

ICT IN BANKING SECTOR – ISSUES AND CHALLENGES

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The ICT is a comprehensive term which consists of almost all communication devices such as radio, television, cellular phones, computer network, satellite systems etc. It includes service and applications also like video conferencing and distance learning. The term Information Communication Technology is mostly used as an Information Technology (IT). The importance of Information Technology and Communication is less related to the term technology than its potential to convey information to larger population at distinct area. Mostly every country of the world has put their efforts in establishing organizations for the development of advance communication techniques, increasing productivity and modernization. Today Business environment is very dynamic and go through frequent changes as a result of technological innovations.

ICT can be helpful in reducing poverty by providing access to education, health & government services Information Technology is becoming an invaluable part of our society for development, supporting growth, promoting innovation and enhancing competitiveness. The one of the best example of Information technology is Banking Sector.

The increase in flexibility and power of wireless provides proper opportunities for rising services to customers. In the current Business organizations, M-commerce has applications in various fields such as financial services, retail sector, telecommunication and information technology etc. M-commerce is broadly accepted and adopted in various field and this fusion of technology and commerce is becoming quite popular these days. (Jahanshahi Asghar Afshar, Mirzaie Alireza and Asadollahi Amin,2010)¹³¹.

Internet Banking makes various change in the banking sector. This is e-banking which facilitate the customer to make transactions 24*7 without any inconvenience. Internet service providers (ISPs) offer broad range of technologies with different data signaling rate (speed) to access internet. ISP is the company whoma monthly fee is paid in order to use the Internet.

Some other type of modem like DSL and cable modems also works in similar way.

The Banking sector is developing day by day in many areas and one of these areas relate to the digitalization of formerly paper-based processes. Now E-Mails basically known as Electronic mails are preferred as compared to postal mails as these are fast to access and quick to respond. E-mails are especially being applied for non-legal correspondence like account statements, marketing and sales. Banks provide several online services to the customers like credit card bills and other transaction details.

Information and communication technology (ICT) has now become a core of banking sector, while banking industry is the core part of every vigorous economy. There is a great effect of globalization, competition and innovation in banking industry. Information and communication technology (ICT) has in particular brought a complete paradigm shift on the bank's performance and on the customer service delivery in the banking industry. In order to compete with global competition and match the global development, the banks have to focus on the excellence of customer service delivery. Banks also have to invest and focus on ICT services for diminishing the operation cost. As ICT network has many advantages as better, convenience and comfortable service, remote reach, time saving, deliver variety of value added products and services. There is a significant effect of flexible and user friendly banking service on the ICT growth and development. Customer satisfaction and customer service delivery is a key parameter for banks to ascertain that how effective and efficient they achieve their long term objective as customer acquisition, retention and increase share through ICT. The research on the impact of ICT on bank's performance and customer service delivery in the banking industry have been broad. However, few areas, with consumer perspective, are left with less exploratory debate.

ROLE OF ICT IN THE BANKING INDUSTRY

Apparently, there are always potentials of crisis which make the bank endure an insufficiency; advanced ICT supported by a superior mechanism control is required to make certain that ICT has achieved the

required processes insufficiency; thus, advanced information system supported by a superior mechanism control is required to make certain that ICT has achieved the required processes.

The Advancement of ICT and its implementation in banking sector leads to the enormous improvement in this sector globally. For instance the development of worldwide networks has considerably decreased the cost of global funds transfer.

ICT has entirely reorganized the scenario and the magnitude of competition in the banking industry. Following the introduction of online banking, ATMs and card banking, which are the initial milestones of electronic banking, the diffusion of ICT and increased penetration of Internet has added a new challenges and distribution

channel to retail banking: online banking for the delivery of services and products. In the past, banking took place on the High Street. The banking time was limited as branches get open from 10am to 5pm and five days a week Monday to Friday. This was very inconvenient for customers who are working fulltime. Banks had to employ many staff to deal with customers as this was the only way that services could be provided. Banking as a business is no longer just the domain of Traditional time bound banking. The major supermarkets also offer banking services to their customers. Now there are also some banks which has purely online operations with no local branches at all. All this change has come about because of the rise of the internet and widespread access to broadband.

‘Effective communication links and computerized system are a sine qua non for high quality service delivery. Globally there is a quick access to information, if there is any shortage in the market information is circulated quickly through the scattered global network.

Today the banks are now become digitalized and networked. Banks have ejected new delivery channels for their product and services. The delivery channel include direct dial up connection , private networks, public networks etc. and the devices are telephone, personal computer Automated teller machine, smart mobile phone etc. Banks are approaching to customers through ICT banking services such as internet banking, phone banking, mobile Banking, Card banking and inter branch banking. Although the Banks offer the different range of financial product and services vary in their content and sophistication. One can download the banking apps and can easily operate their account from mobile, tablets, ipad, laptop etc. Now a day’s private and foreign bank has open there ATMs in several places in small and big cities.

