Influences Prompting the Implementation of Technology: An Analysis

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Abstract

Indian financial system in the pre-reform period (i.e., prior to Gulf crisis of 1991), essentially catered to the needs of planned development in a mixed-economy framework where the public sector had a dominant role in economic activity. The strategy of planned economic development required huge development expenditure, which was met through Government's dominance of ownership of banks, automatic monetization of fiscal deficit and subjecting the banking sector to large pre-emptions – both in terms of the statutory holding of Government securities (statutory liquidity ratio, or SLR) and cash reserve ratio (CRR). Besides, there was a complex structure of administered interest rates guided by the social concerns, resulting in cross-subsidization. These not only distorted the interest rate mechanism but also adversely affected the viability and profitability of banks by the end of 1980s. There is perhaps an element of commonality of such a 'repressed' regime in the financial sector of many emerging market economies. It follows that the process of reform of financial sector in most emerging economies also has significant commonalities while being specific to the circumstances of each country. A narration of the broad contours of reform in India would be helpful in appreciating both the commonalities and the differences in our paths of reforms.

Financial system plays an important role in the economic development of the country. Because of the advent of information technology there is a change in the banking sector which has paved way for the introduction of retail electronic payment system and has progressed in the recent years in various countries and India has left no way behind. Implementation of internet in banking system has modernized the banks. E-Banking is knowledge based and mostly scientific in using the electronic devices of the computer resolution through the extensive use of IT without direct resources to the bank by the customers. The objective of the paper is to examine and analyze the progress made by the internet banking in India. The paper also highlights the challenges faced by Indian banks in adoption of technology. The views of the author are depicted as conclusion at the end.

Keywords: E-Banking, Information Technology, ATM's, RTGS, NEFTs, Debit and Credit Cards.

Introduction

Reform measures were initiated and sequenced to create an enabling environment for banks to overcome the external constraints – these were related to administered structure of interest rates, high levels of pre-emption in the form of reserve requirements, and credit allocation to certain sectors. Sequencing of interest rate deregulation has been an important component of the reform process which has imparted greater efficiency to resource allocation. The process has been gradual and predicated upon the institution of prudential regulation for the banking system, market behaviour, financial opening and, above all, the underlying macroeconomic conditions. The interest rates in the banking system have been largely deregulated except for certain specific classes; these are: savings deposit accounts, non-resident Indian (NRI) deposits, small loans up to Rs.2 lakh and export credit

The banking industry in India has experienced radical changes since independence with the improvements in technology & automation. The banking sector has become highly competitive. To survive & grow in the changing market scenario banks are opting for best in class & latest technologies. Introduction of IT has changed the banking industry from paper & branch banks to digitize & network based banking services. Information technology has become the base of the recent financial sector reforms and has helped the banks in developing leaner and more flexible structure that can respond quickly to the dynamic of a fast changing market. The use of IT in the banking sector has increased beyond ones imagination with features like online loan application, online uploads of documents, net banking online bill payments etc. before couple of decades who would have thought these things could have been possible.

Objective:

This paper seeks

1) To study identify the key factors influencing Indian banking industry in adoption of technology.

2) To study and suggest ways to mitigate the hurdles faced in E-banking.

Internet banking background

The trend has been the creation of service delivery channels through whichconsumers can interact with the banks. Therefore modern banks provide their consumers with increased channel choice, reach out consumers through many routes. As such, ATMs,telephone, internet and wireless channels are now available to the consumers to perform their banking transactions in addition to the traditional branch banking. Banks cannot go back in the future by reducing the number of channels as consumers have become somewhat adapted to and indeed are utilizing a broad range of options (Durkin, 2004)

Evolution Of E-Banking:

The early version of what was considered online banking began in 1981. New York City was the first place in the U.S. to test out the innovative way of doing business by providing remote services as four of its major banks — Citibank, Chase Manhattan, Chemical Bank and Manufacturers Hanover. Evolution Of

Internet banking, both as a medium of delivery of banking services and as a strategic tool for business development, has gained wide acceptance internationally and is fast catching up in India with more and more banks entering the fray. India can be said to be on the threshold of a major banking revolution with net banking having already been unveiled.

