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Emerging Need for Digital Payments

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ABSTRACT

Transformation of Physical payments to Digital payments is the need of the hour. The era of electronic transactions in its infancy is transforming the whole world in general and the business world in particular. Information Technology with its dynamic and flexible features are opening new horizons to the business world. The new outlook of business with E-business is redefining the business transactions calling for Electronic money in place of physical money or the fiat money. The banking industry is the key operator for the E-transactions and payments where the Electronic money which is a product of E-Banking is the crucial key in making all the commercial transactions simple, easy and besides cutting down the operational costs. The changing preferences of the customers are opening new avenues for the business operations with E-banking in the form of retail electronic payment system. This paper is an attempt to present E-banking as a backbone to E-business and to understand the challenges to the changing trends. The study is analytical in nature based on secondary data. Statistical tools like growth rates and averages etc are used. The paper concludes that the focus of the banks has shifted from just providing physical banking services to E-services in the competitive world where banks are trying to improve their e-banking services in terms of quality and security as it is the most preferred banking mode to transact in the emerging tech savvy business world.

Introduction

Electronic money, a product of E-Banking, is very crucial in making all the commercial transactions simple, easy and importantly cutting down the operational costs. The changing preferences of the young and tech savvy customers are opening new avenues for the business operations with E-banking in the form of retail electronic payment system. Banks are the backbone of the economy of any nation which is operating in globalised era which is engulfed in competitive environment. For any bank to survive in this competitive environment they have to use IT and IT enabled services which have introduced new business paradigm. It is increasingly playing a significant role in improving the services in the banking industry. Indian banking industry has witnessed a tremendous developments due to sweeping changes of information technology. Electronic banking has been emerging from innovative Internet of Things (IOT) which consists of Big Data, Data Analytics, Cloud Computing, Artificial Intelligence and Automation. These IOT technologies are also enabling banking industry to reduce cost of transactions and enhancing the scope of business opportunities. In India there are sixty percent of unbanked people to whom banks cannot extend banking services. But ninety percent of people have mobile and smart phones which are facilitating them to avail mobile banking services. Particularly, in remote rural areas, business correspondents with Point of Sale (POS) machines can extend banking services. In broader sense E-Banking

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means banking at anytime, anywhere and anyhow far from the home branch. E- Banking signifies the technological initiatives taken up in banking sector. Electronic banking, also known as electronic funds transfer (EFT), is simply the use of electronic means to transfer funds directly from one account to another, rather than by cheque or cash. The following are the e-banking products and services:

1. Automated Teller Machines (ATMs)
2. Internet Banking
3. Mobile Banking
4. Phone Banking
5. Tele-banking
6. Electronic Clearing Services
7. Electronic Clearing Cards
8. Smart Cards
9. Door Step Banking (through business correspondents)
10. Electronic Fund Transfer

Main features of E-banking:

1. Convenient banking at anytime, anywhere, anyhow.
2. Good bye to long Q's at branches while saving time.
3. 24x7 services.

Review of Literature

Sathye (1997) opines that educating the customers is a critical factor to expand e-banking and answering the query of the customer in terms of advantages will create a pressure on banks. Lot of bank employees is required to educate customers initially. Filotto et al. (1997) viewed that among all groups of customers the youngster's usage of ATM is higher whereas Barnett (1998) proved that young customers feel more comfortable with e-banking. In India e-banking is becoming more popular as per the study of Mookerji (1998). Joseph et al. (1999) found out six primary dimensions like accuracy and convenience, complaint management and feedback, efficiency, queue management, customization and accessibility which influence the delivery of banking services with respect to internet. Whereas Jeevan (2000) observed that internet banking enables low cost and high value added services in the field of finance. Hasan(2002) concluded that online home banking is a significant banking strategy is developing fastly Mishra(2005) explained that rated security is the most important concern for online banking. Nyangosi et al. (2009) indicated that the customers are showing positive attitude towards e-banking which predicts the prosperous emergence of e-banking. Almost all the studies in e-banking highlighted the various dimensions but the present study tries to elucidate the relation between e-banking and e-commerce as e-banking is the backbone of e- commerce.

