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# E-Banking: A New Dimension in Indian Banking

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## **Abstract**

*Rapid progress in the field of information technology has reduced the world to a global village and it has caused unprecedented change in the banking industry. Apart from branch banking in the brick and mortar mode, click and order channels like internet banking, ATMs, tele-banking and mobile banking are now in vogue. Customers can view the accounts, get account statements, transfer funds, purchase drafts by just making a few key punches. Availability of ATMs and plastic cards to a large extent do not make it necessary for customers to go to branch premises. Indian banking industry has witnessed a tremendous development due to sweeping changes that are taking place in information technology. Electronic banking has emerged from such an innovative development.*

*In this context, the paper makes an attempt to examine the performance of Indian banking sector in the area of e-banking. The paper is divided into five sections. In section I and II, backdrop and objectives of the study have been stated. Section III contains the data and methodology. The analysis and interpretations are presented in section IV and section V is a concluding part wherein some suggestions have been given. The study is based on secondary data and different statistical and mathematical tools such as simple growth rate, percentages and averages are used. The progress in e-banking in Indian banking industry is measured through various parameters such as computerization of branches, Automated Teller Machines, transactions through Retail Electronic Payment Methods ,usage of Electronic Clearing Cards, etc.*

**Keywords :** E-Banking, Mobile Marketing,ECS, NEFT.

## **I: Introduction**

Radical progress in the field of information technology has reduced the world to a global village and it has caused unprecedented change in the banking industry. Automation has revolutionized financial and banking sectors globally. Indian banking industry has witnessed a tremendous developments due to sweeping changes that are taking place in the information technology. Electronic banking has emerged from such an innovative development. Apart from branch banking in the brick and mortar mode, click and order channels like internet banking, ATMs, tele-banking and mobile banking are now in vogue. Customers can view the account, get account statement, transfer funds, purchase drafts by just making a few key punches. Availability of ATMs and plastic cards to a large extent make on necessary for customers to go to branch premises.

E-Banking is an umbrella term for the process by which a customer may perform banking transactions electronically without visiting a brick-and-mortar institution. It has broken the barriers of branch banking. E-banking is the term that signifies and encompasses the entire sphere of technology initiatives that have taken place in the banking industry. E-banking is a generic term making use of electronic channels through telephone, mobile phones, internet etc. for delivery of banking services and products. It allows customers to access banking services electronically such as to pay

bills, transfer funds, view accounts or to obtain any banking information and advice.

In simple terms, E-banking does not involve any physical exchange of money, it's all done electronically, from one account to another, using the internet. From a personal computer one can access his bank account information and perform many banking functions like transferring money, making a loan payment. Once anybody registers himself / herself on a bank website, he can view his/her bank account, credit card and loan balances, accrued interest, transaction details of each account etc. Indian banks offer to their customers following e-banking products and services:

- ♦ Automated Teller Machines (ATMs)
- ♦ Internet Banking
- ♦ Mobile Banking
- ♦ Phone Banking
- ♦ Telebanking
- ♦ Electronic Clearing Services
- ♦ Electronic Clearing Cards
- ♦ Smart Cards
- ♦ Doorstep Banking
- ♦ Electronic Fund Transfer

number of benefits accrue to the various parties with the development of e-banking.

In this context, the paper makes an attempt to examine the performance of Indian banking sector in the area of e-banking. The paper is divided into five sections. In section I and II backdrop and objectives of the study have been serialized. Section III contains the data and methodology. The analysis and interpretations are presented in section IV and section V is a concluding part wherein some suggestions have been given.

#### To the Banks

- ♦ E-banking provides competitive advantage with boundary less network to the banks.
- ♦ Due to e-banking, banks carry on business less with paper money and more with plastic money; have online transfer of funds, thus economizing the cost of storage of huge stocks of currency notes and coins.
- ♦ It eliminates the use of paper and replaces it with computer screen.
- ♦ By connecting with ATM and PO terminals, risks of cash overdraw can be eliminated in case of ATM credit and debit cards.
- ♦ E-banking websites can act as a revenue earner through its promotional activities.

