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# Financial Designing: Innovations in Indian Banking Sector

**Dr.Ajit Kumar Bansal (Professor & Dean)**

**E Max Business School, Ambala (Hr.)**

**ajit.bansal5@gmail.com**

## ABSTRACT

Indian Banking Sector is facing numberless challenges like changing needs and perceptions of customers, new regulations from time to time and great advances in technologies. The pressure of meeting these challenges have compelled banks to introduce the innovative ways of doing business. The present research paper is an attempt on how the technology has transformed the face of banking in India. In the past decades India's banking system has seen some major financial innovations which lead to tremendous improvements in banking services and operations. ECS, RTGS, EFT, NEFT, ATM, Retail banking, Debit and Credit cards, free advisory services, online banking, mobile banking etc are the various innovations in banking and financial sector. This paper also highlights the benefits and challenges of changing banking trends.

**Key Words: Financial, Designing, Innovations, Technological, Securitization**

## Introduction

The commercial banking business has changed dramatically over the past 25 years, due in large part due to technological change. Advances in telecommunications, information technology and financial theory and practice have jointly transformed many of the relationship focused intermediaries of yesteryear into data-intensive risk management operations of today. Consistent with this, we now find many commercial banks embedded as part of global financial institutions that engage in a wide variety of financial activities.

To be more specific, technological changes relating to telecommunications and data processing have spurred financial innovations that have altered bank products and services and production processes. For example, the ability to use applied statistics cost-effectively (via software and computing power) has markedly altered the process of financial intermediation. Retail loan applications are now routinely evaluated using credit scoring tools, rather than using human judgments. Such an approach makes underwriting much more transparent to third parties and hence facilitates secondary markets for retail credits (e.g., mortgages and credit card receivables) via securitization. Statistically based risk measurement tools are also used to measure and manage other types of credit risks- as well as interest rate risks-on an ongoing basis across entire portfolios. Indeed, tools like value-at-risk are even used to determine the appropriate allocation of risk-based capital for actively managed portfolios.

It will describe how technological change has spurred financial innovations that have driven the changes in commercial banking over the past 25 years.

The various innovations in banking and financial sector are ECS, RTGS, EFT, NEFT, ATM, Retail Banking, Debit & Credit cards, free advisory services, implementation of standing instructions of customers, payments of utility bills, fund transfers, internet banking, telephone banking, mobile banking, selling insurance products, issue of free cheque books, travel cheques and many more value added services.

## II. 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 regulators face.

*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.

*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.

*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.

*Hua G. (2009)* investigates the acceptance in China by conducting an experiment to investigate how users' perceive online banking is affected by the e online banking website.

*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.

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.

## III. OBJECTIVES OF THE STUDY

- 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 it.

## IV. INNOVATIONS IN BANKING SECTOR

### ATM

An automated teller machine (ATM) is a computerized telecommunications device that provides a financial institution's customers a secure method of performing financial transactions in a public space without a human clerk or bank teller.

ATM can be interior (i. e., located in the branch premises) or exterior (located anywhere outside the branch premises). Banks need not obtain permission of the RBI for installation

of ATMs at branches and extension counters for which they hold licenses issued by the Reserve Bank. They can also install offsite ATMs without RBI approval.

However, they should obtain a license from the regional office of DBOD (Department of Banking Operations and Development) of RBI, before operationalizing the ATM, so as to be in conformity with section 23 of the Banking Regulation Act.

The penetration of ATMs across the country increased in 2012-13 with the total number of ATMs crossing 1, 00,000, clocking a double digit growth during the year This growth was driven primarily by private sector banks, with their share in total ATMs picking up rapidly to about 38 per cent. Also Over the years, the relative growth in off-site ATMs has been much more than that of on-site ATMs. As a result, by 2013-14, off-site ATMs accounted for more than half the total ATMs in the country as shown in Table 1:

**ATMS OF SCHEDULED COMMERCIAL BANKS (AS at end MAR, 2014)**

| S.No | Bank Group                | On site ATM | Off site ATM | Total ATM |
|------|---------------------------|-------------|--------------|-----------|
| A    | Public Sector Bank        | 40241       | 29411        | 69652     |
|      | • Nationalized Bank       | 20658       | 14701        | 35359     |
|      | • SBI Group               | 19583       | 14710        | 32591     |
| B    | Private Sector Bank       | 15236       | 27865        | 43101     |
|      | • Old Private Sector Bank | 4056        | 3512         | 7566      |
|      | • New Private Sector Bank | 11180       | 24353        | 35535     |
| C    | Foreign Bank              | 283         | 978          | 1261      |
| D    | All SCB's (A+B+C)         | 55760       | 58254        | 114014    |

**Source:** Report on Trend & Progress of Banking

**Debit Card and Credit Card**

A debit card is an electronic card issued by a bank which allows bank clients access to their account to withdraw cash or pay for goods and services. This type of card, as a form of payment, also removes the need for cheques as the debit card immediately transfers money from the client's account to the business account.

