Trend and Growth of Retail E-Banking Payment Systems in India

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Abstract
Electronic banking and payment system automation has its origin from the year of 1950s itself. The Standard Research Institute and Bank of America in the United States put their hands together to bring out two significant innovations in the field of banking. Electronic Recording Method of Accounting (ERMA) for automating and recording transactions in accounts and Magnetic Ink Character Recognition (MICR) for cheque dispensation. This MICR based cheque clearing system was originally implemented in the USA in 1959 and has grown from systems in various modes and it remains the stamina for E-payment systems in many countries. For the last two decades, various E-payment systems have been emerging popularly. To know and understand the degree of popularity and usage proportion, the researcher has conducted a brief study to find out the trend and growth of e-payment systems in India for the last ten to fifteen years.
Keywords: e-payment, ECS, RTGS, debit credit clearing.

Introduction

Several measures were taken by the Government of India as well as the Reserve Bank of India to facilitate the development of banking in India. As a regulator and supervisor, the RBI has made considerable and remarkable progress in consolidating the existing payment and settlement systems and in promoting the technology to establishing an efficient, integrated and secure system functioning in a real-time environment, which has further helped the development of e-banking in India. The Government of India enacted the IT Act, 2000 with effect from October 17, 2007, which provides legal identification to electronic transactions and other means of electronic commerce. Significant development and evolution of the payment system in the country has taken place in the last two decades starting with the implementation of MICR based clearing in 1986 in Mumbai. Some of the new electronic payment methods launched subsequently ECS and EFT draw strength from the capabilities of MICR based clearing system. The growth of credit and debit card payment and settlement systems for retail customers and retailers and the RTGS for Wholesale transactions are two other important aspects of payment system evolution. E-banking facilitates the effective payment and accounting system considerably.

Payment System

Payment systems constitute the backbone of economic activity. Evolution of payment systems moves away from traditional paper-based systems to electronic systems. In the 1970's, the processing of payments was typically paper-based involving some manual interventions and long processing time. Introduction of technology enabled gradual replacement paper with electronic media for transmission and processing, reducing thereby cost and time is taken for settlement.A payment system is the backbone of any financial economy and spectacular growth in a financial transaction has necessitated certain far-reaching changes in the payment and settlement systems around the globe.

A technological revolution in the field of electronics and telecommunications has helped to bring about sophisticated and classy developments in the payment and settlement system in many countries. A well-defined payment and settlement system is, therefore a crucial component of the financial infrastructure of any country. Payment systems are important for economic growth and they are largely driven by innovation, convenience and economic benefits. Computerization of clearing operations was the first major step towards modernization of the payments system.

Retail payment systems constitute the bulk of the volume of payment transactions of the country. The predominant mode of retail payments comprises the NEFT, RTGS, ECS, IMPSetc. Other systems such as Electronic Funds Transfer (EFT), the Special EFT (SEFT) and card-based systems (credit, debit, ATM and smart cards), are gaining acceptance. While ECS-Credit and ECS-Debit systems are for bulk payments akin to the automated clearing houses (ACH) elsewhere, the EFT and SEFT systems are for individual transactions. The ECS-Credit, EFT and SEFT systems are credit transfer based modes of payments, whereas the ECS-Debit system is based on direct debits. All the retail electronic payment modes have grown considerably year by year, reflecting their growing popularity.With the objective of ensuring faster flow of funds among various constituents of the financial sector, Reserve Bank of India has taken up the work of reforms in the payment and settlement systems for the country. The most important driver of quick adoption of technology in any sector is the possibility of achieving significant cost reductions in the long term. Banking sector is no different. The use of technology in banking sector reduces transaction cost and hence reduces the overall operating expenses.

Real Time Gross Settlement System (RTGS)

The Real Time Gross Settlement was implemented by the Reserve Bank on March 26, 2004. The RTGS provides for an electronic based settlement of inter-bank and customer based transactions, which enable for straight through processing of customer transactions without manual intervention.The RTGS system is primarily for large value of transactions with the minimum threshold limit of Rs.1 lakh. There is no upper ceiling for RTGS transactions. The number of RTGS enabled bank branches stood at 55006 as on March 31, 2009 with the addition of 11,494 branches to the RTGS network during the year 2008-09.