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Objectives of Study

1. To study the E-payments during Covid-19.
2. To analyze the growth of E-Banking instruments in India.

Research Methodology

The study is based on Secondary data that has been collected from published and unpublished literatures which include books, journals, magazines, Newspapers etc. The statistical data is taken mainly from the RBI websites to analyze the growth of E-banking in India. Statistical and mathematical tools such as simple growth rates, percentages and averages etc are used. Percentages and charts are used to illustrate the changing trends in E-banking. The period of the study is during 2011 to 2016.

1. The Data for this Article is collected from various RBI Data Sources published by RBI.
2. Analysis and Interpretation

Paper Clearing System (PCS)

In the traditional banking system a customer has to go physically to a local branch for depositing and withdrawal. Generally for withdrawals either the customer has to use paper instruments such as cheques, counter payment and by bank drafts. In case of problems arising in any transactions one can approach the manager. In case of loans the physical assistance is taken from the bank. The Paper Clearing System (PCS) covers all paper based payment instruments. In today's technological world, paper payment instruments are in decline.

Table - The Declining Trend of Paper Clearing System:

Years	Paper Clearing	Growth rate	Cheque Truncation System (CTS)	% share	MICR Clearing	% share	Non-MICR Clearing	% share
2011-12	1,341.87	-	180.03	13.42	934.88	69.67	226.95	16.91
2012-13	1,313.48	-2.12	275.04	20.94	823.31	62.68	215.31	16.39
2013-14	1,257.31	-4.28	591.38	47.04	440.07	35.00	225.86	17.96
2014-15	1,196.51	-4.84	964.86	80.64	22.43	1.87	209.82	17.54
2015-16	1,096.37	-8.37	958.39	87.41	-		137.98	12.59
Average	1241.11	-4.90	593.94	49.89	555.17	42.31	203.18	16.28

Source: RBI Reports

During the study period the paper clearing system shows an increasing declining trend. On an average the paper clearing was 1241.11 in volume with an average decreasing rate of 4.90. Of the average volume of paper clearing the percentage share of cheque truncation system (CTS) clearing was 49.89 percent, Magnetic Ink Character Recognition (MICR) clearing was 42.31 percent and Non- MICR clearing was 16.28 percent. According to a survey by Celent, the ratio of e-

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payments to paper based transactions has increased considerably which is a result of advance in technology and increasing awareness among the customers of the ease and efficiency of internet and mobile transactions.

Electronic Fund Transfers

Electronic banking, also known as electronic fund transfer (EFT), uses computer and electronic technology in place of cheques and other paper transactions. EFTs is initiated through devices like cards or codes that let the customer to authorize, accessing bank account.

EFT services

Automated Teller machine (ATM) is an electronic terminal that lets the customer to bank almost virtually at any time. To withdraw cash, make deposits, or transfer funds between accounts, the customer generally inserts an ATM (Debit/Credit) card by entering the unique PIN. The total number of ATMs from 2011-12 to 2015-16 increased in volume from 95,686 to 2,12,061 with an average growth rate of 22.44 per cent.

The point of sale (POS) or point of purchase (POP) is the time and place where a retail transaction with respect to goods and services is completed. Now-a- days the POS are gaining more importance with the introduction of plastic money generally the debit/credit cards. The total number of POS from 2011-12 to 2015-16 increased in volume from 660920 to 1385668 with an average growth rate of 20.68 per cent.

Table - Electronic Fund Transfer Services

Years	Number of ATMs (in actuals)	Growth rate	Number of POS (in actuals)	Growth rate	Mobile Banking	Growth rate
2011-12	95686	-	660920	-	25.56	-
2012-13	114014	19.15	854290	29.26	53.3	108.53
2013-14	160055	40.38	1065984	24.78	94.71	77.69
2014-15	181398	13.33	1126735	5.70	171.92	81.52
2015-16	212061	16.90	1385668	22.98	389.49	126.55
Average	152642.8	22.44	1018719	20.68	177.355	98.57

Source: RBI Reports

Mobile banking is described as the latest channel in e-banking to provide a convenient way of performing banking transactions using mobile phones or other mobile devices. The mobile banking from 2011-12 to 2015-16 increased from 25.56 to 389.49 percent with an average growth rate of 98.57 per cent. The potential for mobile banking seems to be far greater than any other mode of EFT services because of the increasing number of mobile phone users. Today's life-styles with mobile will definitely fuel the growth of 24x7 e-banking services.