A credit card is issued by a financial company giving the holder an option to borrow funds, usually at point of sale. Credit cards charge interest and are primarily used for short-term financing. Interest usually begins one month after a purchase is made and borrowing limits are pre-set according to the individual's credit rating.

There has been growth in issuance of debit and credit cards by public and private sector banks. However Debit cards are a more popular mode of electronic money than credit cards. So far, debit cards have been a more popular mode of electronic money than credit cards in India as shown in Table2. While public sector banks have been frontrunners in issuing debit cards, new private sector banks continue to lead in the number of credit cards issued (Table 2).

**Table 2: Credit and Debit Cards Issued by Scheduled Commercial Banks (As at end-March 2014)(In millions)**

| S.No | Bank Group | Outstanding No Credit Cards |      | Outstanding No Debit Cards |      |
|------|------------|-----------------------------|------|----------------------------|------|
|      |            | 2013                        | 2014 | 2013                       | 2014 |
|      |            |                             |      |                            |      |

|   |                     |      |      |       |       |
|---|---------------------|------|------|-------|-------|
| A | Public Sec. Banks   | 3.1  | 3.5  | 214.6 | 260.6 |
|   | * Nationalised Bank | 0.8  | 0.9  | 97.7  | 118.6 |
|   | * SBI Group         | 2.2  | 2.6  | 112   | 136.4 |
| B | Pvt Sec. Banks      | 9.7  | 11.1 | 60    | 67.3  |
|   | * Old Pvt Sec Banks | 0.04 | 0.04 | 13.9  | 15.4  |
|   | * New Pvt Sec Banks | 9.6  | 11.1 | 46    | 51.9  |
| C | Foreign Bank        | 4.9  | 5    | 3.8   | 3.3   |
| D | All SCB's (A+B+C)   | 17.7 | 19.5 | 278.4 | 331.2 |

**Source:** Report on Trend & Progress of Banking

### NEFT

NEFT is an electronic fund transfer system, which facilitates transfer of funds to other bank accounts in over 63000 bank branches across the country. This is a simple, safe, fastest & cost effective way to transfer funds especially for retail remittances.

**Table 3: Volume and Value of Electronic Transactions by SCBs (Volume in million, Value in Rs. Billion)**

**Source:** Report on Trend & Progress of Banking

### RTGS

Real time Gross Settlement introduced in India since Mar, 2004 is a system through which electronics instructions can be given by banks to transfer funds from their account to the account of another bank. This system is maintained & operated by RBI.

There has been sustained growth in both the volume and value of all types of electronic transactions of SCBs in general and debit transactions in particular in recent years, a trend that continued in 2013-14 (Table 3). Both RTGS (meant for large value payments system, processing both customer and interbank transactions of ₹2, 00,000 and above) and NEFT (a retail system) consistently posted double digit growth in terms of the volume of

## V. Challenges Ahead

### Control of Cost

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 cost is definitely 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.

### Involvement of Top Management:

We have a well-established Discretion Policy wherein for budgeted items executives have discretion to commit expenditure. However, for key and large expenses, the respective

| Type of Transaction | Volume  |         | Percentage | Volume  |         | Percentage |
|---------------------|---------|---------|------------|---------|---------|------------|
|                     | 2012-13 | 2013-14 | 2013-14    | 2012-13 | 2013-14 | 2013-14    |
| ECS Cr.             | 121.5   | 122.2   | 0.6        | 1838    | 1771    | -3.6       |
| ECS Dr.             | 162     | 177     | 5 7.2      | 834     | 1083    | 29.9       |
| Credit Card         | 320     | 397     | 23.9       | 966     | 1230    | 27.3       |
| Debit Card          | 328     | 469     | 43.2       | 534     | 743     | 39.8       |
| NEFT                | 226     | 394     | 74.3       | 17904   | 29022   | 62.8       |
| RTGS                | 55      | 69      | 24.5       | 539308  | 676841  | 25.5       |



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.

**The mistakes that banks have made in the past in terms of over investment in IT, underutilization 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 are appointing people with fresh and creative mind. 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 are never ready to change accordingly. Now a 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.

**VI. Strategies**

- (i) 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.
- (ii) Technology should be cost-effective, customer-driven and applicable in the real world.
- (iii) Appoint young employees with fresh and creative minds expert in latest technology.
- (iv) The Public sector banks should make their own effective competitive strategies taking into consideration the strategies of new private sector and foreign banks.
- (v) Introduce innovative and globally accepted products/services.
- (vi) 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.
- (vii) *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 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 within 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.

- (viii) *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 are 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.

- (ix) *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.

### **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.

### VII Conclusion

The study concludes that more are more developments are taking place in technology. In the face of the new competitive pressures, there are inherent rigidities in public sector banks which is going rise to serious challenges.

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