

A Study on Current Scenario of E-Banking in India

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Abstract-The exponential growth in information technology has led to the evolution of various electronic platforms such as E-banking and E-Commerce. The extensive acceptance and usage of E-banking services in India has helped in bringing banking services to the doorstep of every bank's customer. In E-banking, all banking services including monetary transactions or inquiries are conducted online through mobile phones or computers. The percentage of bank customers using is growing every year. The growth in the usage of E-banking is a good sign for the banking sector as it helps in reducing the cost of doing business in long term and brings more transparency and accountability. As E-banking is comparatively of recent origin, the fear of risk factors and threats is also high among customers. In this regards the paper focuses on studying the current scenario of E-banking services and finding issues concerning customers regarding various E-banking services.

Key words: E-banking, ATM, Debit card, Credit card, MB, IB, NEFT, RTGS, IMPS, UPI.

INTRODUCTION

After India's independence, banks played the role of collecting money in form of savings from customers and lending that money to borrowers as loans or advances. Over the period, the banking sector adopted and developed itself to perform much more active and important roles including various agency functions, and also act as intermediaries for real-time financial transactions at the ground, national and international levels. This development of the banking sector has happened over a period of time and is mainly due to the adoption of information and communication technology.

The adoption of information technology has helped the banking sector to provide banking services in various E-banking platforms i.e., ATM, tele banking, mobile banking, internet banking etc. E-banking has now become an integral part of delivering various banking services to customers and it has proven to be beneficial

for both banks and customers, as it helps banks to reduce the cost of doing business and improve their efficiency, and for customers it allows them to access banking services anywhere and anytime. The development of internet-based banking is considered as one of the most significant changes in the world economy in recent years.

E-BANKING

Electronic banking (E-banking) is a term used to indicate a process through which customers of the bank are allowed to perform banking transactions using electronic and communication networks ^[1]. In simple terms, E-banking can be defined as a process that enables banks to deliver banking products and services to their customers using information and communication technology. It is typically carried out through public or private networks, and customers of the bank can access these services through various electronic devices like personal computers and mobile phones, etc.

EVOLUTION OF E-BANKING

ATM (Automated Teller Machine) was the first electronic banking service offered by banks to customers. In 1960, an American named Luthor George Simjian invented the machine called 'Bankograph', a machine that allowed customers to deposit cash and checks into it. This machine later evolved into ATM; the first ATM was set up by Barclays bank on the streets of London in 1967. A Britisher named John Shepherd Barron is credited with the invention of the ATM ^[2]. After several years, internet banking was launched on a restricted basis by the bank of Scotland in 1982 in the UK called 'Homelink', which was then extended to all countries in 1983. Using the Homelink service, customers can transfer funds between accounts and pay bills. This service is the basis for the development of present-day internet banking services ^[3].

EVOLUTION OF E-BANKING IN INDIA

After the LPG reforms of 1991, many new private sector banks and foreign banks entered into the business of the Indian banking sector. The entry of new banks increased the competition for customers in the banking sector and attract customers and reduce the cost of doing business, private sector banks started adopting and using emerging technologies and also introduced self-service channels ^[4]. The adoption of emerging technology helped private sector banks in providing better quality services to their customers, attract more customers, and increase the market share of the customer base in the Indian banking sector. Now to stay competitive in the market, public sector banks followed these new banks and started adopting emerging technologies and introduced self-service channels to their customers ^[5].

OBJECTIVES OF THE STUDY

The main objective of the study is to know the concept of E-banking, the evolution of E-banking, various modes of E-banking, and the growth of various E-banking services in India.

STATEMENT OF THE PROBLEM

Electronic banking draws greater attention in the banking sector due to the availability of banking services around the clock. E-banking is an integral part of the economy. Thus, a researcher has attempts to know the growth in electronic services in recent years, economy faced a lot of changes due to demonetization and covid-19.