In India, Reserve Bank of India outlined the mission to ensure that payment and settlement systems are safe, efficient, interoperable, authorized, accessible, inclusive and compliant with international standards. The Vision is to proactively encourage electronic payment system for ushering in a less cash society in India .Regulation is keen to promote innovation and competition with an intention to help payment system achieve international standards. Various initiatives by Reserve Bank of India, in mid-eighties and early-nineties, resulted in offering technology based solutions. The need evolved to provide cost effective alternative system. Electronic Clearing Service (ECS) was launched in 1990s to cater to bulk and repetitive payments. By September 2008, a new avatar in the form of National Electronic Clearing cell was launched to handle multiple credits to beneficiary accounts. National Electronic Clearing Service (NECS) rides on core banking solution of member banks. The retail funds transfer system was introduced in 1990s to allow electronic transfer of fund for people to people payment. In November 2005, a robust system was launched to allow one to one funds transfer requirement of individuals and corporates. Prepaid instruments allow transaction for goods and services against the value stored on payment instrument. It may be in the form of smart cards, magnetic stripe cards, internet wallets, mobile accounts, mobile wallets and paper vouchers. Consequent to the guidelines in mobile banking, selected banks were permitted to offer the service after receipt of necessary permission from Reserve Bank of India. Indian Retail payments pose significant challenges and opportunities. Based on Payment system vision document released by Reserve Bank of India, the number of non-cash transactions, at 6 per person, is low in India. It is estimated that Government subsidies alone constitute more than Rs.2.93 trillion and electronification has a potential to translate 4.13 billion electronic transactions in a year. The credit of launching internet banking in India goes to ICICI Bank. Citibank and HDFC Bank followed with internet banking services in 1999. The Government of India enacted the IT Act, 2000 with effect from October 17, 2000 which provided legal recognition to electronic transactions and other means of electronic commerce. The Reserve Bank is monitoring and reviewing the legal and other requirements of e-banking on a continuous basis to ensure that e-banking would develop on sound lines and e-banking related challenges would not pose a threat to financial stability.

According to report of RBI in jan 2016, there are 196079 ATM and 1337310 point of sale devices in India. Indian banks offer to their customers following e-banking products and services: Automated Teller Machines (ATMs) Internet Banking Mobile Banking Phone Banking Tele banking Electronic Clearing Services Electronic Clearing Cards Smart Cards Door

Step Banking Electronic Fund Transfer Automated Teller Machines (ATMs): ATMs have become the order of the day in banking. Though they were evolved as novel cash dispensers, now they have emerged as a marketing tool to target the masses. There are more than 60.000 offsite and onsite ATMs of many banks which are nothing but virtual branches, as customers can conduct any transactions through the touch screens. They are user friendly and they have mass acceptability. At present banks have started outsourcing and sharing of ATM services to reduce costs. Most banks are used to cross sell other products also so as to meet the varied requirements of customers.

Banks have started dispensing Railway tickets, Air tickets, Movie tickets etc. through ATMs. Voice activated ATMs ,ATMs with finger prints scanning technology etc are on the move. If they become operative they can save the customers from the hassel of carrying a card .In future a bank's ATM would function like a Kiosk, delivering more on non cash transactions there by reducing fixed and operating costs. Growth in ATMs The geographic reach of ATMs increased further as the number of ATMs installed increased to around 0.2 million as at end March 2016, an increase of 9.7 per cent over the previous year. Public Sector Bank maintained more than a 70 per cent share in the total number of ATMs. Foreign Banks, however, continued to post a decline in the number of ATMs.

Real Time Gross Settlement (RTGS):

Real Time Gross Settlement (RTGS) is an electronic form of funds transfer where the transmission takes place on a real time basis. In India, transfer of funds with RTGS is done for high value transactions, the minimum amount being Rs 2 lakh. The beneficiary account receives the funds transferred, on a real time basis. The main difference between RTGS and National Electronic Funds Transfer (NEFT) is that while transfer via NEFT takes place in batches (with settlements and transactions being netted off), in the case of RTGS, the transactions are executed individually and on gross basis. The customer initiating the funds transfer through RTGS has to have the Indian Financial System Code (IFSC) of the beneficiary's bank, along with the name of the beneficiary, account number and name of the bank. The bank branches, both at the initiating and receiving end, have to be RTGS-enabled for the transaction to be processed. Customers with Internet banking accounts can do RTGS transactions on their own.

