E-DELIVERY CHANNELS IN BANKS-A FRESH OUTLOOK

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ABSTRACT

The present paper exhibits the growth of information technology in various bank groups. In our country in 2009, 79 percent branches are under core banking. The maximum technology is taking place in new generation private sector banks as well as foreign banks. 43.5 percent are off site ATMs in our country. Public sector banks have more on site ATMs where as new private sector banks and foreign banks have more off site ATMs. The paper also suggests some strategies to enhance e delivery channels in banks particularly in public sector banks.

Key Words: Computerization in banks, core banking and e delivery channels in banks

INTRODUCTION

The financial sector reforms introduced in the early 1990s envisaged an effective and strong financial industry. The introduction of these reforms brought with it a healthy competition. Banks felt the need to upgrade their customer service to a much higher plane in order to survive in this competitive environment. They found technology as an ideal tool to achieve this objective. Public sector banks were guided by the recommendations of the Committee for up-gradation of banking technology. Though the pace of the computerization has been moderate, the manner in which public sector banks went in for investments in technology was enough proof of the belief the banks have on technology to secure their future. Till 1980s, banks had only one delivery channel which is the branch presence. Suddenly, technology has opened up options for various delivery channels. Technology-aided products like ATMs, point of sale devices, anywhere banking, smart cards, internet banking and WAP banking, have given the customers to choose his channel of getting catered to his requirements. Consequently, the banks should also have channel-based strategy to serve the customers. Over the years, technology has brought a sea change in the functioning of the banks. The earlier manual system of preparation, have been automated, thereby saving a lot of time and effort.

While looking at the Indian banking scenario it becomes imperative to look at the different constituents as they have some common and some different drivers that influence their strategies. These are the public sector banks, the private sector banks including eight new private sector banks and the foreign banks. They are at different stages of technology adoption partly due to their different legacies as much as the differences in their strategic approach to computerization and technology absorption. The agenda for the different constituents will vary due to organizational differences, the spread and the nature of operations. With the Central Vigilance Commission's (CVC) guidelines almost 70 per cent of the business of public sector banks should be computerized. This is the first step in the technology absorption process. In the second stage, the networking of branches and centralized processing systems has been initiated. Simultaneously, customer centric initiatives for net and mobile and WAP banking also have been under way. Indian banking is at the threshold of a paradigm shift. The applications of technology and product innovations are bringing about structural changes in the Indian Banking system. Off-site ATMs, on-line debit cards and electronic everywhere banking are transforming the traditional concept of branch banking. While banks are striving to strengthen customer relationship and move towards 'relationship banking,' customers are increasingly moving away from the confines of traditional branch banking and seeking the convenience of remote electronic banking. Financial institutions are evolving roadmaps for transforming themselves into "Universal Banking' entities. Information technology and the communications networking systems have revolutionaries the working of banks and financial entities all over the world. It is only recently that information technology has begun to make headway in the offices of commercial banks. With a significant workforce, the public sector banks have not been able to harness the beneficial effects of computerization. Information technology is viewed more as reconciliation equipment for the back office and a ledger mechanism for the front office. This, in effect, constrains public sector banks from providing a 'single window concept' service to their customers in a world where banking is increasingly becoming a consumer-centric service provider. This lack of leveraging of their investment in effect has inhibited their decision-support system, which is a growing threat they encounter from their private sector and foreign counterparts.

Use of Internet in banking

Internet is a network of networks. It is not a single network, but a global interconnected network of networks providing free exchange of information. It implies the most pragmatic use of information technology as medium of universal communication.

It has brought unprecedented changes in society. Spanning the entire globe, the net has redefined the

methods of communication, work, study, education, interaction, entertainment, health, trade and commerce. The versatile facilities and opportunities provided by the Internet and World Wide Web led to the development of electronic commerce. This became possible when the internet transformed from the ordinal system providing static web pages, into interactive two-way system.

E-Commerce

Electronic Commerce is a system, which includes transactions that centre on buying and selling of goods and services to directly generate revenue. E-commerce builds on the advantages of traditional commerce by adding the flexibility offered by electronic networks. E-commerce helps conduct of traditional commerce through new ways of transferring and processing information.

E-Banking

E-banking and electronically providing financial services are branches of electronic commerce. A significant development 20 SCMS Journal of Indian Management, July-September, 2006. Published by School of Communication and Management Studies has been achieved in offering a variety of new and innovative E-banking services to customers today, which were not thought of before.