These ICT services are introduced by banks like ICICI Bank Ltd., HDFC Bank Ltd, Citibank, Global Trust Bank Ltd., AXIS Bank Ltd., Bank of Citibank, Bank of Madura Ltd., Federal bank Ltd etc. The late enterers are Punjab National Bank, Allahabad Bank and State Bank of India. Innovative banks like ICICI Banks Ltd. have move ahead to transaction of funds through electronic communication devices. They allow transfer of funds from one account to another of the banks. Some of the more aggressive such as ICICI Bank Ltd., HDFC Bank and AXIS Banks have turn themselves in a one-stop financial outlets. These banks have knot up with computer training companies, computer manufacturers, Internet Services Providers (ISPs) and portals, for expanding their Net banking services, and for widening their customer base. In 2000 ICICI Bank Ltd. has set up a web-based joint venture with the satyam infoway for online distribution of its retail product and services on the internet.

TELEPHONE BANKING

It is a banking service provided by a financial institution, which permit its customers to access their account over the telephone. Telephone banking is relay on the technology called interactive voice response system (IVRS). This facility can be provided for 24 hour a day, 365days a year. Telephone banking is done through an automated phone answering system with phone keypad response or voice recognition capability. They provide the security to their customers by first authenticate the customer identity by a numeric or verbal password or through security questions asked by a live representative. It offers almost all the features of ATM except the fund transaction. It provide all the above mention attributes

Telephone banking is a cost saving techniques for banks as they can transfer expensive branch-based transactions to automated system. This facility helps the banks to reduce the operation cost and increase their revenues. Mostly all banks adopted this service and they are also providing attractive deals to their customers to make them want to use this automated system willing fully. Some banks provide free telephone calls service but majority of banks provide special telephone number or toll free number which is only charged at the local rate and which will be subsidized by the bank.

AUTOMATED TELLER MACHINE (ATM)

ATM is the alternative banking channel which provides banking facilities to customer without any bank teller. It is an electronic computerized telecommunication device that allow customer to access bank account from other place apart from bank premises. The good thing about ATM is that it provides 24 hour cash withdrawal facility and account balance inquiry without having long queue. Through this channel the transaction occur quickly as sliding the card is faster than writing cheque and it is also more accurate than paying with cash.

INTERNET BANKING

Internet Banking is the type of self service banking. In this customer can access his account with the help of internet through intelligent communication gadgets. Customer finds it time saving and convenient, and for bankers it is cost saving. Customer can access their account through their personal PC, laptops, Tablets etc. Internet has reduced the geographical distance between the cities, states and countries. So there is no requirement to open the branches in each area of the city as now long distant place are connected through internet. Customer perceives Internet banking as usefulness and ease to use than traditional banking service.

Various banks provide their customers the internet banking facility. The bank issues a security code or personal identification number to the customers to access their account through their website. First step of internet banking is to verify the user through its PIN. After the verification user get permission to access their wide range of financial product and services. E- Banking has also led to the emergence of new banks, which operates only through the internet and do not exist physically. Such banks are called Virtual banks or internet only banks.

There are three basic kinds of Internet banking in the marketplace are as following:

Informational- This is the basic level of Internet banking. In this the banks has marketing information about the bank's products and services on a stand-alone server. In this the risk is very low, as informational systems typically have no path between the server and the bank's internal network. This level of Internet banking can be provided by the bank or outsourced. The risk factor is too low as the bank site is informative only. Appropriate controls therefore must be in place to prevent unauthorized alterations to the bank's server or Web site.

Communicative-In this the Internet banking system allows some interaction between the bank's systems and the customer. Initially the interaction system was limited to information based services such as seeking product and services information, enquiring loan information, downloading loan form, check balance online etc because these servers may have a path to access the internal network of the bank which is information based. There are also some other application like fund transaction which are more risky for the bank and customers too.

Transactional-This is a level of Internet banking in which customer are allowed to execute transactions. Since a path typically exists between the server and the bank's or outsourcer's internal network, this is the highest risk architecture and must have the strongest controls. Customer transactions can include accessing accounts, paying bills, transferring funds, etc. Many innovative banks provide this type of banking service.

In today's scenario technology is changing very frequently. Information communication technology has entered into every sector which makes the persons very much techno-savy. Now customer looks or accepts the more convenient path for every work. Banks are adopting advent ways to approach customers as through Web sites, electronic mail, and electronic bill presentment and payment. Age, gender and technology readiness are consider important factors for maintaining a relationship between customer and banks and to evaluate the behavior intention to utilize internet banking. Trust in the bank is also one of the key factor in driving customer's intention. Developing a trust on bank will take several years. The adoption of online banking is not a issue for the customers who have full knowledge about online security issues but in India

there are many or majority of peoples are not techno-savvy and have very less knowledge about these issues. Apart for this in U.S the consumers are highly concern about sharing sensitive personal information such as social security, health, medical and financial data.

