

## **Demonetisation and Performance of Electronic Financial Service System of Banks in India**

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### **ABSTRACT**

*There is a great interest among Indian policy makers, academicians and commercial enterprises to explore the possibility of moving towards a cashless economy in the country. Despite multiple electronic methods of payment being available, cash is still the preferred mode of payment in India. Banking industry in India has witnessed positive developments due to sweeping changes that are taking place in the information and communication technology. Electronic Financial Service System (EFSS) has emerged as result of this tremendous development. The objective of the research paper is to analyse the progress made by various banking and payment institution after the declaration demonetisation in India. The study is mainly secondary data based and also analytical in nature. The progress in EFSS is measured through various parameters such as growth in NEFT, RTGS, Mobile banking, card transaction etc. Different Statistical methods are used for the present study. The catalytic push from demonetisation hastened migration towards digital payments in November and December 2016. However, ease in availability of cash by progressive remonetisation impacted the pace of growth of digitalisation in February 2017.*

**Keywords:** Electronic Financial Service System, Demonetisation, Remonetisation, Electronic Payments.

### **INTRODUCTION:**

The last few years have witnessed an explosion of Information and Communication Technology based initiatives which have brought about a drastic change in the way how banking products, services and information are developed and delivered. Information and communication technology (ICT) have improved the performance of banks all over the world. The convenience and time factor of digital banking have attracted many customers to go for Electronic Financial Service System (EFSS) of Banks. Presently, Banking services have reached rural people of India. Moreover, there is much scope for expanding banking activities with the help of technology solutions. It is a widely accepted fact that Banks have been in the forefront of harnessing technology to improve their products, services and efficiency. At the same time it should be noted that India has traditionally been a cash intensive economy. About 78 per cent of all consumer payments in India are conducted through cash (RBI Report, 2017). It is, therefore, quiet sure that currency shortage during the period of demonetisation would have had some adverse impact on economic activity in general.

#### **Electronic Financial Service System (EFSS) of Banks:**

Electronic Financial service System is a technology enabled system that helps any user with a computer, mobile phone, other technology solution and a browser can get connected to bank's website to perform any of the virtual banking functions. In electronic financial service system, bank has a centralized database that is web-enabled. All the electronic financial services that the bank has permitted on the internet platform are displayed

in main menu of the banks website. When the branch offices of bank are interconnected through internet there would be no physical identity for any bank branches. In short, electronic financial service of banks has become a borderless activity permitting anytime, anywhere and anyhow electronic transaction of banking.

Electronic Financial service System provides a number benefits to banking customers in the form of ease, availability and cost of transactions. Electronic finance has become one of the most essential technological changes in the financial service industry. Electronic finance can be defined as the provision of financial services and markets using electronic communication and computation. Electronic finance includes electronic payment, e-trading, and Electronic Financial Information System. Another significant point is that Mobile phone penetration has reached almost 85% in our country. Almost all banks are in the process of rolling out online, mobile and social banking extensions to their core offerings in an effort to respond to this changing consumer demographic. Electronic Financial Service system, is thus emerging as an innovation with potential to change the structure and nature of banking institutions. Therefore EFSS can be defined as the provision of services that embody Internet banking, Mobile banking, ATMs, Fund Transfer System, Real Time Gross Settlement, NEFT, Cards transaction, M Wallet, Data warehousing- E-Customer Relationship Management etc.

#### **Demonetisation in India:**

Demonetization refers to an economic policy where a certain currency unit ceases to be recognized or used as a form of legal tender. In other words, a currency unit loses its legal tender status as a new one comes into circulation. Previously, the higher denomination banknotes in Rs 1,000, Rs 5,000 and Rs 10,000 were demonetized in January 1978.

The formal announcement of demonetization of high currency denomination notes of Rs. 500 and Rs. 1000 worth nearly 15.4 trillion, constituting about 87 percent of the currency in circulation, took place on November 8, 2016. The move aimed at curbing corruption, black money, eliminating counterfeit currency and terrorism funding. Alongside, the move aimed at the promotion of a cashless economy mainly through digitisation, converting the informal economy to a formal one, increasing the scope for financial inclusion, enhancement of financial savings, larger scope for strengthening of treasury accounts of the Government ultimately to be utilized for development finance, etc.