Corporate Internet Banking (CIB)

It facilitates banking from your desk. At the click of a mouse, we can access your accounts at any branch of the bank and also keep track of your accounts at its numerous branches.

IT banking in rural areas

IT has revolutionized the urban sector of banking manifolds but e-banking in rural areas has not taken much care of. If e-banking is implemented in the rural sector, it would be a great boon to the rural areas. If e-banking is implemented things would be much easier. In certain areas kiosks have been put up. Where extremely easy user interfaces are used so that even very less educated people can carry out transactions. This however is not very common. If e- banking becomes common in the rural areas, the much talked about corruption would end as it would be a direct communication between bankers and the people without the need of mediators who are responsible for all the corruption. It would lead to the commercialization of the rural sector, and would help bridge the divide between the technologically and economically rich urban sectors and would help in easy transfer of funds from the urban sector to the rural sector. The basic structure of the banks is increasingly in conflict with the changing product, delivery and service needs of the customers. The future belongs to financial service providers and not traditional banks. The vast majority of large banks will create value networks.

Current Technology Models

The use of technology has several impacts on the banking business. It provides multiple delivery channels for the service industry; it enables management of data that is critical for business design as well as the reporting requirements both internal and external. It has an impact on the efficiency of operations, impacting the cost of doing business. It is evident from various estimates the new technology enabled delivery channels are attractive from the point of reducing cost of operations. It is estimated that as against rupee one for a branch transaction the costs for Internet transaction is estimated to be Rs.0.1, followed by Rs.0.35 for telephone banking and Rs.0.45 for the ATM Channel. Most of the public sector, private and foreign banks are looking at e-commerce strategies in their net banking channels. They have already initiated IT strategies with commitment of IT budgets to embrace technology.

REVIEW OF LITERATURE

Avasthi & Sharma (2000-01) have analyzed in their study that advances in technology are set to change the face of banking business. Technology has transformed the delivery channels by banks in retail banking. It has also impacted the markets of banks. The study also explored the challenges that banking industry and its regulator face.

B. Janki (2002) analyzed that how technology is affecting the employees' productivity. There is no doubt, in India particularly public sector banks will need to use technology to improve operating efficiency and customer services. The focus on technology will increase like never before to add value to customer services, develop new products, strengthen risk management etc. the study concludes that technology is the only tool to achieve their goals.

Hua G. (2009) investigates the online banking acceptance in China by conducting an experiment to investigate how users' perception about online banking is affected by the perceived ease of use of website and the privacy policy provided by the online banking website. The 110 undergraduate students in Chinese University are involved in the investigation. The study finds that both perceived ease of use and privacy policy have a significant impact on user's adoption of online banking. The study also investigates relative importance of perceived ease of use, privacy, and security. Perceived ease of use is of less importance than privacy and security. Security is the most important factor influencing user's adoption. The study also discusses the implications of these results and limitations.

Jalan, B. (2003), IT revolution has brought about a fundamental transformation in banking industry. Perhaps no other sector has been affected by advances in technology as much as banking & finance. It has the most important factor for dealing with the intensifying competition & the rapid proliferation of financial innovations.

Mittal, R.K. & Dhingra, S. (2007) studied the role of technology in banking sector. They analyzed investment scenario in technology in Indian banks but this study was related to the time period before the Information Technology Act and at that time technology in Indian banks was very low. But both the researchers nicely presented their views.

Padhy, K.C. (2007) studied the impact of technology development in the banking system and he also highlights the future of banking sector. The core competencies will provide comparative advantages.

Rao (2002) analyzed the impact of new technology on banking sector. The technology is changing the way the business is done and opened new vistas for doing the same work differently in most cost effective manner. Tele-banking and internet banking are making forays such that branch banking may give to home banking. He provided some policies to protect their profitability.

Shastri, R.V. (2000), studied the emergence of IT in banking sector. He highlighted some challenges faced by banks regarding IT implementation. This paper also highlighted future outlook of IT oriented banks.

Shetty, V.P. (2000), technology is dramatically altering the ways in which financial services are delivered to consumers and continue to do so in future too. Electronic banking or the use of computers and electronic technology as a substitute for traditional paper based transactions, is here to stay.

Uppal, R.K. & Kaur, R. (2007) studied the impact of Information Technology on various parameters of bank performance and concluded that Indian banking industry is fastly moving towards IT. The future of e-channels is very bright.

Research Gap

The review of literature exhibits in our country a few studies have been conducted about information technology and its impact on banking sector. The present paper is addition towards information technology and Indian banking sector.

