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Indian Banking: Moving Towards Information Technology

The Problems and the Solutions

ABSTRACT

The process of economic liberalization in India initiated in 1991, has significant impact on banking industry of the country. Information Technology (IT) revolution has not only changed the way banking business is done but also widened the range of products/services offered by the banks. The present paper highlights the extent of computerization, core banking solutions, e-delivery channels in different banks and bank groups. The paper analyses the impact of computerization and e-delivery channels on the comparative performance of different bank groups. The performance of these bank groups is very high which are fully computerized and providing services through e-delivery channels. Ultimately, the paper finds some areas of bank problems in e-age and their solutions and suggests some areas of comprehensive research.

1. INTRODUCTION

The concept of banking has drastically changed from a business dealing with money transactions alone to a business related to information on financial transactions. This implies that IT will play a critical role in the years to come by providing better customer services, presumably at a lower cost (Uppal & Rimpi, 2006, p.7). Several innovative IT based services such as ATMs, EFT, anywhere-anytime banking, smart cards, net-banking etc. are no longer alien concepts to Indian banking customers (Rangarajan, C., 2000, p.4).

Technology has played a significant role in improving the efficiency of the financial system in recent years. It is also being viewed as an excellent tool for providing a fairly exhaustive range of products and extending banking facilities to the vast multitude of population. Indian banking sector has made a quantum leap forward in terms of switching over from paper-based transactions, which include

: use of currency notes, cheques or challans
: to electronic means. Computerization of
: banking business got high importance in
: 2005-06. Between Sept. 1999 and
: March 2006, public sector banks incurred
: an expenditure of Rs.10676 Cr. on
: computerization and development of
: communication networks (Report on
: Trend & Progress of Banking in India,
: 2005-06, p.97). Today, in India, the bank
: customers have done away with the old-
: fashioned passbook, and the customer
: can have a statement of his transaction
: from the ATMs (Banerjee, 2005, p.73).

2. SCHEME OF THE PAPER

: After a brief introduction of the
: theme, Section II fixes the objectives,
: data base and research methodology.
: Section III highlights the extent of
: computerization, CBS and ATMs and the
: performance of various bank groups.
: Section IV finds some areas of bank
: problems and their solutions while section
: V concludes the paper and bring out
: some new areas for comprehensive
: research.

3. OBJECTIVES

- To study analyze the recent trends in information technology in different bank groups.
- To study the paper based verses electronic transactions in banks in IT era.
- Areas of bank problems and their solutions in e-age era.

4. RESEARCH METHODOLOGY

The universe for the study is Indian banking sector and five major bank groups have been consider to draw the required results such as Nationalized Banks (G-I), SBI & its associates (G-II), Old Private Sector Banks (G-III), New Private Sector Banks (G-IV) and Foreign Banks (G-V). Time period for the study is from 2004-05 to 2005-06.

Database

Report on Trend and Progress in 2005-06 and IBA, Performance Highlights, 2000-06.

5. COMPUTERIZATION IN PUBLIC SECTOR BANKS AND CORE BANKING SOLUTIONS

The number of branches providing ‘core banking solutions (CBS)’ has increased significantly in recent years. The CBS provides a host of benefits such

- as ‘anywhere banking’, ‘anywhere access’ quick funds movement at optional costs and in an efficient manner, while new private sector banks, foreign banks and a few old private sector banks have already put in place core banking solutions, PSBs are increasingly adopting similar systems.
- The total number of branches providing CBs increased from 11.00 pc as on March 31, 2005 to 28.9 pc as on March 31, 2006. Many of the PSBs having fully computerized branches adopted CBS during the year.

More than 95 pc branches of PSBs at end-March 2006 were fully or partially computerized. Out of 27 PSBs, branches of as many as ten PSBs were 100 pc computerized. Andhra Bank, Bank of Baroda, Corporation Bank, SBI, SBBJ, State Bank of Hyderabad, State Bank of Mysoor, SBP, State Bank of Saurashtra, State Bank of Travancore), while branches of another 12 banks were more than 50 pc computerization (Allahabad Bank, Dena Bank, Vijaya Bank, Bank of India, Bank of Maharashtra, Canara Bank, CBI, IB, Indian Overseas Bank, OBC, PNB, State Bank of Indore).

Branches of only five PSBs were less than 50 pc computerization (Punjab & Sindh Bank, Syndicate Bank, UCO Bank, Union Bank of India, United Bank of India).

More than 95 pc branches of PSBs at end-March 2006 were fully or partially computerized. Out of 27 PSBs, branches of as many as ten PSBs were 100 pc computerized.