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Above the table illustrates the declining trend in the number of ATMs and POS and an exponential rising trend in Mobile Banking as the technology advances.

All Cards

All Cards are nothing but the plastic money which provide convenient and easy mode of payments without physically handling cash. It eliminates the possibility of handling heavy cash and it is secure mode because it avoids thefts. Broadly a card is used for transferring funds, paying bills and shopping. Cards are of two types debit card and credit card. At ATM's and at POS terminals the cards are used to make the payments. From the analysis, cards utility on an average is 7562.35 in volume. During the study period from 2011-12 to 2015-16 there was an increasing trend in total cards from 5,731.61 to 10,038.67 with an average growth rate of 15.08 per cent. Credit cards are slowly taking lead in their share with an increasing trend from 322.15 to 791.67 in volume. But as a percentage share, the Credit Cards remain same with minor variation by the banks. The percentage share of Debit Cards in total cards remains above 90 per cent through the period. This shows the conservative nature of the customers who are more inclined to debit cards because most of the customers take up payments and transactions only when their respective accounts are with the balance. This concept is clear from the average percentage usage of both the cards. Debit cards hold 93.01 percent whereas credit cards hold 6.99 percent of the total number of cards used.

Table - Usage of Cards

Years	Cards	Growth rate	Credit Cards	% share	Debit Cards	% share
2011-12	5,731.61	-	322.15	5.62	5,409.46	94.38
2012-13	6,398.35	11.63	399.13	6.24	5,999.21	93.76
2013-14	7,219.13	12.83	512.03	7.09	6,707.10	92.91
2014-15	8,423.99	16.69	619.41	7.35	7,804.57	92.65
2015-16	10,038.67	19.17	791.67	7.89	9,247.00	92.11
Average	7562.35	15.08	528.88	6.99	7033.47	93.01

Source: RBI Reports

Debit cards are also known as cheque cards. Debit cards look like credit cards or ATM (automated teller machine) cards, but operate like cash or a personal check. Debit cards are different from credit cards. While a credit card is a way to "pay later," a debit card is a way to "pay now." When a debit card is used, money is quickly deducted from checking or savings account. Debit cards are used only when the respective account has balance in it.

Generally Debit cards are accepted at many locations, including grocery stores, retail stores, gasoline stations, and restaurants. This can be used anywhere where the merchants display card's brand name or logo. They offer an alternative to carrying a cheque book or cash. The analysis shows that at ATMs the percentage use of debit cards is 90.34 percent whereas at POS it is 10.69 percent. On an

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average the usage of debit cards had shown an increasing trend at both the terminals.

Table - Usage of Debit Cards

Years	Debit Cards	Usage at ATMs	% share	Usage at POS	% share
2011-12	5,409.46	5,081.92	93.95	327.54	6.45
2012-13	5,999.21	5,530.16	92.18	469.05	8.48
2013-14	6,707.10	6,088.02	90.77	619.08	10.17
2014-15	7,804.57	6,996.48	89.65	808.09	11.55
2015-16	9,247.00	8,073.39	87.31	1,173.61	14.54
Average	7033.47	6353.99	90.34	679.47	10.69

Source: RBI Reports

Credit Card

Credit cards offer services on credit basis to a certain limit. Another recent innovation in the field of plastic money is cobranded credit cards, which combine many services into one card-where banks and other retail stores, airlines, telecom companies enter into business partnerships. This increases the utility of these cards and Majority of credit card purchases come from expenses on jewelers, dining and shopping. The analysis shows that at ATMs the percentage use of Credit cards is
0.68 percent whereas at POS it is 99.32 percent. On an average the usage of Credit cards had shown comparatively slow increasing trend at both the terminals. One point of difference is that Credit cards are used more at POS terminal proving that customers do credit purchases in case of big purchases as the payment can be paid later supporting the credit sales.