The acronym "RTGS" stands for Real Time Gross Settlement. RTGS system is a fund transfer mechanism where transfer of money takes place from one bank to another on a "real time" and on "gross" basis. This is the fastest possible money transfer system through the banking channel. Settlement in "real time" means payment transactions are not subjected to any waiting period. The transactions are settled as soon as they are processed. "Gross settlement" means the transactions are settled on one- to- one basis without having any bunch with any other transaction.

Table 1 RTGS – Volume and Value of Transaction

Year	No.of Transactions (in Millions)	Value of transactions (in trillions)
2004-05	.46	40.66184
2005-06	1.767	115.40836
2006-07	3.876	184.81155
2007-08	5.84	273.18330
2008-09	13.36	322.79881
2009-10	33.24	394.53359

2010-11	49.3	484.87245
2011-12	55.0	539.30756
2012-13	68.5	676.84102
2013-14	81.1	734.25246
2014-15	92.8	754.03245
2015-16	98.3	824.57834
2016-17	107.8	981.90454
2017-18	124.4	116.712513
CAGR	0.538444 3.846%	0.08449 6.035%

Source: Compiled from various issues of RBI Annual reports.

It is observed that the RTGS system has gained rapid growth in terms of coverage, volume and value of transactions over the past fourteen years. During the year 2017-18, the value of transactions rose by 12440 times and achieved a CAGR of 3.846% percent as compared with 2004-05.

Electronic Fund Transfer

The RBI, as part of the initiatives aimed at quick movement of funds in a paperless mode introduced the EFTs in 1996. Electronic fund transfer system has a lower cost of transaction which makes them cheaper and faster in comparison to paper-based instruments. Under this system money is transferred from account to account of any bank branch in places where EFT services are offered. As a result of the technological development, the proportion of electronic transactions both in terms of volume and value has increased considerably. The following Table shows the details of electronic fund transfer (debit) transactions for the financial years from 2004-05 to 2017-18.

Table 2 EFT - Volume and Value of Transactions

Year	No.of Transactions(in Millions)	Amount of transactions (in trillions)
2004-05	1.365	0.491
2005-06	3.067	0.613
2006-07	4.776	0.775
2007-08	13.32	1.403
2008-09	32.16	2.519
2009-10	66.35	4.1
2010-11	132.3	9.391
2011-12	226.1	17.903
2012-13	394.1	29.022
2013-14	661.0	43.786
2014-15	927.6	59.804
2015-16	1252.9	87.273
2016-17	1622.1	120.04
2017-18	1946.4	172.229
CAGR	0.748328 5.3452%	0.569535 4.068%

Source: Compiled from various issues of RBI Annual reports.

Above table depicts that electronic fund transfer emerges as the principal retail fund transfer system and has increased more than 20 times during the year 2009-10 as compared with 2004-05. In terms of volume, transactions increased to 66.35 million during 2009-10 as compared with 1.365 million in the year 2004-05. During the last years, it is registering with the CAGR of 5.3452%percent. Lower transaction cost and safety are major reasons for increase in use of electronic fund transfer system.

Classification of Electronic Clearing Services

Electronic clearing service (ECS) is a retail payment system that can be used to make bulk payments/receipts of similar nature, especially where each individual payment is of a repetitive nature and of relatively small amount. It has two variants – one for direct credit and the other for direct debit. Under ECS (credit), one entity/company makes payments from its bank account to a number of recipients by direct credit to their bank accounts. The direct credit facility enables companies and government departments to make large volumes of payments such as salary and pension. With the ECS (debit), the organizations such as utility companies (electricity and telecom) and insurance companies collect their bills, insurance premier and equated monthly instalment payments of loans directly from the bank account of their customers. ECS (credit clearing) is a mode of payment whereby an institution makes a large number of payments like interest, salary,

pension to a large number of investors/shareholders/ employees/ex-employees. They can make the payments electronically instead of issuing paper warrants. The transactions are settled on the second day of submission of data to the clearing house.