SCOPE OF THE STUDY

The world is connected through technology due to advancements in technology. Not excluding the banking sector, now all the banks are proving services through various E-banking modes. The concept of E-banking is anytime anywhere banking. Where facilities are available at every individual doorstep. To stay in the competition banks provide services at a lower cost to attract customers and retain them. So, it became necessary to study the growth of E-banking in India and the extent of services growth where, rapidly changing and growing the needs and expectations of bank customers.

METHODOLOGY

The study is based on secondary data. The secondary data was collected from annual reports of the RBI, monthly data of RBI, magazines, books, journals, and related various websites.

ANALYSIS AND INTERPRETATION

ATM

An Automated Teller Machine (ATM) is an electronic telecommunication device that enables customers of a financial institution to perform financial transactions, such as cash withdrawals, deposits, fund transfers, etc. HSBC bank set up the first ATM in 1987 in India. While ATMs facilitate a variety of banking transactions for customers, their main utility has been for cash withdrawal and balance inquiry ^[6]. There are mainly two types of ATMs: On-site and Off-site ATMs. The former is located within the bank site and the latter is located at various public locations like airports, shopping centers, and railway stations i.e., outside bank premises.

Table-1 Number of On-site and Off-site ATMs

Year	On-site	Off-site
2016	101826	98128
2017	109740	98073
2018	104011	101173
2019	106380	95816
2020	112876	97319
2021	115775	98684
2022	119727	97896

Source: rbi.org.in

Table 1 shows, the number of On-site and off-site ATMs in India. The number of Onsite ATMs are increasing trend over the years. On the other hand, the number of Off-site ATMs are increasing trend, however, the year 2018 recorded the highest number of Off-site ATMs in India, and in the year 2022 a slightly decreasing trend was observed.

DEBIT CARD AND CREDIT CARD

A debit card is a payment card issued by banks that can be used to access banking services at ATMs or can be used as an alternate method for payments instead of cash, here money is directly transferred from a consumer’s bank account. Most Indian banks issue RuPay, Visa, or master debit cards to their customers, the transactions made through these cards are routed through their card networks ^[7].

A Credit card is a rectangular plastic or a metal card issued by banks to its users, which users can use to purchase goods and services within the stipulated limit (credit limit) on credit. Card purchases normally become payable after a free credit period, during which no charges are imposed on credit. Charges are imposed on credit after the due date. The main difference between debit and credit cards is, in the former every transaction amount is debited directly from the customer’s bank account whereas the latter amount is debited from the users pre-agreed limit [8]. The central bank of India was the first to issue a credit card in India in 1980, followed by Andhra bank in the same year.

Table-2 Number of Debit and Credit Cards Outstanding

Year	Debit card	Credit card
2016	671187187	24860730
2017	780795417	30374102
2018	906465905	37782876
2019	905813162	47088647
2020	829446698	57360145
2021	900500492	62260420
2022	920517551	75166069

Source: *rbi.org.in*

Table 2 shows, the number of outstanding Debit and Credit cards in India from 2016-2022. It observed an increasing trend over the years of Credit cards and Debit cards outstanding increasing trend from 2016 to 2019 and it slightly decreased in the year 2020 and follows an upward trend.

Table-3 Debit and Credit cards transactions in the form of Volume and Value

Year	Debit Card		Credit Card	
	Volume (Million)	Value (Rs. Lakh Crore)	Volume (Million)	Value (Rs. Lakh Crore)
2016-17	2399.3	3.299	1087.1	3.284
2017-18	3343.4	4.601	1405.2	4.590
2018-19	4414.3	5.935	1726.6	6.033
2019-20	5061.1	7.04	2144.3	7.31
2020-21	4014.6	6.61	1764.1	6.30
2021-22	3938.7	7.30	2239.9	9.72

Source: *Annual Reports of RBI*

It can be inferred from table 3, both the volume and value of Debit and Credit cards were increasing trend over the years. However, in the year 2020-21 and 2021-22 was decreasing in the volume of Debit cards was even though the volume was increasing trend during the years. The same was observed in Credit card volume decreasing the volume and also in value. While increasing the value of Credit card during the year 2021-22.