E-Payments

The Reserve Bank of India is encouraging e-payments because of security and efficiency and making the whole process easier. RBI is playing a pivotal role in facilitating e-payments by making it mandatory for banks to route high value transactions through Real Time Gross Settlement (RTGS), NEFT (National Electronic Funds Transfer), NECS (National Electronic Clearing Services).

National Electronic Fund Transfer (NEFT)

NEFT facilitates individuals and corporates to electronically transfer funds from any bank branch to any individuals or corporates having an account with any other bank branch in the country. It is done via electronic messages. Even though it is not on real time basis like RTGS, hourly batches are run in order to speed up the transactions. These transactions became more popular when compared to other payments as it facilities transfer to any bank from any bank. From the analysis it is drawn that NEFT transactions showed an increasing trend from 226.11 to 1252.88 volumes of transactions with a average growth rate of 54.35 percent.

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Table - National Electronic Fund Transfer (NEFT)

Years	Retail Electronic Clearing	EFT/NEFT	% share	Growth rate
2011-12	512.44	226.11	44.12	-
2012-13	694.07	394.13	56.79	74.31
2013-14	1,108.32	661.01	59.64	67.71
2014-15	1,687.44	927.55	54.97	40.32
2015-16	3,141.53	1,252.88	39.88	35.07
Average	1428.76	692.34	48.46	54.35

Source: RBI Reports

Immediate Payment Service (IMPS)

Immediate Payment Service (IMPS) is an initiative of National Payments Corporation of India (NPCI). It is a service through which money can be transferred immediately from one account to the other account, within the same bank or accounts across other banks. Upon registration, both the individuals are issued an MMID (Mobile Money Identifier) Code (7 digit numeric code) from the irrespective banks. This facility is available 24X7 and can be used through mobile banking application. The analysis deduced that IMPS transactions started with 0.1 volumes and increased to 220.81 volumes with a average growth rate of 717.69 percent indicating that customers prefer fast transactions.

Table - Immediate Payment Service (IMPS)

Years	Retail Electronic Clearing	Interbank Mobile Payment Service (IMPS)	% share	Growth rate
2011-12	512.44	0.1	0.02	-
2012-13	694.07	1.23	0.18	1130.00
2013-14	1,108.32	15.36	1.39	1148.78
2014-15	1,687.44	78.37	4.64	410.22
2015-16	3,141.53	220.81	7.03	181.75
Average	1428.76	63.17	4.42	717.69

Source: RBI Reports

National Automated Clearing House (NACH)

National Automated Clearing House (NACH) for Banks, Financial Institutions, Corporates and Government is a web based solution to facilitate interbank high volume e-transactions which are repetitive and periodic in nature. NACH System can be used for making bulk transactions towards distribution of subsidies, dividends, interest, salary, pension etc. and also for bulk transactions towards collection of payments pertaining to telephone, electricity, water, loans, investments in mutual funds, insurance premium etc. This is latest mode introduced into the system.

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Benefits of E-Banking

For Banks:

1. In the long run a bank can cut down costs on tellers and for managing large branch base on one side and low rate transaction cost over the Internet will increase profits of banks.
2. E-transactions helps to overcome geographic boundaries in reaching the whole new market thus increasing the Customer Base.
3. Banks becomes more efficient with Internet access for their customer which provides the bank with paper less system thus eliminating the manual errors in the systems.
4. The major advantage is improved Customer Service and Satisfaction. E-Banking eliminates customers visit to branches, waiting in long queues, and asking a teller by providing services at their convenient place and time just by clicks as one get ample information via internet.
5. Image of bank is enhanced as bank becomes state of the art to a customer with E-banking facilities and gives a feeling of cutting image to the customers.