The Electronic clearing services has been in operation in India since March 2004, and has been exhibiting rapid growth, not only in terms of volume and value of transactions but also in the coverage of branches, reflecting the increased application of technology. ECS is a mode of electronic funds transfer from one bank account to another bank account using the mechanism of clearing house. It is useful for bulk transfer from one account to many accounts or vice-versa. This facility is mostly used for making bulk payments like payment of dividend to investors, payment of salaries to employees etc.

There are two types of ECS i.e., ECS (Credit) and ECS (Debit) used for raising debits to a number of account holders for crediting a particular institution.

Table 3 ECS – Credit Clearing
Volume and Value of Transactions

Year	No. of transactions in millions	Amount of transactions in trillions
2004-05	40.001	0.04466
2005-06	44.216	0.1298
2006-07	69.019	0.25441
2007-08	78.365	0.48937
2008-09	88.394	0.66976
2009-10	98.550	1.2
2010-11	117.3	1.8169
2011-12	121.5	1.8378
2012-13	122.2	1.7713
2013-14	152.5	2.492
2014-15	115.3	2.019
2015-16	39	1.059
2016-17	10.1	0.0144
2017-18	6.1	0.0155
CAGR	-0.13469 -0.9621%	-0.07818 -0.55842%

Source: Compiled from various issues of RBI Annual reports.

Table shows that the use of ECS (Credit) volume has increased in recent years, In terms of value, transactions' increased to Rs. 98.550 million during 2009-10 as compared with 40.001 million in the year 2004-05, The electronic clearing services (Credit) increased more than eleven times during 2009-10 over the year 2004-05 EFT system avoids chances of loss of instruments in transit and their fraudulent encashment.During the last three years the volume and value of transactions have reduced adversely. It may be due to the introduction of other modes of transfer.

ECS – Debit Clearing

ECS (debit clearing) is a mode of payment whereby an institution receives payments from a large number of consumers/customers. ECS (debit clearing) scheme helps utility institutions, insurance companies, credit card companies and finance companies to collect the proceeds of telephone/ electricity bills, insurance premier or Periodical instalments etc., on the due date based on the mandates received from the consumers.

Table 4 ECS – Debit Clearing
Volume and Value of Transactions

Year	No. of transactions in millions	Amount of transactions in trillions
2004-05	15.29	0.0447
2005-06	35.958	0.1299
2006-07	752.202	0.2544
2007-08	127.120	0.4894
2008-09	160.055	0.6698
2009-10	149.3	0.7
2010-11	156.7	0.7365
2011-12	164.7	0.8336
2012-13	176.6	1.083
2013-14	192.9	1.268
2014-15	226.0	1.740
2015-16	224.8	1.652
2016-17	8.8	0.039
2017-18	1.5	0.010
CAGR	-0.16356 -1.1683%	-0.15327 -1.0948%

Source: Compiled from various issues of RBI Annual reports.

As per the table given above, during 2004-05 the volume of ECS (Debit) transactions had 15.29 million, which increased to 226.0 in 2014-15. But during the year 2016-17 the transactions have reduced to 8.8 million and the value camedown to 0.039 trillion with the CAGR of -0.15327 due to the introduction of new e-banking transfer modes.

Conclusion

Banks need to furnish themselves sufficiently to operate in such a competitive environment.The health of the banking system is strong. Banks have adopted technology, and are making efforts at increasing penetration. However, the benefit of technology has not reached to common people. As a result, banking transactions have not become cheaper, easier and faster due to deficiency in delivery model.What is needed at this stage is a planned, strategic and massive collaborative effort from all stakeholders to leverage technology in an effective way, bringing more people into banking fold, reducing costs and, thereby, ensuring benefits of technology indeed results in cheaper, easier and faster transactions, particularly for small and retail customers.

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