TELEBANKING

Telephone banking is a service provided by a bank or financial institution to its customers over the telephone without the need for the customer to visit a branch or ATM facility. To avail of this service, firstly customer needs to register at his bank branch, and authentication customer over the telephone is done through customer-specific id and password or security questions, and services accessible over telephone banking range from requesting for issuing check book, stopping payment of the check, blocking the loss of ATM card, balance inquiry and bank statement, etc., and services

accessible over this service mostly does not involve fund transfers or any financial transactions [9].

MOBILE BANKING

Mobile banking can be defined as the provision of various banking services to customers on mobile services [10]. Mobile banking, customers can access mobile banking services by downloading and installing bank applications or third-party applications like Yono SBI, Phonepe, G.pay, etc.

The earliest mobile banking service introduced was SMS banking and before 2010 mobile banking service meant SMS banking. after the introduction of smartphones with WAP support enabling the use of the mobile web in 1999, European banks introduced mobile banking services on this platform to their customers.

Mobile banking service was introduced as SMS banking in India in 2002, and ICICI bank introduced the first mobile banking application in India in 2008. Other banks followed ICICI bank and launched their

mobile banking application, today all most banks have their mobile banking application.

Table-4 Mobile Banking transactions in the form of Volume and Value

Year	Volume (Million)	Value (Billion)
2016	110.64	1498.18
2017	206.52	1057
2018	661.43	2776.33
2019	1432.20	4931.43
2020	2519	8994.01
2021	4987	14396.1
2022	6845	17866.1

Source: *rbi.org.in*

Table 4 shows, that Mobile banking transactions increasing over the years. From the year 2018 to 2022 observed drastic changes in the volume and also in the value of Mobile banking. It shows the acceptance of Mobile banking in India is increasing year and year.

INTERNET BANKING

Internet banking or online banking is an electronic payment system that enables customers of a bank or other financial institution to conduct financial transactions or banking transactions through its website.

Internet banking was introduced in 1982 with the launch of ‘Homelink’ by the Nottingham building society (NBS) in the UK. Using the HomeLink service, customers could transfer funds between accounts and pay bills, etc. Later in 1998, ICICI bank introduced the internet banking service to its customers for the first time in India.

RTGS

RTGS stands for ‘Real-Time Gross Settlement’ and is a system where it is the continuous and real-time settlement of fund transfers, individually on a transaction basis (without netting). Payments made using the RTGS system are settled on an individual basis at the RBI level so transactions made are final and irrevocable [10]. RTGS system was launched in March 2004.

From December 2020, RTGS service can be accessed 24*7*365. RTGS system is meant for large value transactions, the minimum amount to be remitted through RTGS is 200000 and there is no maximum ceiling. RBI has capped the maximum charges that can be levied on outward transactions.

Table-7 RTGS transactions in the form of Volume and Value

Year	Volume (Million)	Value (Rs. Lakh Crore)
2016-17	107.8	981.904
2017-18	124.4	1167.125
2018-19	136.6	1356.882
2019-20	150.7	1311.56
2020-21	159.2	1056.00
2021-22	207.8	1286.58

Source: *Annual Reports of RBI*

Table 7 reveals, the number of transactions in volume increasing trend was observed over the years. However, the value decreasing trend was observed in the year 2020-21 and again upward trend was observed in the year 2022.

NEFT

NEFT stands for ‘National Electronic Funds Transfer’ is a nationwide centralized payment system owned and operated by RBI. There is no limit imposed by RBI for using the NEFT system but banks can impose their amount cap for using the NEFT system. Payments made using the NEFT system are settled on a half-hour basis and the NEFT system is available around the clock and throughout the year [10]. NEFT system was introduced in November 2005.