For Customers:

1. Internet banking is free.
2. The control over nearly every aspect of managing his bank accounts.
3. Not to maintain a required minimum balance.
4. Better interest rates for the customer.
5. Pay cheques directly into banks without visiting banks.
6. Withdraw money from checking account from an ATM machine with a personal identification number (PIN), at the convenience of customer, day or night.
7. Automatically pay monthly bills from account.
8. Transfer funds to mutual fund account.
9. Government social security benefits check or tax refund deposited directly into checking account.
10. Buy groceries, gasoline and other purchases at the point-of sale (POS), using a check card rather than cash, credit or a personal check.
11. Usage of a smart card with a prepaid amount of money embedded in it to pay phone, expressway road toll etc.
12. Use computer and personal finance software to coordinate total personal financial management process, integrating data and activities

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related to income, spending, saving, investing, record keeping, bill- paying and taxes, along with basic financial analysis and decision making.

13. Buy and Sell Securities, Check Stock Market Information, Check Currency Rates, Check Balances, See which checks are cleared, Transfer Money, and View Transaction History and avoid going to an actual bank.
14. Lastly service charges are comparatively lower than visiting charges of banks where time is an important constraint.

Challenges with E-Banking

1. Anything new creates always hurdles for acceptance.
2. New systems to be supported with new outlets to support the customer.
3. Assistance to customers is to be given as any major problems faced by them results in a disastrous condition as it can destroy the banks reputation quickly and easily.
4. Gaining the customer reliability with respect to Internet access is to get the customer trust is a Hercules task.
5. Security is another important area where the customer is always worried and banks should provide for protection, security and accuracy.
6. Cyber security is the most challenging task. India has not yet developed proper checks to counter cyber fraud which is a regular feature during recent times, particularly, when we shift to online banking services as Credit or Debit Card are used at sales point by revealing the unique identity number which is very often being compromised.

Summary

INTERNET was once a simple tool in hands of few researchers which has been now blossomed into an appliance of everyday life. With advancements of Internet, the methodology for business transactions on one side and customers' needs, choices and preferences on the other side are changing the way the system has to transact. E-banking is creating new avenues to customers by increasing their satisfaction levels and showing new horizons to the business world. The e-banking provides a convenient, easy and secure mode of payments which is the background on which the whole business world is based on. Traditional mode of payments or transactions done by banks has been significantly reduced. According to a survey by Celent, the ratio of e-payments to paper based transactions has increased significantly which is a result of advancement in technology and increasing awareness among the customers about the ease and efficiency of internet and mobile transactions. Electronic Fund Transfers uses computer and electronic technology in place of cheques and other paper transactions. EFTs are initiated through devices like cards or codes that let the customer to authorize, access bank account at

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Automated Teller machine (ATM) and point of sale (POS) terminals. Cards are nothing but the plastic money which provides a convenient and easy mode of payments without physically handling cash. It eliminates the possibility of handling heavy cash and it is secure mode because it avoids thefts. Broadly a card is used for transferring funds, paying bills and shopping. Mobile banking is described as the latest channel in e-banking to provide a convenient way of performing banking transactions using mobile phones or other mobile devices. The Reserve Bank of India is encouraging e-payments because of security, efficiency and making the whole process easier.

Conclusion

Globalization made markets open to business while the customer is made the king of whole business empire, thus giving preferences to what he needs The changing trends are calling for the focus of the banks from just providing physical banking services to E-services. Recent demonetization, which removed the legal tender of Rs.500/- and Rs.1000/- notes, necessitated the immediate need of E- Payments and transactions on large scale. Even though, the main motive behind demonetization is to eradicate black-money and counter-fiat money. The black- money leads to large scale money laundering by evasion of taxes. The counter fiat facilitates financing terrorists compromising on national security dangerously. Government of India wanted to control both of these illegal activities with one act of demonetization. But this objective can be achieved only through E-payments and transactions. Sooner we achieve these goals; the demonetization will become a success story. Otherwise, black-money may generate again reducing GOI revenue and the enemies may be able to print again counterfeit.

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