#### **History of Demonetization in India:**

The recent demonetization in India is third in the sequence of major initiatives taken related to banning the high denomination notes in India. The earlier initiatives were carried out in 1946 and 1978. In 1946, the currency note of Rs 1,000, and Rs 10,000 were removed from circulation. But as per the literature the impact of demonetization had been very little as higher denomination notes were not available in the common public domain in large scale. At the same time, the same high denomination notes along with Rs. 5000 note were reintroduced in 1954. The 1978 demonetization has banned the high denomination notes of Rs 1000, Rs 5000 and Rs 10,000. The possible reason for the then note ban was to overcome the problem related to black money generation in the country. Though the notes of high denominations were banned earlier, it constituted a miniscule part of currency worth Rs 1.46 billion, merely 1.7% of total notes in circulation.

#### **REVIEW OF LITERATURE:**

Lokesh Uke (2017) observed that demonetization in India as a great effort taken by Indian government to combat with black money and corruption. It is a bold decision taken by government. The main purpose of demonetization is eradicating the black money and reduces the corruption. Government of India has become success to some extent.

Ayash Yousuf Shah (2017) argued that demonetisation move will have major impact on the parallel economy but sudden announcement and failure to prepare in advance has created temporary chaos and discomfort among the general public. Common Men are finding it difficult to buy with no money in pocket, wasting hours in queues which although could have been avoided if planned in advance.

Tax research team (2016) in their study point out cash crunch after demonization, the entire economic system has been constituted to come to a dead end. With limitations on cash transactions, alternative patterns of payment like usage of plastic money (debit and credit cards), e-wallets and apps, online transactions using e-banking, etc. have a surge in demand

Seema Rathi (2017) observed that initiative by the government to back the bank accounts by biometric aadhaar authentication numbers is a move which has lasting effects. The biometric backed bank accounts not only makes the system fool proof but also serves as an excellent instrument for illiterate people to make payments with just their thumbprints.

Prof. Dr. Roshan S. Patel, Prof. Dr. Roshan S. Patel (2017) opined that many poor people do not have bank

accounts in India. Although the Jan Dhan Scheme launched by the government succeeded in bringing millions into the banking system, the process is not complete and many of the accounts are non-functional. The government has to rectify this problem and bring the entire poor and marginalized section into the banking system.

Ambika K.C , B. Shambhu Lingappa (2017) opined that India has competitive telecommunication market, well developed financial markets and it is a leading exporter of technology services. All these factors support the growth of cashless payments. But India has not gained much in terms of cashless payments compared to its peers. Non-cash payments in India are dominated by card payments, electronic direct transactions and non-cash paper transactions.

**Research Question:**

The present Research tries to understand whether there is any progress in the volume and value of digital transaction after the implementation of demonetization in India or not?. How the progressive remonetisation impacted the growth of digital banking in India?

**OBJECTIVES OF THE STUDY:**

The objective of the present investigation is to analyse the performance of EFSS after the implementation of demonetisation through various parameters such as growth in NEFT, RTGS, Mobile banking, card transaction etc.

**RESEARCH METHODOLOGY:**

The present study is secondary data based and also analytical in nature. Statistical and mathematical tools such as simple growth rate, percentages and averages are used. The variables of the study are the growth in National Electronic Fund Transfer, RTGS, Mobile banking and debit card and credit card transaction etc. In this study, simple growth rate is indicated by GR.  $GR = \frac{Y_t - Y_0}{Y_0} \times 100$  where  $Y_t$  indicates value of given parameter in current year/month and  $Y_0$  indicates value of given parameter in base year/month.

**Significance of the Study:**

Analysing the performance of EFSS after the implementation of demonetisation is found very significant. Electronic Financial Service System (EFSS) is a technology oriented information system that has the potential to increase customer satisfaction and the performance of the banking products and services. The present study is conducted in order to assist in contributing literature on Electronic Financial Service System and technology acceptance in the Indian context. The outcomes of the study will be incorporated with literature on EFSS, which are yet to attain wide spread usage and adoption.