OBJECTIVES, RESEARCH METHODOLOGY AND DATABASE

Objectives

- To study and analyze the extent of technological developments in various bank groups.
- To study and analyze the challenges before Indian banks especially public sector banks and suggest some strategies to face these challenges.

Research Methodology

Research Design

The present study is concerned with the Indian banking industry and exhibits growth of e delivery channels in various bank groups. The present paper finds the share of each e delivery channels from total branches. Ultimately, suggests some strategies for the enhancement of technology in banks.

Sample Design

The universe of the study is Indian banking industry. The Indian banking industry has been divided into five major bank groups.

- Nationalized Banks G-I
- State Bank Group G-II
- Old Private Sector Banks G-III
- New Private Sector Banks G-IV
- Foreign Banks G-V

Database

- Report on Trend and Progress of Banking in India, 2008-09 RBI, Mumbai
- Performance Highlights, Various Issues, 1996-2008 IBA, Mumbai.

Parameters of Study

- Computerization in Public Sector Banks
- Branches and ATMs of Scheduled Commercial Banks
- Transactions through Retail Electronic Payment Methods
- ATMs as a percentage of Total Branches
- Internet Banking Branches as a percentage of Total Branches
- Mobile Banking Branches as a percentage of Total Branches
- Tele Banking Branches as a percentage of Total Branches

IV

Results and Discussion

Use of technology in expanding banking is one of the key focus areas of the Reserve Bank. The banks in India are using Information Technology (IT) not only to improve their own internal processes but also to increase facilities and services to their customers. Efficient use of technology

has facilitated accurate and timely management of the increased transaction volume of banks that comes with a larger customer base. One of the visible outcomes of this is that banks are aiming to serve the hitherto unbaked population of the country at their doorstep by undertaking large scale financial inclusion by offering specially designed, simple, safe, yet technology based products.

Computerization in Public Sector Banks

One of the major achievements during the year under review was the increase in coverage of the number of branches providing Core Banking Solution (CBS). The total number of branches of public sector banks which have implemented CBS increased from 35,464 as on March 31, 2008 to 44,304 as on March 31, 2009. The process of computerization of the banking sector, which is regarded as the precursor to other technological initiatives, is almost on the completion stage. Public sector banks continued to spend large amounts on computerization and development of communication networks. In fact the growth rate of amount spent by public sector banks on computerization, which had shown some deceleration in 2007-08, accelerated during 2008-09. The proportion of public sector bank branches which achieved full computerization increased from 93.7 per cent as at end-March 2008 to 95.0 per cent as at end-March 2009. Continuous progress is being made by banks to achieve a higher target, as more number of banks have moved into the 'more than 90 per cent but less than 100 per cent' category

Table 1
Computerization in Public Sector Banks

Category	2008	2009
Fully Computerized Branches (i+ii)	93.7	95.0
(i) Branches Under Core Banking Solution	67.0	79.0
(ii) Branches already Fully Computerized	26.6	15.6
Particularly Computerized Branches	6.3	5.0

Source: Report on Trend and Progress of Banking in India 2008-09 RBI, Mumbai

Branches and ATMs of Scheduled Commercial Banks

During 2008-09, the maximum average of ATMs as a percentage of total branches has been observed in foreign bank groups i.e. 357.3 percent as compared to other bank groups While, the ATMs installed by new private sector banks and foreign banks were more than 3 times of their respective branches, the ATM to branch ratio was much lower for other bank groups, Of all the ATMs installed in the country at end-March 2009, new private sector banks had the largest share in off-site ATMs, while nationalized banks had the largest share in on-site ATMs

Table 2
Branches and ATMs of Scheduled Commercial Banks
(As at end-March 2009)

Bank Groups	Number of Bank/Branches					Number of ATMs			Off-Site ATMs % Total ATMs	ATMs % of Branches
	Rural	Semi-Urban	Urban	Metro-Politan	Total	On-Site	Off-Site	Total		
Nationalized Banks	13,381	8,669	8,951	8,375	39,376	10,233	5,705	15,938	35.8	40.2

State Bank Group	5,560	4,835	3,043	2,624	16,062	7,146	4,193	11,339	37.0	29.0
Old Private Sector Banks	842	1,554	1,344	933	4,673	1,830	844	2,674	31.6	56.9
New Private Sector Banks	271	1,084	1,371	1,478	4,204	5,166	7,480	12,646	59.2	296.6
Foreign Banks	4	4	52	233	293	270	784	1,054	74.4	357.3
Total	20,058	16,146	14,761	13,643	64,608	24,645	19,006	43,651	43.5	67.0