#### To the Customers

- ♦ Banking services are accessible 24x7. It signifies that a bank's online service is provided 24 hours a day, 7 days a week and 52 weeks a year.
- ♦ There is need to stand in line at the bank because all we have to do is log onto the internet and access our bank account.
- ♦ Quick and steady access to information

- ♦ Online purchase of goods and services and payments made for various purposes
- ♦ The customer can view his account balance, can get a statement of his account, can apply for loans, check the progress of his investments, review interest rates and collect other important information.

### II: Objectives of the Study

The main objectives of the study are:

- ♦ To focus on the concept of e-banking as well as various facilities availed through these type of banking
- ♦ To identify various e-banking services/products adopted by Indian banks
- ♦ To study and analyze the progress made by Indian banking industry in the adoption of technology
- ♦ To give suggestions for improving the effectiveness in adopting the technology of e-banking in the Indian banking sector

### III. Data and Methodology

The study is based on secondary data which have been collected from the different Bulleins of Reserve Bank of India relating to "Trends and Progress of Banking in India". Statistical and mathematical tools such as simple growth rate, percentages and averages have been used.

### IV. Analysis and Interpretations

#### ♦ Computerisation as well as Core Banking Solution(CBS)of Public Sector Banks

Table 1 indicates that more than 98 per cent of the branches of public sector banks are fully computerised and within which almost 92 per cent of branches are on core banking platform. On an average during this period 94.8 per cent of branches are fully computerised, 84.71 per cent branches are under core banking solutions.

**Table 1**  
**Computerisation in Public Sector Banks (Percent of total bank branches)**

Year	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	Average
Fully Computerised Branches	85.6	93.7	95.0	97.8	98.1	98.6	94.80
Branches under Core Banking Solutions	44.4	67.0	79.4	90.0	91.3	91.8	84.71

Source: Trends and Progress of Banking in India, RBI, 2006-07, 2008-09, 2009-10, 2011-12

#### **Introduction of Automated Teller Machines (ATMs):**

ATMs are an innovative means to provide basic banking services to the customers in a much faster and cost effective manner. The system is known as "Any Time Money" because it enables the customers to withdraw money from the bank from any of its ATMs round the clock. Table 2 indicates the progress made scheduled commercial banks in respect of providing ATM facilities.

Up to 2010-11, onsite ATMs are more as compared to offsite ATMs, but from 2011-12 the picture has reversed. The percentage of onsite ATMs during the last two years stood at 49.7per cent and 48.9 per cent respectively, where as percentage of offsite ATMs for the same period registered 50.3 per cent and 51.1 per cent respectively. Offsite ATMs are particularly more cost efficient since they operate without paraphernalia of a bank branch.

Over the years, the relative growth in offsite ATMs has been much more than that of onsite ATMs. As a result,

by 2012-13, offsite ATMs accounted for more than half of the total ATMs in the country.

**Table 2**  
**Automated Teller Machine (ATMs) of Scheduled Commercial Banks**

Year	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
On Site	14796	18486	24645	32679	40729	47545	55760
Off Site	12292	16303	19006	27474	33776	48141	58254
Total	27088	34789	43651	60153	74505	95686	114014
% Change	-	28.43%	25.47%	37.80	23.86%	28.43%	19.15%
On site as % of total ATMs	54.6	53.1	56.5	54.3	54.6	49.7	48.9
Off site as % of total ATMs	45.4	46.9	43.5	45.7	45.4	50.3	51.1
ATMs as % of total branches	47.5	56.9	67.0	87.0	89.5	117.8	121.3

Source: Trends and Progress of Banking in India, RBI, 2006-07,2008-09,2009-10,2011-12

Table 3 indicates that the penetration of ATMs across the country increased in 2012-13 with total number of ATMs crossing 1,00,000 clocking a double digit growth during the year. The number of ATMs stood at 1,14,014 at the end of March,2013, of which 37.8 per cent are

owned by private sector banks,31per cent by public sector banks,30 per cent by SBI and Associates and 1.12 by foreign banks. There has been a 27 per cent year-on-year growth in the number of ATMs in the country since 2006-07, but the penetration of ATMs in Tier III and Tier IV Centres remain below the desired level.