**Components of EFSS:**

There are many cashless payment options available in India. Some of these are discussed below:

**Card Transactions (Debit and Credit Cards):**

The RBI and central government are putting their best effort for greater adoption of electronic payments among banking customers in India. Card payments include payments made using debit cards, credit cards and prepaid card. A card payment involves a card holder, a merchant or entity with infrastructure to accept card payments, a bank which issues the card and a bank which sets up the infrastructure for accepting card payments. Aadhaar Card enabled payment system allows a person to pay using his Aadhaar card if it is linked to his bank account.

**Net Banking:**

E-banking has been prevailing in India around sometime in the form of automated teller machine. It has been transformed by the internet and has emerged that benefits both banks as well as customers. Internet banking or online banking, as it is sometimes called, simply is an extension to traditional banking, which uses internet both as a medium for receiving instructions from the customers and also delivering services to them. Internet banking, as a medium of delivering the banking services to customers has gained wide acceptability in all developed nations. From the perspective of banking products and services being offered through Internet, Internet banking is nothing more than traditional banking services delivered through an electronic communication backbone, viz, Internet.

**Mobile Banking:**

Recognizing the importance of technology oriented banking, mobile as a channel for offering financial services in the country, the central Bank issued the first set of guidelines on mobile banking in 2008. Various Banks have been offering mobile banking services to their customers through various channels such as SMS, USSD channel, mobile banking application etc in the last couple of years. The real time inter-bank mobile banking payments has been facilitated through the setting up of the Immediate Payment Service. The IMPS has increased the efficiency of mobile banking by enabling real time transfer of funds between bank accounts and providing a centralized interbank settlement service for transaction conducted through mobile banking.

**The Unified Payments Interface (UPI):**

The Unified Payments Interface (UPI) offers a set of standard Application Programming Interface specifications to facilitate online payments. It aims to simplify and provide a single interface across all NPCI systems besides creating interoperability and superior customer experience. The key aspects of the Unified Payments Interface are: a) The Unified Payments Interface permits payments via mobile app, web etc. b) The payments can be both sender and receiver initiated. c) The payments are carried out in a secure manner aligned with the extant RBI guidelines.

**RTGS/NEFT:**

Real Time Gross Settlement System (RTGS) & National Electronic Fund Transfer system (NEFT) are the modern electronic financial services which enable an efficient, secure, economical and reliable system of transfer of funds from bank to bank as well as from remitter's account in a particular bank to the beneficiary's account in another bank across the country.

**RTGS:**

The RTGS is the continuous (real-time) settlement of funds individually on an order by order basis (without netting). Real Time refers the processing of instructions at the time they are received rather than at some later time. Gross Settlement means the settlement of funds transfer instructions occurs individually that is on an instruction by instruction basis. The RTGS is primarily meant for large value transactions. The minimum amount to be remitted through RTGS is limited to Rs 2 Lakh. There is no upper ceiling for RTGS transactions.

**NEFT:**

NEFT can be defined as an electronic fund transfer system that operates on a Deferred Net Settlement (DNS) basis which settles transactions in batches. In RTGS, the settlement takes place with all transactions received till the particular cut-off time. These transactions are netted in NEFT whereas in RTGS the transactions are settled individually. Any transaction initiated after a designated settlement time would have to wait till the next designated settlement time. Contrary to this, in the RTGS transactions are processed continuously throughout the RTGS business hours. Individuals who do not have a bank account can also deposit cash (Max. Rs. 50,000/-) at the NEFT enabled branches with instructions to transfer funds using NEFT.

**Mobile Wallets:**

The necessity for prepaid payment instruments in the form of physical card or e-wallet was felt to give non-bank customers the facility to use electronic modes of payments and give existing bank customers a safeguard measure that limits the extent to which they are exposed. The emergence of bank (State Bank Buddy, ICICI Pockets) and non-bank (PayTM, Mobikwik, Citrus Pay, etc.) payment wallets in India has changed the landscape of electronic financial service system.

**BHIM:**

BHIM means Bharat Interface for Money is a mobile app developed by NPCI. It was based on the Unified Payment Interface and launched on 30 December 2016. It facilitates e-payments directly through banks and as part of the drive towards cashless transactions. BHIM enables the users to send or receive money to other UPI payment addresses or scanning QR code or account number with IFSC code or MMID (Mobile Money Identifier) Code to users who do not have a UPI-based bank account. BHIM users can create their own QR code for a fixed amount of money, which is helpful in merchant transactions.