National Electronic Funds Transfer (NEFT): National Electronic Funds Transfer (NEFT) is a nation-wide payment system facilitating one-to-one funds transfer. Under this Scheme, individuals can electronically transfer funds from any bank branch to any individual having an account with any other bank branch in the country participating in the Scheme How is RTGS different from NEFT? Timing: As mentioned above, NEFT operates in hourly batches. Currently, it has 11 settlements from 9am to 7pm on weekdays and five settlements from 9am to 1pm on Saturdays. So, in case you initiate a transaction after a settlement time you have no option but to wait till the next settlement time. But that's not the case with RTGS transactions, since they are processed constantly throughout the RTGS business hours. The service window for RTGS at banks is available from 9am to 4.30pm on week days and from 9am to 1.30pm on Saturdays for settlement at the RBI end. Keep in mind that the timings that each bank follows may vary. Amount: As far as NEFT goes, it does not have a minimum or maximum limit of amount you can transfer. But the maximum amount per transaction is limited

to Rs 50,000 for cash-based remittance and remittance to Nepal. As far as RTGS goes, it is mostly meant for large transactions. The minimum amount that can be remitted through it is Rs 2 lakh. RTGS does not have an upper ceiling for transactions. Charges: For NEFT, inward transactions (when you receive funds via NEFT) are free, as no charges are to be levied from the person to whom fund are being transferred to. When you use NEFT to make an outward transaction (when you send funds via NEFT) at a bank branch for amounts up to Rs 1 lakh, the charge is up to Rs 5 plus service tax. For transactions above Rs 1 lakh and up to Rs 2 lakh, the charge is up to Rs 15 plus service tax. for transactions above Rs 2 lakh, the charges can't exceed Rs 25 plus service tax. For RTGS, inward transactions (when you receive funds through RTGS) are free. For outward transactions (when you send funds via RTGS), if the amount is between Rs 2 lakh and Rs 5 lakh, the charges will be up to Rs 30 per transaction. If the amount transferred is above Rs 5 lakh, the charges can't exceed Rs 55 per transaction.

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FEATURES OF ELECTRONIC BANKING:

1. Easy Electronic Fund transfer facility.

2. Better efficiency in Customer relationship management.

3. Making the Payments of bills like electricity, telephone bills, and mobile recharge.

4. It introduces virgin & innovative banking products & services.

5. It can view of balance of accounts and statements;

6. E-banking can bring doorstep services.

7. Balance and transaction history search.

8. Transaction history exports

9. Order mini statements

10. Mobile banking.

11. Pay anyone payments Multi Payments.

12. SMS banking services.

Advantages of Internet Banking:

Round The Clock Banking: E-banking facilities perform of basic banking transactions by customers round the clock globally. World-wide 24 hours and 7 days a week banking services are made possible. In fact there are no restricted office hours for E-banking. Convenient Banking: E-banking increases the customer's convenience. No personal visit to the branch is required .customers can perform basic banking transactions by simply sitting at their office or at home through PC or LAPTOP. Customers can get drafts at their door steps through e-mail call. Thus E-banking facilitates home banking. Low Cost Banking: The operational costs have come down due to technology adoption. The cost of transactions through internet banking is much less than any other traditional mode. Profitable Banking: The increased speed of response to customer's requirements under E-banking vis-a-vis branch banking can enhance customer satisfaction and consequently can lead to higher profits via handling a larger number of customer accounts. Banks can also offer many cash management products for the existing customers without any additional cost. Low –Cost Banking (Establishment): Brick and mortar structure of banking gets converted in to click and portal banking. Banks can have access to a great number of potential customers without the commitment cots of physically opening branches. Hence there is much saving on the cost of infrastructure. Moreover, requirements of staff at the banks get reduced to a great extent.

India's Net banking directory

Bank Name	Technology Vendor	Service offering
ABN AMRO Bank	Infosys (BankAway)	NetBanking
Abu Dhabi Commercial Bank	Infosys (BankAway)	ADCB NetLink
Bank of India	I-flex	BOIonline
Centurion Bank	Logica	MyCBOL
Citibank	Orbitech (now Polaris)	Citibank Online
Corporation Bank	I-flex	CorpNet
Federal Bank	Sanchez	FedNet
Global Trust Bank	Infosys (BankAway)	ibank@gtb
HDFC Bank	i-flex/ Satyam	NetBanking
ICICI Bank	Infosys, ICICI Infotech	Infinity
IDBI Bank	Infosys (BankAway)	i-net banking
IndusInd Bank	CR2	IndusNet
Punjab National Bank	Infosys (BankAway)	
Standard Chartered Bank	In-House	Me Standard Chartered Online
State Bank of India	Satyam/Broadvision	onlinesbi.com
UTI Bank	Infosys (BankAway)	iConnect