**Table 3**  
**Bank Group-wise Automated Teller Machines of Scheduled Commercial Banks**

(as on 31.03.2013)

Bank Group	On site ATMs	Off site ATMs	Total number of ATMs	Percent of Total ATMs(%)	On site ATMs as % of Total ATMs of concerned Banks	Off site ATMs as % of Total ATMs of concerned Banks
I. Public Sector Bank	40,241	29,411	69,652	61.09	57.77	42.23
Nationalised Bank	20,658	14,701	35,359	31.01	58.42	41.58
SBI Group	19,583	14,710	34,293	30.08	57.10	42.90
II. Private Sector Banks	15,236	27,865	43,101	37.80	35.35	64.65
Old Private Sector Banks	4,054	3,512	7,566	6.64	53.58	46.42
New Private Sector Banks	11,182	24,353	35,535	31.16	31.47	68.53
III. Foreign Banks	283	978	1,262	1.12	22.42	77.58
All Banks(I+II+III)	55,760	58,254	1,14,014	100.00	48.90	51.10

Source: Trends and Progress of Banking in India, RBI, 2012-13,p76

♦ **Transactions through Electronic Payment Systems:**

The electronic payment systems are segregated into different parts: ECS(Electronic Clearing Service), RTGS(Real Time Gross Settlement) and NEFT ( National Electronic Fund Transfer). ECS is a non-paper based movement of funds which has improved the speed of

financial transactions across the country. It consists of Electronic Credit Clearing Service and Electronic Debit Clearing Service. ECS brings down administration cost and ensures profitability and productivity to the banks. On the other hand, National Electronic Fund Transaction (NEFT) is a deferred net settlement. Tables 4 and 5 show volume and value of electronic transactions of scheduled commercial banks. There has been sustained growth in

both the volume and value of all types of electronic transactions of banks. On an average, the value of ECS Credit is greater than ECS Debit, which stood at Rs.2,31,888.6 crore and Rs.68,032.86 crore respectively. On the other hand, both RTGS (meant for large volume payments system, processing both customer and inter-

bank transactions of Rs.2,00,000 and above) and NEFT(a retail system) have shown upward movement in terms of volume as well as value. The rate of growth of NEFT and RTGS (in value) during 2012-13 estimated at 62.1 per cent and 25.5 per cent respectively.

**Table 4:**  
**Electronic Transactions (ECS) of Scheduled Commercial Banks**  
*(Volume in million & Value in Rs. Crore)*

Year	ECS Credit		ECS Debit	
	Volume	Value	Volume	Value
2006-07	69.0	83,273	75.2	25,441
2007-08	78.3 (13.48)	7,82,222 (839.3)	127.1 (69.01)	48,937 (92.35)
2008-09	88.3 (27.97)	97,487 (17.06)	160.0 (112.8)	66,976 (70.91)
2009-10	98.1 (42.17)	1,17,613 (41.24)	149.3 (98.5)	69,524 (173.3)
2010-11	117.3 (70.0)	1,81,686 (118.2)	156.79 (108.4)	73,646 (189.5)
2011-12	121.5 (76.09)	1,83,830 (120.8)	165.0 (119.4)	83,402 (227.8)
2012-13	122.2 (77.1)	1,77,109 (112.7)	177.2 (135.6)	1,08,304 (325.7)
Average	99.24	2,31,888.6	144.36	68,032.86

Source: Trends and Progress of Banking in India, RBI, 2006-07,2008-09,2010-11,2012-13.

Note: The figure in the brackets indicate rate of growth.