TABLE I (A)

COMPUTERIZATION IN PSBS (AS ON MARCH 31ST, 2006)

Technology	(Percent)
1. Branches already fully computerized*	48.50
2. Branches under Core Banking Solutions	28.90
3. Fully Computerized Banks	77.50
4. Partially Computerized Branches	18.20

Source : Report on Trend and Progress in 2005-06, P. 97

Note : *Other than branches under CBS.

Off-site ATMs as percentage of total ATMs were the highest in case of foreign banks, followed by SBI group, new private sector banks, nationalized banks and old private sector banks.

TABLE I (B)
BANKS UNDER CORE BANKING SOLUTIONS

CBS Percentage	No. of Banks	Name of the Banks under CBS
0-10	9	Allahabad Bank, Bank of Baroda, Canara Bank, CBI, Dena Bank, Punjab & Sindh Bank, Bank of Maharashtra, UCO Bank, United Bank of India
11-50		Bank of India, Indian Bank, Indian Overseas Bank, Syndicate Bank, Union Bank of India, Vijay Bank, SBI, State Bank of Mysore
50-100	5	Andhra Bank, Corporation Bank, Oriental Bank of Commerce, PNB, Sate Bank of Indore
100 percent	5	SBBJ, State Bank of Hyderabad, State Bank of Patiala, State Bank of Saurashtra, State Bank of Tranvancore

Source : Report on Trend & Progress of Banking in India, 2005-06, p. 311

6. ATMs OF SCHEDULED COMMERCIAL BANKS

Table II indicates total number of ATMs installed by the banks were 21147 at the end of March 2006. Nationalized Banks accounted for the largest share of installed ATMs, followed by the new private sector banjks, SBI group, old private sector banks and foreign banks,

while SBI group, new private sector banks and foreign banks had more off-site ATMs, Nationalized Banks and Old Private Sector Banks had more on-site ATMs. Off-site ATMs as percentage of total ATMs were the highest in case of foreign banks, followed by SBI group, new private sector banks, nationalized banks and old private sector banks.

TABLE II
TOTAL BRANCHES AND NUMBER OF ATMS OF SCHEDULED COMMERCIAL BANKS

Bank Groups	Total Banks	Number of ATMs			%age of off-site to total ATMs
		On-site	Off-site	Total	
G-I	34185	4812	2353	7165	32.80
G-II	13831	1775	3668	5443	67.40
G-III	4566	1054	493	1547	31.90
G-IV	1950	2255	3857	6112	63.10
G-V	259	232	648	880	73.60
Total (I to V)	54791	10128	11019	21147	52.10

Source : Report on Trend & Progress of Banking in India, 2005-06, p. 97

- 7. RETAIL ELECTRONIC AND CARD-BASED PAYMENTS** continuous rise in retail electronic and card-based mode of payments. The volume and value of card and electronic based payments more than doubled in 2006 from the previous year.
- The convenience and easy acceptability of credit cards and technology advances have resulted in a

**TABLE III
RETAIL ELECTRONIC & CARD-BASED PAYMENTS**

Year	Retail Electronic [@]		Card-Based [#]		Total	
	Volume	Value	Volume	Value	Volume	Value
2001-02	178	6123	NA	NA	178	6123
2002-03	237	10222	NA	NA	237	10222
2003-04	290	29606	1862	35889	2152	65486
2004-05	579	77702	3615	77267	4194	154969
2005-06	832	106599	10453	236994	11286	343593

Note : @ECS (Debit & Credit), EFT& SEFT/NEFT, # Credit, Debit Cards, Smart Cards
Vol. represents number of transactions (Volume in thousands, value in Rs. Crores)

- 8. PAPER BASED vs. ELECTRONIC TRANSACTIONS** terms of volume and 51.20 per cent in terms of value in 2006. The use of electronic mode of payments increased both in terms of volume and value during 2005-06 compared with the previous year, (Table-IV)
- Reflecting the increasing use of electronic and card-based payments in retail transactions, their share in total transactions constituted 46.70 per cent in

**Table IV
Paper-based Vs. Electronic Transactions**

Volume (Number of Transactions)			
Year	Paper-based	Electronic	Total
2002-03	10139	1730	11869
2003-04	10228	2152	12380
2004-05	11671	4200	15871
2005-06	12895	11300	24195
Value (Rs. Crore)			
2002-03	13424313	37536	13461849
2003-04	11595960	67461	11663421
2004-05	10120716	4221153	14341869
2005-06	11337062	11884429	23221491

Source : Report on Trend & Progress of Banking in India, 2005-06, p. 97

A number of complications may arise due to the gap between the customers' perception and the organizational perceptions.