Source: Same as Table 1

Transactions through Retail Electronic Payment Methods

In recent years, the use of electronic payments has witnessed manifold increase, partly reflecting increased adoption of technology. The growth of volume of transactions directed through electronic payment method, however, decelerated from 41.4 per cent in 2007-08 to 24.8 per cent in 2008-09. More strikingly, the value of transactions directed through electronic payment method declined sharply during 2008-09. The entire decline is due to -87.5 per cent fall in value of transaction in respect of ECS-credit. It is noteworthy in this regard that the sharp rise in ECS credit value during 2007-08 was mainly due to the refund of the oversubscription amount of IPOs floated by companies using electronic mode as mandated by the stock exchange. Therefore, the decline in value of ECS credit transactions during 2008-09 may be interpreted more as returning to normal trend rather than a matter of concern.

Table 3

Transactions through Retail Electronic Payment Methods

Type	Volume of transactions (000's)			Growth in volume (per cent)		Value of transactions (Rs. Crore)			Growth in value (per cent)	
	2006-07	2007-08	2008-09	2007-08	2008-09	2006-07	2007-08	2008-09	2007-08	2008-09
ECS-Credit	69,019	78,365	88,394	13.5	12.8	83,273	7,82,222	97,487	839.3	-87.5
ECS-Debit	75,202	1,27,120	1,60,055	69.0	25.9	25,441	48,937	66,976	92.3	36.9
EFT/ NEFT	4,776	13,315	32,161	178.8	141.5	77,446	1,40,326	2,51,956	81.2	79.6
Credit Cards	1,69,536	2,28,203	2,59,561	34.6	13.7	41,361	57,984	65,356	40.2	12.7
Debit Cards	60,177	88,306	1,27,654	46.7	44.6	8,172	12,521	18,547	53.2	48.1
Total	3,78,710	5,35,309	6,67,825	41.4	24.8	2,35,693	10,41,990	5,00,322	342.1	-52.0

Source: Same as Table 1

ATMs as a percentage of Total Branches

ATMs are becoming more popular in this world of technology among all the bank groups. This table indicates the ATMs as a percentage of total branches. It is a tremendous achievement of all bank groups that average of ATMs has been increased in all bank groups during e-banking period. Study reveals that G-IV bank groups have maximum average of ATMs during e-banking period as compared to other bank groups.

Table 4: ATMs as a percentage of Total Branches

Non E-banking Period(1996-97 to 2000-01)					
Bank Group	G-I	G-II	G-III	G-IV	Industry
Average	0.07	0.02	0.46	0.79	0.04
S.D.	5.25	5.85	0.22	0.24	5.00
C.V. (%)	7500	29250	47.82	30.37	12500
E-banking Period(2001-02 to 2007-08)					
Average	0.20	0.30	0.65	2.00	0.11
S.D.	2.96	0.18	0.19	0.61	4.82
C.V. (%)	1480	60	29.23	30.5	4381.8

Source: Performance Highlights, Various Issues, 1996-2008 IBA, Mumbai.

Internet Banking Branches as a percentage of Total Branches

Internet banking is also becoming more popular in this world of technology among all the bank groups. This table indicates the internet banking as a percentage of total branches. It is a remarkable progress of all bank groups that average of internet banking has been increased in all bank groups during e-banking period. The maximum average of internet banking has been new private sector bank group than other bank groups.

Table 5: Internet Banking Branches as a percentage of Total Branches

Non E-banking Period(1996-97 to 2000-01)					
Bank Group	G-I	G-II	G-III	G-IV	Industry
Average	2.63	2.54	44.36	28.96	3.82
S.D.	1.51	3.08	24.97	10.68	1.13
C.V. (%)	57.41	121.25	56.28	36.87	29.58
E-banking Period(2001-02 to 2007-08)					
Average	11.44	15.41	73.76	52.02	10.63
S.D.	4.03	4.70	6.81	14.69	2.94
C.V. (%)	35.22	30.49	9.23	28.23	27.65

Source: Same as Table 4

Mobile Banking branches as a percentage of Total Branches

Mobile banking has drastically cut down the cost of providing service to the customers. For service providers M-banking offers the next surest way to achieve growth so M-banking is more popular in all bank groups. This table exhibits the M-banking as a percentage of total branches. It is a tremendous achievement of all bank groups that average of M-banking has been more increased in all bank groups during e-banking period. The maximum average of M-banking has been new private sector bank group as compared to other bank groups.

