank monitored the organisation's performance and set the decision making parameters, but the information available to both branch staff and their customers was limited to one geographical location.

Challenges Faced By Indian Banking Scenario in India

Business Challenges

- ➢ Meet customer expectations on service and facility offered by the bank.
- ➢ Customer retention.
- ➢ Managing the spread and sustain the operating profit.
- ➢ Retaining the current market share in the industry and the improving the same.
- ➢ Completion from other players in the banking industry.

Other Important Operational Challenges

- ➢ Frequent challenges in technologies used focusing up grades in hardware and software, attending to that implementation issues and timely roll out.
- ➢ Managing technology, security and business risks.
- ➢ System re-engineering to enable. Defined and implemented efficient processes to be able to reap benefits off technology to its fullest potential.

- ➢ Upgrading the skill of work force spread across the country.

Guidelines to Be Followed& Focused For Effecting Implementation of It in Banking Sector

At corporate level to meet the challenges, various initiated have been taken and implementation is process beside up gradation of data centre facilities:

Centralization of functions

Inward clearing data uploading and processing
Check book issues
MIS-On-Line Monitoring/ Generation of statement by controlling offices
Audit from the remote location
Sending mails and statement of accounts to customers & completion of non-mandatory field in newly opened accounts.

- ✓ Single Window System
- ✓ Revised Account opening from for capturing complete customer/ Account data as per CBS requirement.
- ✓ Call centre for customers.
- ✓ Customer Relationship Management (CRM) Application.
- ✓ Data Warehousing.

To facilitate successful implementation of the above initiative, intensive efforts are to be undertaken by all of us on following issues:

- ➢ Completion of correct MIS details in all accounts and SRM's
- ➢ Customer / Account data completion / correction.
- ➢ Customer-ID crystallization.
- ➢ Aggressive marketing of Internet Banking & Debit Card products to increase share of delivery channels transaction.
- ➢ Skill up gradation & increase in awareness of all staff member.
- ➢ Strict compliance of Circular & Guidance available online (CBSINFO) / Messages issued through scrolling ticker on login page.

Present slowdown in rollover must be put to full use to have concrete action on these fronts.

CONCLUSION

Information Technology enables sophisticated product development, better market infrastructure, implementation of reliable techniques for control of risks and helps the financial intermediaries to reach geographically distant and diversified markets. Internet has significantly influenced delivery channels of the banks. Internet has emerged as an important medium for delivery of banking products and services. Information, communication and networking, achieving inter branch connectivity, moving towards Real Time gross settlement (RTGS) environment the forecasting of liquidity by building real time databases, The shift from traditional banking to e-banking is changing customer's expectations. 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.

References

Bakshi, S, 'Corporate Governance in Transformation Times', IBA Bulletin, 2003.

Bimil Jalan, "Strengthening Indian Banking and Finance – Progress and Prospects", the Bank Economist Conference, India, 2002.

Reddy, Y.V. (1998) "Financial Sector Reforms: Review and Prospects". RBI Bulletin, December.

Reserve Bank of India, Annual Report, various years.

Reserve Bank of India (1991) Report of the Committee on the Financial System (Chairman Shri M.Narasimham).

Reddy, Y.V.(2000), Monetary and Financial Sector Reforms in India, A Central Banker's Perspective, UBS Publishers, New Delhi.

Performance of Commercial banks in India, RBI annual Reports 2011&2012

****