**EFSS-Performance Analysis:**

An analysis of banking transaction show that there is a sequential growth in the digital transactions in the months following demonetisation. The pattern of digital transactions in February 2017 over November 2016 shows that the growth rates showing an increasing trend both in the terms of value and volume as compared November 2016.

**Table 1: Growth in NEFT**

| Year         | Volume (million) | GR % | Value (billion) | GR% |
|--------------|------------------|------|-----------------|-----|
| Oct 2016     | 133              |      | 9,504           |     |
| Nov 2016     | 123              | -7   | 8,808           | -7  |
| Dec 2016     | 166              | 24   | 11,538          | 21  |
| January 2017 | 164              | 23   | 11,355          | 19  |
| Feb 2017     | 148              | 11   | 10,878          | 14  |
| March 2017   | 186              | 39   | 16,294          | 71  |

**Source:** RBI Bulletin-various editions

There has been growth in volume and value of National Electronic Fund Transfer transaction since October 2016. The highest growth rate is achieved during the month of March 2017. The growth rate indicated decrease

in November 2016 after demonetisation.

**Table 2: Growth in RTGS**

| Year     | Volume-million | gr% | Value-billion | gr% |
|----------|----------------|-----|---------------|-----|
| Oct 16   | 9,006          |     | 76,473        |     |
| Nov 16   | 7,874          | -12 | 78,479        | 2   |
| Dec16    | 8,840          | -1  | 84,096        | 10  |
| Jan 17   | 9,335          | 3   | 77,481        | 1   |
| Feb 17   | 9,104          | 1   | 74,218        | -2  |
| March 17 | 12,538         | 39  | 1,23,375      | 61  |

**Source:** RBI Bulletin-various editions

The first two months after the implementation of demonetization is found decreasing trend. March 2017 witnessed the highest growth in the value and volume of transaction.

**Table 3: Growth in IMPS**

| Year         | Volume (million) | GR% | Value (billion) | GR% |
|--------------|------------------|-----|-----------------|-----|
| Nov 2016     | 36               |     | 325             |     |
| Dec 2016     | 53               | 47  | 432             | 33  |
| January 2017 | 62               | 72  | 491             | 51  |
| Feb 2017     | 60               | 66  | 482             | 48  |

**Source:** RBI Bulletin-various editions

There has been steady growth in the IMPS transactions both in terms of value and volume since the demonetisation. There is a short fall in the growth rate in February 2017.

**Table 4: Growth in UPI**

| Year         | Volume (million) | GR%  | Value (billion) | GR%  |
|--------------|------------------|------|-----------------|------|
| Nov 2016     | .3               |      | .9              |      |
| Dec 2016     | 2                | 566  | 7               | 677  |
| January 2017 | 4.2              | 1300 | 16.6            | 1744 |
| Feb 2017     | 4.2              | 1300 | 19              | 2011 |

**Source:** RBI Bulletin-various editions

A sharp pickup is seen in UPI transactions. The number of transactions rose from 0.3 million in November to 2.0 million in December and further to 4.2 million in January and February. The value of transactions increased from 0.9 billion in November to about 19 billion in February.

**Table 5: Growth in DEBIT /CREDIT CARD AT POS**

| Year     | Volume (million) | GR% | Value (billion) | GR% |
|----------|------------------|-----|-----------------|-----|
| Nov 2016 | 206              |     | 352             |     |
| Dec 2016 | 311              | 50  | 522             | 48  |
| Jan 2017 | 266              | 29  | 481             | 36  |
| Feb 2017 | 212              | 3   | 391             | 11  |

**Source:** RBI Bulletin-various editions

The Debit and credit card payments at PoS also recorded a sharp pick-up in December but the growth moderated in January and February with progressive remonetisation.