E BANKING A KEY ENABLER AND ITS INFLUENCE

Despite of various challenges that are prevailing in context with e-banking in India, the following opportunities are motivating the marketers for implementing e-banking:

Increasing Internet Users & Computer Literacy

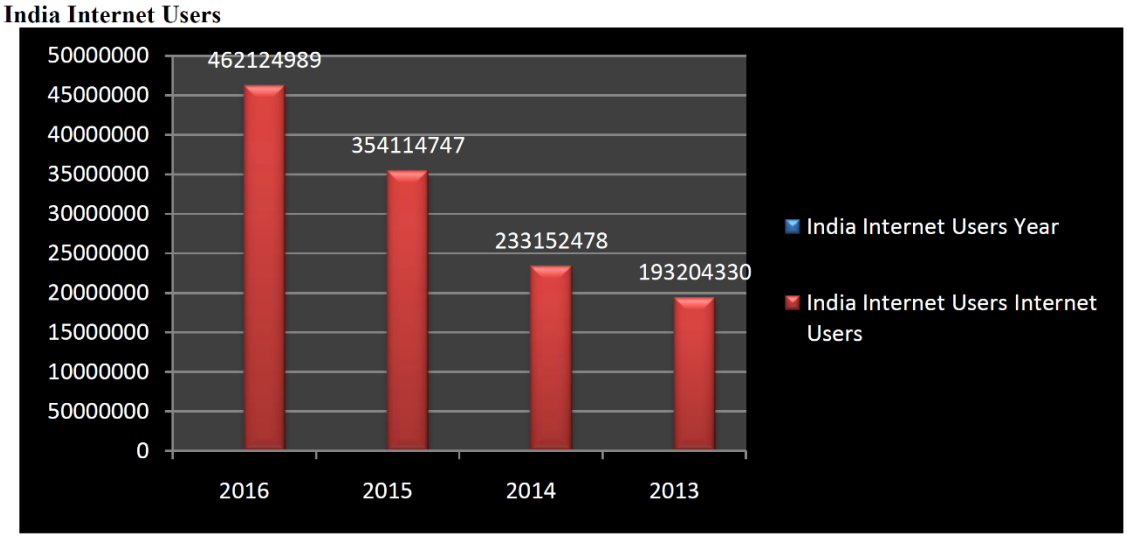
To use internet banking it is very important or initial requirement that people should have knowledge about internet technology so that they can easily adopt the internet banking services. The fast increasing internet users in India can be a very big opportunity and banking industry should en-cash this opportunity to attract more internet users to adopt internet banking services.

Initiatives Taken By Government Agencies For Financial Literacy

Financial literacy and education play a crucial role in financial inclusion, and inclusive growth. A study reported that there is significant impact of financial literacy on use of internet banking, If customers are not financially educated they will simply avoid using new online services and not change their traditional way of banking, thus banks will not be able to convert users into their new online banking strategies. Various government institutions like RBI, SEBI, IRDA and various other market players have taken a number of initiatives on financial education. They have prepared a school curriculum along with various topics including internet banking, banking product and services, net banking to educate the school students, college students, working executives,middle income group, home makers, retired personnel, self-help groups etc.

Competitive Advantage

The benefit of adopting e-banking provides a competitive advantage to the banks over other players. The Implementation of e-banking is beneficial for bank in many ways as it reduces cost to banks, improves customer relation increases the geographical reach of the bank, etc. The benefits of e-banking have become opportunities for the banks to manage their banking business in a better way.



Key Risks

Security Risk: The problem related to the security has become one of the major concerns for banks. A large group of customers refuses to opt for e-banking facilities due to uncertainty and security concerns. According to the IAMAI Report (2006), 43% of internet users are not using internet banking in India because of security concerns. So it's a big challenge for marketers and makes consumers satisfied regarding their security concerns, which may further increase the online banking use.