Table 6: Mobile Banking Branches as a percentage of Total Branches

Non E-banking Period(1996-97 to 2000-01)					
Bank Group	G-I	G-II	G-III	G-IV	Industry

Average	1.95	2.30	38.57	24.42	2.27
S.D.	1.23	3.26	23.66	11.47	0.94
C.V. (%)	63.07	141.73	61.34	46.96	41.40
E-banking Period(2001-02 to 2007-08)					
Average	8.93	12.91	67.88	50.44	7.25
S.D.	4.76	3.79	6.45	14.43	2.80
C.V. (%)	53.30	29.35	9.50	28.60	38.62

Source: Same as Table 4

Tele Banking Branches as a percentage of Total Branches

Tele banking is also becoming more popular in this world of technology among all the bank groups. This table indicates the tele-banking as a percentage of total branches. It is a remarkable progress of all bank groups that average of tele-banking has been more increased in all bank groups during e-banking period. The maximum average of tele-banking in new private sector bank group than other bank groups.

Table 7: Tele Banking Branches as a percentage of Total Branches

Non E-banking Period(1996-97 to 2000-01)					
Bank Group	G-I	G-II	G-III	G-IV	Industry
Average	0.99	2.13	28.38	28.56	1.84
S.D.	0.63	2.74	15.32	10.44	0.21
C.V. (%)	63.63	128.63	53.98	36.55	11.41
E-banking Period(2001-02 to 2007-08)					
Average	5.22	12.59	52.27	47.58	6.02
S.D.	2.25	3.65	9.51	9.31	2.90
C.V. (%)	43.10	28.99	18.19	19.56	48.17

Source: Same as Table 4

Challenges Ahead

Increased competition or lowering of costs that banks need to deal with

These issues have always been there and all banks have to cope with these. In today's world of narrowing margins, a serious look at costs definitely is an imperative. One obviously has to ensure product superiority and operational excellence. However, to my mind, the biggest challenge today is to establish a customer intimacy without which the other two are meaningless. In the financial world, product superiority does not last for long as it is relatively easy to copy products. So, the real strength comes from operational excellence and understanding the customer and developing rapport with him.

The CEO and CFO involved in the decision for purchasing/upgrading a bank's infrastructure

We have a well-established Discretion Policy wherein for budgeted items executives have discretion available to commit expenditure. However, for key and large expenses, the respective business head and CFO get involved in the decision process. For larger expenditure amounts the CEO also participates in the decision process. Expenditure requests invariably originate from the respective businesses.

Techniques used to ensure that consumer satisfaction and lower costs are achieved

Notwithstanding what banks may feel about their products, customers utilize these products only for a few minutes. The key lies in making those few minutes convenient, efficient and effective. There are multiple ways to achieve these objectives. For instance, we introduced welcome kits wherein, a customer who comes in to open an account with our bank walks out with a fully enabled account,

debit card, cheque book, net banking account, and phone banking account—in a matter of minutes. Another key area that I can immediately think of is integration of services. Why should a customer receive multiple mailers from the bank when he can instead receive integrated financial statements? Why should a customer have multiple login IDs for different electronic channels?
These measures not only lead to customer convenience, they also help the banks save on cost. Identifying customer needs and tailoring products to match these needs is another area where a lot can be done.

Factors of taken into account when planning IT infrastructure budgets every year
IT infrastructure budgets take a medium term (18 to 24 months) view of the requirements. While cost optimization plays an important role, the key considerations are on high-availability, scalability and optimal level redundancy of the infrastructure. The key lies in making this infrastructure transparent to the end user.

The mistakes that banks have made in the past in terms of over investment in IT, under utilization of resources and so on
Indian Banks have at any stage done over investment in technology. Expenditure has been right or perhaps less than what has been the need of the hour. However, expecting tangible and time-bound returns is today's minimum expectation from the investments in technology. Mistakes can be that there was a lot of emphasis on doing things in-house and an improper alignment of technology with business requirements. Another issue is that of proper synchronization of tech innovations with businesses processes and rollouts. Without this, however good a product or service may be, sales do not result. At the end of the day, anything that does not result in sales is not meaningful.

Technology
Our public sector banks are lagging behind in technology when we compare them with their counterparts. Public sector banks having vast branch network in rural, poor and uneducated areas, to which the level of automation and efficiency of services are immaterial. Still, these areas lack the basic infrastructure, so how it is possible to introduce e-services/technology. Hence there is a need to make capable at least to compete with our new private sector banks.