Table 8 NEFT transactions in the form of Volume and Value

Year	Volume (Million)	Value (Rs. Lakh Crore)
2016-17	1622.1	120.040
2017-18	1946.4	172.229
2018-19	2318.9	227.936
2019-20	2744.5	229.46
2020-21	3092.8	251.31
2021-22	4040.7	287.25

Source: *Annual Reports of RBI*

Table 8 shows, the number of transactions both in volume and value is increasing trend from 2016-17 to 2021-22. A drastic change in volume was observed in the year 2020-21. It shows the continued improvement in NEFT transactions over the years.

IMPS

As NEFT and RTGS systems were available for fund transfers only during bank working hours, RBI wanted a system that is available round the clock for transferring funds, and in November 2010 NPCI launched IMPS (Immediate Payment Service). IMPS is a system that allows immediate transfer of funds

24*7 between bank accounts in India. In October 2020 RBI increased the limit on the maximum amount that can be transferred from Rs. 200000 to RS.500000 through the IMPS system to promote digital transactions. National Payments Corporation of India (NPCI) owns and operates the IMPS system ^[11].

Table-4 IMPS transactions in the form of Volume and Value

Year	Volume (Million)	Value (Rs. Lakh Crore)
2016-17	506.7	4.116
2017-18	1009.8	8.925
2018-19	1752.9	15.903
2019-20	2597.2	23.38
2020-21	3278.3	29.41
2021-22	4662.5	41.71

Source: *Annual Reports of RBI*

From table 4, the annual turnover of IMPS both in volume and value increasing one year to another year. Rapid growth was observed from 2016 to 2022. The banking transactions over the IMPS were accepted in a greater way as compared to over the years.

UPI

Universal Payments Interface (UPI) is a system that powers multiple bank accounts into a single mobile application, merging several banking features, seamless fund routing, and merchant payments into one hood^[12]. NPCI operates the UPI system and UPI was launched in August 2016. Popular mediums (applications) to use UPI service are Phonepe, G.pay, BHIM, etc. per day limit of a number of transactions is 10.

Table-5 UPI transactions in the form of Volume and Value

Year	Volume (Million)	Value (Rs. Lakh Crore)
2016-17	17.9	6.9
2017-18	915.2	10.98
2018-19	5353.4	8.770
2019-20	1251.86	21.32
2020-21	2233.07	41.04
2021-22	4595.61	84.16

Source: *Annual Reports of RBI*

Table 5 reveals, UPI’s annual turnover from 2016-17 to 2021-22. The payments through UPI were increasing over the years. It shows grown much faster than other electronic banking services. Rapid growth in value is observed in the year 2021-22.

SUGGESTIONS

The ATM sector has its popularity and growth. Now to increase the popularity and usage of debit cards, RBI and banks have to take initiative steps to provide convenient, reliable, and efficient customer service. Mobile banking transactions in terms of both volume and value have been increasing over the years. The arrival of a Universal Payment Interface (UPI) has further increased the ease of using mobile banking services and this has helped in increasing the adoption of mobile banking by customers. Data privacy, data protection, and security threats are important issues of concern for mobile banking service users. The necessary steps to protect customers’ privacy and data need to be taken RBI and Government has to make stringent laws to protect the privacy and data of customers. The NEFT and RTGS services together have the highest share of transactions in terms of both volume and value in combined transactions all E-banking services together in the last few years. The customers using these EFT services have increased and still many customers who still use the conventional mode of banking are not aware of these services. The RBI and banks have to take measures to increase awareness about EFT among bank customers.

CONCLUSION

Electronic banking has become a necessary survival weapon and fundamentally changing the banking sector worldwide. Today banking services are available at the doorstep of every individual customer through electronic mode at anywhere anytime at a cheaper cost and also empower customers with unprecedented freedom of choosing a service provider as their banking needs. The growth of electronic banking has redefined the relationship between banks and customers. The tremendous changes provide a new growth perspective due to the telecommunication infrastructure in India. The concept of E-banking is an acceptable manner where, seen in the growth and usage of various forms of E-banking in India. In the last five years, the growth of E-banking is appreciable through increasing smartphone users and internet penetration in the country suggesting E-banking has a bright future ahead in India.

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