**Table 5**  
**Progress in the area of NEFT & RTGS**

Year	NEFT		RTGS	
	Volume (in million)	Value (Rs. in billion)	Volume (in million)	Value (Rs.in billion)
2010-11	132	9,321	49	4,84,872
2011-12	226 (70.9)	17,904 (92.1)	55 (11.6)	5,39,308 (11.2)
2012-13	394 (74.3)	29,022 (62.1)	69 (24.5)	6,76,841 (25.5)
Average	250.67	18749	57.67	5,67,007

♦ **Introduction of Electronic Clearing Cards:**

Now-a-days Electronic Cash i.e. debit and credit cards are being used in place of hard cash. It is also called plastic money. The most important difference between a credit card and a debit card is that while credit card is a post- paid and debit card is pre-paid. Tables 5 and 6 show Bank Group-wise outstanding number of credit and debit cards issued by scheduled commercial banks as

at end of March 2013. The number of credit cards issued has declined from 4.14 million in 2006-07 to 3.50 in 2012-13. In 2013 the per cent of total cards issued in case of private sector banks is highest that is 57.13 per cent in case of which the major share is of new private sector banks that is 56.9 per cent and that of old private sector banks is 0.21 per cent. The share of public sector banks

is just 17.95 per cent and that of foreign banks is 25.64 per cent. In 2012-13, public sector banks have the highest number of debit cards (260.6 million) which is 78.5 % of total debit cards issued by the industry. Nationalized Banks (35.8per cent) and SBI group

(41.2per cent) have high percent of cards issued as compared to private sector banks (20.32per cent). The share of new private sector banks (15.67per cent) is higher as compared to old private sector banks (4.65per cent). Foreign banks have 1per cent of total debit cards issued.

**Table 6**

**Bank Group-wise Outstanding Number of Credit Cards issued by Scheduled Commercial Banks (in million)**  
(as on 31<sup>st</sup> March)

Bank Group	2007	2008	2009	2010	2011	2012	2013
I.Public Sector Bank	4.14 (17.9)	3.93 (14.26)	3.44 (13.9)	3.26 (17.8)	3.08 (17.07)	3.1 (17.5)	3.5 (17.95)
Nationalised Bank	0.75 (3.24)	0.72 (2.6)	0.72 (2.9)	0.73 (14.38)	0.78 (4.32)	0.8 (4.52)	0.9 (4.62)
SBI Group	3.39 (14.7)	3.21 (11.65)	2.72 (11.01)	2.53 (13.8)	2.30 (12.75)	2.2 (12.4)	2.6 (13.3)
II.Private Sector Banks	10.68 (46.2)	13.29 (48.2)	12.18 (49.3)	9.50 (51.8)	9.32 (51.7)	9.7 (54.8)	11.14 (57.13)
Old Private Sector Banks	0.03 (0.13)	0.04 (0.15)	0.06 (0.24)	0.06 (0.33)	0.04 (0.22)	0.04 (0.23)	0.04 (0.21)
New Private Sector Banks	10.65 (46.06)	13.25 (48.1)	12.12 (49.06)	9.44 (51.5)	9.28 (51.44)	9.6 (54.24)	11.1 (56.9)
III.Foreign Banks	8.31 (35.94)	10.33 (37.5)	9.08 (36.76)	5.57 (30.4)	5.64 (31.26)	4.9 (27.68)	5.0 (25.64)
All Banks(I+II+III)	23.12	27.55	24.70	18.33	18.04	17.7	19.5

Source: Trends and Progress of Banking in India, RBI, 2012-13,p79

Note: Figures within parentheses indicate respective share of the same to the total

**Table 7**

**Bank Group-wise Outstanding Number of Debit Cards issued by Scheduled Commercial Banks (in million)**  
(as on 31<sup>st</sup> March)