Poor Human Resource Management
The profitability of any organization depends on the productivity of its people, as they are the real strength of that organization. New private sector banks and foreign banks have understood this mantra and hence appointing people with fresh and creative mind with full of knowledge of latest technology. Approximately 90 pc of their staff is young with fresh brains. But public sector banks are overloaded with much experienced senior staff but with old hands who never ready to change accordingly. Now days, it is the need of the hour to develop and manage the human resources to make adaptable to the changing environment. It is a big challenge for these banks that how to manage their human capital to make it productive, because unproductive staff is only burden on business and hence weaken banks as compare to private sector and foreign banks.

Investment
Huge investments have to be made for building the infrastructure to ensure ROI. This infrastructure has to be made available 24 hours a day and all days through the year. Technology cannot afford to have downtime.

Strategies

- Public sector banks should adopt the latest technology to provide e-services as need of the hour. It will also help to reduce their burden of extra establishment expenditure.
- Technology should be cost-effective, customer-driven and especially implemental in the real working
- Appoint young employees with fresh and creative minds expert in latest technology and trained the other ones also.
- Public sector banks should make their own effective competitive strategies taking into consideration the strategies of new private sector and foreign banks.
- Introduce innovative and globally accepted products/services.
- The Govt. of India should launch a campaign to educate public about IT/Computerization and its implications. This will eradicate any negative attitude or suspicion in public regarding the effect of IT/Computerization and any resistance that may hinder this process.
- *Automated Teller Machines:* Another major chunk of customers visit the branches for the purpose of cash withdrawals/deposits. Many a times they have to stand in the long queues. Many a times important clients, having large value business are not able to get proper time and attention, because of the rush at the bank counter. Also, branches have business hours and such transactions at branches are possible only with in those hours. Automated teller machines have been able to address this problem to a large extent. They provided convenience to the customers by giving them the flexibility of getting their need fulfilled at any time chosen by them. Also, the need for standing in long queues has been done away with. Banks too are able to focus on the other types of business, with the reduction in the number of clients waiting in the queues. Sharing of ATM network between the banks is a further advancement in this area. A customer will be benefited as he will be able to transact his business from any ATM nearest to him, irrespective of his bank. Banks will be able to reach maximum number of customers without having to make large investments.
- *Remote Access:* Corporate clients, who give voluminous business to banks, also need a delivery channels suited to their specific requirement. Anybody familiar with branch banking would have noticed the presence of one or two persons of a corporate in the branch every day, monitoring the position of the accounts. This special need has been met through remote access. The corporate clients is given connectivity with the bank's database and he, by logging in from his remote location, is able to get details of his account and even download the statement.
- *Mobile Banking:* This is advancement for financial services providers; the mobile phone has introduced new channels to reach customers-one that is personal, easy to use, secure, location and time independent. Bank branches are increasingly expensive to operate, and customers are increasingly demanding-wanting to do business when it is most convenient for them. The new banking application is loaded onto the SIM card of the mobile and alters the handset menu. The customer gets a banking option on the mini browser menu with access to the following services: Balance enquiries, Change PIN, Statement, Payment, Transfer and Activate/Register.

The main points to be kept in mind while investing in IT are:

- A well defined Return on Technology investment
- A visible addition to customer value
- Improvement of operational efficiencies leading to customer convenience and cost savings

Implications

After making a comprehensive study regarding the use of various IT delivery channels of various products and services in banks, this study will become very useful for those banks which have still not fully adopted IT in banks, particularly public sector banks. They can modify some services, delivery channels as per the requirements of the customers, it will further helpful to improve the CRM in banks. This study will be more useful for the planners, policy makers, banking industry and those who are interested in banking studies.

Future Outlook

No doubt, technology is taking place but this speed is quite slow in Indian banking industry particularly, in public sector banks. The future outlook demands heavy investment in information technology.

Conclusion

The study concludes that more developments in technology are taking place. In the face of the new competitive pressures, inherent rigidities in public sector banks to enhance serious challenges. The gap between partially using IT in banks and fully using IT in banks has widened. Financial sector reforms experienced that as compared to new private sector banks and foreign banks, in public sector banks very less IT has taken place. This IT in new private sector and foreign banks is becoming threat and also motivation for Indian public sector banks. Thus in this competition those banks will survive in the future which will manage technology infrastructure.

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