MOBILE BANKING

Banks were directed on the regulatory/supervisory issues, registration of customers for mobile banking, to ensure technology standards, interoperability, interbank clearing and settlement arrangements for fund transfers, customer grievance and redressal mechanism and transaction limits in an attempt to ensure safe, secure transfer of funds. Under extant regulatory prescriptions, there is no monetary restriction on fund transfer effected through mobile banking as it is left to the risk perception of each bank and policies approved by their respective boards. In line with these guidelines, banks have been offering mobile banking services to their customers through various channels such as SMS, USSD channel, mobile banking application etc. The committee considered options of using mobile for the merchant payments whereby the merchants on initiating the payment request completes the transaction by accepting an OTP generated by customer on his mobile. The committee also considered a standard and simple process to generate OTP across all banks.

One of the major factors affecting customer on-boarding and usage of mobile banking services is the concern relating to security of transactions effected using the mobile phone. While mobile banking application is an end-to-end encrypted channel, the other access channels viz. SMS, USSD, IVR, are not end-to-end encrypted. However, in order to enjoy the higher level of security available in the application-based mobile banking, the customer's handset has to be GPRS-enabled. Since SMS facility is available on all handsets, the issue of security can be addressed if the SMS can be encrypted end-to-end, thus allaying any concerns relating to lack of security in this channel. In addition to this, another important aspect adding to the concerns on the part of customers relate to how their complaints and grievances will be addressed for transacting on this channel – whether through their bank or through their mobile service provider.

SMS is a popular and widely used channel in mobile phones. It is ubiquitously available in all handsets irrespective of make and model and also GSM and CDMA enabled handsets. Many customers are use too of this SMS channel, which they feel are more convenient They uses services as mobile VAS services such as Cricket, Jokes, Horoscopes, etc. are based on SMS and used widely by customers.

Following are some of the challenges faced with SMS channel for mobile banking by the banks:

- a. Customer needs to know the exact syntax of SMS for performing transaction.
- b. The syntax becomes complex when (i) bank adds more transactions which will end up as different keywords and (ii) when more input parameters are needed to complete the transaction. Under these conditions, it is also difficult to communicate and educate the customer to use the syntax.
- c. The SMS channel is not end-to-end encrypted without having an application on the handset to encrypt the entire SMS. There is a transaction limit as per RBI mobile banking guidelines, of Rs 5,000/- per transaction without end to end encryption.
- d. The SMS remains in the readable form within the sent items on the mobile phone. In case the custody of the customer's handset is obtained, will result into the risk of losing the confidential information to initiate the financial transactions.
- e. The SMS short code or long code for sending SMS transactions is different for each Bank, and needs to be communicated to customer

Because of above challenges, the SMS based mobile banking has not picked up adequately, despite the advantages offered by SMS channel.

USSD is known as Unstructured Supplementary Service Data. It is a mechanism used between GSM cellular and telecom service provider's systems for communication. USSD can be used for various services as WAP browsing, prepaid callback service, mobile-money services, location-based content services, menu-based information services, and as part of configuring the phone on the network. The character limit is 182

alphanumerical character in length in USSD messages. During session these messages create a real time connection. When the connection stays open, one can do two way communications by exchanging a sequence of data. This makes USSD more interactive and advantageous than services that use SMS.¹⁷¹

The Inter-Ministerial Group (IMG) was constituted on November 19, 2009 to work out the relevant norms and modalities for introduction of mobile based delivery model for delivery of basic financial services and to enable finalization of a framework to allow financial transactions using mobile phones.

The IMG had, among other things, recommended that TRAI may draw up guidelines to ensure high availability of associated communication services in mobile banking. Accordingly, based on a consultation with stakeholders, TRAI had issued the Mobile Banking (QOS) Regulations, 2012 on April 17, 2012. The recent TRAI guidelines, it is open to banks to tie up with MNOs to offer these services directly to their customers by getting into arrangements with each of the MNOs. This may be done by the bank with each of the MNO or their service providers. With this, the customer dialing the USSD code will reach the bank's own menu, and the transactions will be routed to the bank directly by MNO. However, in such cases, this facility is extended only to bank customers who are also the subscribers of those MNOs with whom the bank has tied up for USSD channel.

Conclusion

The use of ICT in banking services is aimed at not only providing better services to customer but also to attain competitive advantages among them. Development of a sound and adequate ICT has become a necessity to meet the challenges of growth and diversification of banking industry. ICT has given the bank an opportunity to offer a wide range of services such as ATM, Mobile Banking, e-banking, M-commerce etc to their customers. The concept of Information Communication technology like M-Commerce. Since the main focus of the study is on the role of the ICT in banking sector, the detailed discussion have been made of ICT services in banking industry is given. This chapter also deals with mobile banking, which is essential need of today

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