Bank Group	2007	2008	2009	2010	2011	2012	2013
I.Public Sector Bank	44.094 (58.8)	64.33 (62.8)	91.70 (66.7)	129.69 (71.26)	170.34 (74.76)	214.6 (77.08)	260.6 (78.5)
Nationalised Bank	19.24 (25.66)	28.29 (27.6)	40.71 (29.6)	58.82 (32.32)	80.27 (35.23)	97.7 (35.1)	118.6 (35.81)
SBI Group	24.85 (33.14)	36.04 (35.2)	50.99 (37.1)	70.87 (38.94)	90.07 (39.53)	112.0 (40.23)	136.4 (41.2)
II.Private Sector Banks	27.19 (36.26)	34.10 (33.3)	41.34 (30.08)	47.85 (26.3)	53.58 (23.52)	60.0 (21.55)	67.3 (20.32)
Old Private Sector Banks	3.94 (5.25)	5.34 (5.2)	7.09 (5.16)	9.81 (5.4)	12.44 (5.46)	13.9 (4.99)	15.4 (4.65)
New Private Sector Banks	23.25 (31.01)	28.76 (28.07)	34.25 (24.9)	38.04 (20.9)	41.14 (18.06)	46.0 (16.52)	51.9 (15.67)
III.Foreign Banks	3.70 (4.93)	4.02 (3.92)	4.39 (3.2)	4.43 (2.43)	3.92 (1.72)	3.8 (1.36)	3.3 (1.00)
All Banks(I+II+III)	74.98	102.44	137.43	181.97	227.84	278.4	331.2

Source: Trends and Progress of Banking in India, RBI, 2012-13,p79

Note: Figures within parentheses indicate respective share of the same to the total

From this analysis it has come to the surface that the issuance of credit cards declined while debit cards showed a high growth trend. So far, debit cards have been a more popular mode of electronic money than credit cards in India, 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.

♦ **Increased Efficiency of Cheque Based Transactions under the Cheque Truncation System (CTS):**

The CTS is a step towards improving the pace of clearance without involving end-to-end physical movement of cheques. Following the introduction of this system, there has been a quantum jump in the number of cheques processed through this system, particularly at New Delhi and Chennai reflecting the growing acceptability of the system. The coverage of CTS is further widened by bringing more centres/areas under its umbrella. The volumes will grow further spreading the benefits of this system to a larger number of customers.

**Table 8  
Progress Under CTS**

Year	Volume (in million)	Value(Rs. in billion)
2011-12	180	15,104
2012-13	275(52.6%)	21,732(43.9%)

Source: Trends and Progress of Banking in India, RBI, 2012-13

Note: Figures in brackets indicate percentage change over the previous year

**V: Conclusion:**

Notwithstanding the growth of various electronic modes of payment in India, it still has a long way to go in terms of achieving the high level of penetration of such modes

across the world, particularly in high income countries. It is noteworthy however that India stands out globally in terms of usage of mobile phones as a mode of payment.

**Table 9  
Penetration of Electronic Modes of Payment**

% of Population of 15 years & above using	World	India
Credit Card	14.8	1.8
Debit Card	30.4	8.4
Electronic mode to make payments(Wire & On line transfer)	14.5	2.0
Mobile Phone to pay bills	2.0	2.2

Note: Data relate to 2011

Source: Global Financial Inclusion Database (Global Findex), World Bank

In India, E-banking is now in growing stage. It is pertinent to mention that Indian banks are making sincere efforts for the adoption of advanced technology and installation of e-delivery channels but still masses are wary of the concept. Banks should create awareness among people about e-banking products and services. It should make sincere efforts to popularise the e-banking services and products and the customers should be made literate about the use of e-banking products and services. In years to come, e-banking will not only be acceptable mode of banking but will be the preferred mode of

banking. Furthermore, it can be said that the penetration of ATMs in Tier III and Tier IV Centres remain below the desired level. In order to ensure deeper penetration of ATMs in unbanked / under-banked areas, the RBI has permitted White Label ATMs (WLA) in the country to supplement the existing ATM schemes operated by banks. Under this policy guidelines, non-bank entities incorporated in India under the Companies Act, 1956 would be authorised to set up, own and operate ATMs in India for providing banking services to the customers of banks in India, based on cards(debit/credit/pre-paid)

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issued by banks. This sector should consider technology upgradation to cope up with changing banking scenario. What we have to have now is an appropriate business delivery model, which will facilitate taking the banking services to the doorsteps of the people at a lesser cost. The technology based solution would go a long way in achieving inclusive growth for this purpose.

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