The Trust Factor: Trust is the biggest hurdle to online banking for most of the customers. Conventional banking is preferred by the customers because of lack of trust on the online security. They have a perception that online transaction is risky due to which frauds can take place. While using e-banking facilities lot of questions arises in the mind of customers such as: Did transaction go through? Did I push the transfer button once or twice? Trust is among the significant factors which influence the customers‟ willingness to engage in a transaction with web merchants

Customer Awareness: Awareness among consumers about the e-banking facilities and procedures is still at lower side in Indian scenario. Banks are not able to disseminate proper information about the use, benefits and facility of internet banking. Less awareness of new technologies and their benefits is among one of the most ranked barrier in the development of e-banking Privacy risk: The risk of disclosing private information & fear of identity theft is one of the major factors that inhibit the consumers while opting for internet banking services. Most of the consumers believe that using online banking services make them vulnerable to identity theft. According to the study consumers‟ worry about

their privacy and feel that bank may invade their privacy by utilizing their information for marketing and other secondary purposes without consent of consumers

Strengthening the public support: In developing countries, in the past, most e-finance initiatives have been the result of joint efforts between the private and public sectors. If the public sector does not have the necessary resources to implement the projects it is important that joint efforts between public and private sectors along with the multilateral agencies like the World Bank, be developed to enable public support for e-finance related initiatives.

Availability of Personnel services: In present times, banks are to provide several services like social banking with financial possibilities, selective up gradation, computerization and innovative mechanization, better customer services, effective managerial culture, internal supervision and control, adequate profitability, strong organization culture etc. Therefore, banks must be able to provide complete personnel service to the customers who come with expectations.

Conclusion

Finally the study concludes that with the passage of time E-banking has gained the momentum in the Indian context. Most of the banks have implemented E-banking facilities which are beneficial to both i.e., banks and the customers. Though there are many challenges and hurdles in the smooth implementation of E-banking system in India but at the same time E-banking is having a bright future. The use of ATMs, Debit and Credit has become a good source of usage of information technology and has paved a way for Digitalization.As the motto of this study is to prove that safety and security is the main challenge of e-banking in India, we found that even the practical users of feel that safer and secure usage of e-banking is a drawback. As discussed above, if the safety measures are adopted by all the banks, e-banking will be a phenomenal implementation by the citizens of India. It might even transform into a revolutionary service by the banking companies.

References

1. Aarma, A., & Vensel, V. (2001). Banks' retail customer satisfaction and

development of Aladwani, A. (2001). Online banking: A field study of drivers,

development challenges, and expectations. International Journal of Information

Management, 21, 213–225. doi:10.1016/S0268- 4012(01)00011-1

2. Burr, W. (1996). Wir informationstechnik die bankorganisation verandern konnte.

Bank und Markt, 11, 28–31.

3. Constantine, G. (2000). Banks provide internet on ramp. Hoosier Banker,

Indianapolis, March, USA

4. Dourish, P., & Redmiles, D. (2002). An approach to usable security based on event monitoring and visualization. Paper presented at proceedings of the 2002 workshop on new security paradigms (pp.75-81), New York.

5. D'souza, Errol (2002): 'How Well Have Public Sector Banks Done? A Note', Economic and Political Weekly, Vol XXXVII, No 9, pp 867-70.

6. Durkin, M. (2004). In Search of the Internet Banking Customer, Exploring the Use of Decision Styles. International Journal of Bank Marketing, 22(7), 484–523. doi:10.1108/02652320410567917

7. Hertzum, M., Juul, N. C., Jorgensen, N., & Norgaard, M. (2004). Usable security and ebanking: Ease of use vis-a-vis security. Technical Report,from www.ruc.dk

http://www.expresscomputeronline.com/20020916/indtrend1.shtml

8. Infoline, I. (2000). Electronic Fund Transfer and Clearing System. Retrieved 25th February 2008, from www.indiainfoline.com

9. Kohli, S S (2003): 'Indian Banking Sector: Challenges and Opportunities', Vikalpa, Vol 28, No 3, July-September, pp 85-89.

10. Liao, S., Shao, Y. P., Wang, H., & Chen, A. (1999). The adoption of virtual banking: An empirical study. International Journal of Information Management, 19, 63–74. doi:10.1016/S0268-4012(98)00047-4

11. Mathew Joseph and Rupa Nitsure (2002): 'WTO and Indian Banking Sector: The Road Ahead', Economic and Political Weekly, June 15, pp 2315-22.

12. Mishra, R. (2001). Internet Banking in India. Retrieved 10th June 2008, from www.banknetindia.com/banking/ibkg.htm