**Mobile banking:**

**Table 6: growth in m-banking**

| Year          | Volume million | GR% | Value billion | GR% |
|---------------|----------------|-----|---------------|-----|
| October 2016  | 78             |     | 1,139         |     |
| November 2016 | 87.47          | 12  | 1,365.70      | 19  |
| December 2016 | 110.64         | 41  | 1,498.18      | 31  |
| January 2017  | 106.13         | 36  | 1,383.05      | 21  |
| February 2017 | 95.41          | 22  | 1,279.93      | 12  |
| March 2017    | 113.65         | 45  | 1,730.88      | 51  |
| April 2017    | 106.27         | 36  | 1,612.65      | 41  |
| May 2017      | 114.26         | 46  | 2,134.20      | 87  |

Source: RBI various editions

Mobile banking usage shows an increasing trend in terms of volume and value except in 2017 January. The highest growth rate indicated in may 2017.

**M –wallet:**

Mobile Payment is a transfer of funds in return for a good or service, where a mobile phone is involved in both the initiation and confirmation of the payment. The payment may be processed by credit cards or debit cards. M-payment is a crucial driver for the growth of the e-commerce industry in India. People can shop online; book movie tickets, rail or flight tickets; and pay their bills by making m-payment through their debit and credit cards. With more than 1 Billion mobile subscribers, India has a promising potential for internet on mobile, and the same is expected for payments and business transactions on mobile. In FY 2016, Indian m-payment reported INR 8.2 Trillion worth of transaction value; and it is expected that it would grow at 150% during FY 2016 to FY 2022.

**Table 7: Indian Mobile Wallet Transaction Value (For Each Quarter, In Millions)**

| Quarter | Amount | GR% |
|---------|--------|-----|
| Q1 CY16 | 1095   |     |
| Q2 CY16 | 1200   | 10  |
| Q3 CY16 | 1444   | 20  |
| Q4CY16  | 2262   | 57  |
| Q1 CY17 | 3612   | 60  |

Source: RBI Reports

As people have adopted mobile wallets for everyday transactions, Average Transaction value decreased despite growth in overall Transaction Value. In the later stage, Mobile wallet usage declined with increased cash supply.

**DISCUSSION AND REFLECTION:**

1. It is found that ease in availability of cash by progressive remonetisation impacted the pace of growth of digitalisation.
2. As people have adopted mobile wallets for everyday transactions, the amount of E-wallet transaction increased drastically after the implementation of demonetisation.
3. Mobile banking usage shows an increasing trend in terms of volume and value except in 2017 January.
4. Prepaid instruments also witnessed an all-time record hike in 2016-17 as compared to previous period.
5. The Debit and credit card payments at PoS also recorded a sharp pick-up in December but the growth moderated in January and February with progressive remonetisation.
6. There has been growth in volume and value of NEFT/RTGS/IMPS/UPI transaction since November 2016.
7. In the initial period of demonetization customers opted various forms of EFSS increasingly on account of lack of currencies. At the same time progressive remonetisation resulted in decrease in the adoption of digital transaction. It indicates that the customer adoption of digital banking is determined to a great extent

by various psychological factors. Therefore, this literature review further recommends the significance of customer adoption study from the customer's perspective.

8. The spurt in digital payment activity in PPIs has also been noteworthy, with the value of transactions increasing from 13 billion to 19 billion, an increase of 42 per cent in three months. However, as remonetisation progressed, there was some decline in growth in PPI transactions in January and February 2017 compared with December 2016. PPIs facilitate purchase of goods and services, including funds transfer, against the value stored on such instruments. Money can be loaded on PPIs by cash, or by debit to a bank account, or by credit card. PPIs are issued as smart cards, magnetic stripe cards, internet accounts, internet wallets, mobile accounts, mobile wallets, and paper vouchers.

#### **SUMMING UP:**

The push to a less-cash society received an impetus facilitated by quick policy measures and initiatives by the Reserve Bank following the withdrawal of high denomination specified bank notes. The initiatives taken by the Bank, along with enhancement in infrastructure and addition of innovative products in the payment space enabled the spread of electronic payments to a larger customer base across the country. Given the partial information that is available post demonetisation so far, the analysis, especially of growth, is only preliminary in nature. It should, therefore, be possible to make an analysis in greater detail as more data becomes available in the coming months. Moreover, customer centric study needs to be conducted to understand the attitude of customers towards various forms of EFSS after the implementation of demonetization.

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