8. A PARADIGM SHIFT IN IT-ORIENTED BANK GROUPS

There is a paradigm shift in profitability of these bank groups (Table-V) which have the maximum computerization and using e-delivery channels. Foreign banks and new private

sector banks are at the front line in this case, their profitability is higher than other bank groups and nationalized banks are following them. Even intra-bank group analysis shows only those banks have the maximum average of profitability which are using the latest technology.

**TABLE V
NET PROFITS AS PERCENTAGE OF TOTAL ASSETS**

Bank Groups	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	Average	S.D.	C.V. (%)
G-I	0.44	0.33	0.69	0.98	1.19	0.89	0.81	0.76	0.30	39.47
G-II	0.80	0.55	0.77	0.91	1.02	0.91	0.86	0.83	0.15	18.07
G-III	0.81	0.59	1.08	1.17	1.20	0.33	0.59	0.82	0.34	41.46
G-IV	0.97	0.81	0.44	0.90	0.83	1.05	0.97	0.85	0.20	23.52
G-V	1.17	0.93	1.32	1.56	1.65	1.29	1.52	1.36	0.27	19.85
Average	0.84	0.64	0.86	1.10	1.18	0.89	0.95			
S.D.	0.27	0.23	0.34	0.28	0.30	0.35	0.35			
C.V. (%)	32.14	35.94	39.53	25.45	25.45	39.32	36.84			

Source : IBA, Performance Highlights, 2000-06.

9. PROBLEM AREAS

Particularly in public sector banks and in general all the bank groups, state-of-the-art banking software may be useless if handled by an untrained or demotivated staff. Centralized banking operations hold no meaning for customer who has to wait for a queue for half an hour to know his bank balance.

Another problem area that comes up is the concept of service quality in itself. Service quality is a concept that is based on what customers perceive, which is very subjective. A number of complications may arise due to the gap between the customers' perception and the organizational perceptions.

Gap-I : Customers' Expectations Vs. management Perceptions

A result of lack of marketing research, inadequate upward communication and too many layers of management.

Gap-II: Management Perceptions Vs. Service Specifications

A result of inadequate commitment to service quality, a perception of unfeasibility, inadequate task standardization and an absence of goal setting.

Gap-III: Service Specifications Vs. Service Delivery

A Result of role ambiguity and conflict, poor employee-job fit and poor technology-job fit, inappropriate supervisory control systems, lack of perceived control and team work.

Gap-IV: The discrepancy between customer expectations and employees' perceptions

A result of the differences in the understanding of customer expectations by front line service providers.

Gap-V : The discrepancy between employee's perceptions and managerial perceptions

A result of the differences in the understanding of customer expectation between managers and service providers.

10. SOLUTIONS

1. Developing effective service quality: Developing service quality in banks can not be left at the stage of technological up-gradation.
2. Human resources up-gradation: Now is the stage to go for HR upgradation. This may initially add to the banks' cost and even fixed resistance amongst employees used to official slumber. But then it is better to incur costs now than to lose a customer forever.
3. System maintenance: Banks have to be as sensitive to the needs of maintenance of the new IT-based systems as a mother is to her child.
4. Brand building: With a strong online brand, banks can rejuvenate their offline strategy as well as add more affordable and useful services to their total offering. Building strong brands will help to reduce the perceptual gaps and will not only bring the customers closer to the banks but also help managers understand their customers better.
5. Measuring the quality of service: Unless the quality of service is measured continuously and by modern scientific methods, it will be very hard to take corrective action.

Many such tools and techniques are available which are widely accepted such as SERVQUAL, SERVPREF, ROQ models etc. Many of these models have also been standardized for e-banking operations. Scores of such

techniques should form the bases for future actions.

6. Business of process re-engineering: Because of the change in the banking system that has come in as a result of technology, customer behaviour and expectations have also changes. Banks have to start redefining their strategy and bring in structural changes to their existing form.

11. ISSUES FOR THE FUTURE COMPREHENSIVE RESEARCH

1. Dimensions of IT and Indian banking industry in WTO regime
2. Feasibility and viability of e-banking in rural and semi urban areas.
3. Cost efficiency of e-banks in India
4. IT & its adverse effect on banking relations and operations.
5. New strategies for the e-banking awareness.

12. CONCLUSION

We may conclude from the ongoing discussion that technology up-gradation is taken place in all the bank groups but it is faster in foreign banks and new private sector banks. Off-site ATMs as percentage to total ATMs is the highest in case of foreign banks, followed by SBI group.

The electronic transactions have increased from 29.40 pc in 2004-05 to 51.20 pc in 2005-06. Technology is directly affecting the performance of the banks. Technological advancement has to be seen beyond hardware and machines. It has to be seen in totality with the larger socio-economic system.

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