

## **Electronic Payments – Impact on Economy & Strategy for Proliferation**

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### **Abstract**

*The objectives of demonetization implemented on November 8, 2016, which withdrew the legal tender status of 86% of the total currency in circulation, as stated by the Government were threefold - to tackle counterfeit Indian bank notes, to effectively nullify black money hoarded in cash and to systematically curb funding of terrorism with fake notes. This decision gave the country another opportunity, apart from the stated objectives – to strive for a minimum cash economy. Reduction of currency in the system will have far reaching economic impact in the form of considerable saving in the costs associated with printing, transportation, storage and management of the cash, will lead to better and more efficient tax administration thereby enhancing the tax revenues and will further financial inclusion. This paper examines the impact of the electronic payments at macro-economic level, steps required to be taken to push the digital payment agenda, opportunities, challenges and recommendations for future course of action.*

*Key Words:USSD, Global Payment, Demonetization,Currency,Electronic Payments, Cards, Mobile Wallet,UPI.*

### **1. Introduction**

On November 8, 2016, 86% of the currency in circulation in the country ceased to be legal tender. Total value of currency in denominations of Rs 500 and Rs 1000 was estimated to be Rs 14.18 lakh crore in March 2016 and Rs 15.44 lakh crore in November 2016. The objectives of demonetization as stated by the Government were threefold - to tackle counterfeit Indian bank notes, to effectively nullify black money hoarded in cash and to systematically curb funding of terrorism with fake notes. While this step of the Government brought innumerable difficulties for the common man, caused slowdown of the economy, at least, in the short term and impact on black money is yet to unfold, it presented a never-before opportunity for the country to strive for a less cash economy with a strong push for embracing electronic payments very aggressively.

### **2. Objective of the Study**

- To discuss the potential and various modes of electronics
- To elaborate the benefits of digital payments, challenges
- To recommend strategy for furthering electronic payments

### **3. Methodology**

The paper is primarily based on secondary data. The secondary data was collected by various published sources like Websites, Newspaper clippings, Economic survey, journals, magazines, RBI Bulletin etc.

#### **4. Methods of Electronic Payments**

Since centuries, the method of payments has evolved considerably. What initially might have started as a pure barter, later progressed to some sort of medium of exchange such as shells to coins of previous metals carrying their actual value to fiat currency and finally to paper based currency. It is the demand of currency by the consumer and evolving consumer behaviour including factors such as ease and convenience that have impacted the way currency has evolved in its various manifestations. Ease of doing business brought about the paper based bills of exchange in their various forms with a view to avoiding use of currency and facilitate payments in due course.

The non-cash payment methods can be put under two categories: Paper based and Electronic or Digital. The paper based instruments like promissory notes, cheques, demand drafts etc. are in use since last few centuries. These instruments were designed to facilitate business rather than replace use of cash, although they helped in transactions without using currency. While paper based currency continues to rule the roost, the need to look for cheaper and more convenient forms of money led towards development of electronic money. With the advent of digital technologies, the paper based instruments are being increasingly replaced with the electronic ones in form of electronic funds transfer, introduced in India in form of NEFT and RTGS for small and large value payments respectively.

The second category of electronic payment instruments, designed for use in retail transactions in lieu of cash transactions, comprise of cards. In 1958, Bank of America introduced what became the present day credit card. With development in the field of electronics and communication technology, the card based payments proliferated very quickly world over, needless to say, owing to convenience as well as lower overall costs to all concerned. Further developments in the field of technology enabled variants of cards, particularly as storage of money, cards facilitating direct debit to bank accounts, settlement of large as well as small transactions electronically, and mobile valets and so on and so forth. With the advent of e-commerce, payment through electronic means increased manifold. Surely, this is one of the most exciting fields in financial technology.

#### **5. Relevance of Minimum Cash economy**

Indian economy is largely cash based economy with a Currency to GDP ratio of 12.2% in March 2016 and was showing increasing trend till demonetization took place. This compared unfavourably with other major emerging economies. Among the BRICS nations, China has a ratio of 9.1%, whereas Russia, Brazil and South Africa have ratios of 9%, 3% and 2.5% respectively. A relatively smaller economy like Indonesia has a Currency to GDP ratio of 5%. As per Annual Report of the RBI for the year 2016-17, the ratio has come down to 8.8% and compares well with a host of advanced and emerging economies (such as Germany, France, Italy, Thailand and Malaysia). Our country can certainly draw inspiration from Nordic countries which have least Currency to GDP Ratio. As per a report in the Guardian, cash payments in Sweden constituted mere 2% of the value of all payments in the year 2015.

The proliferation of electronic payments is on account of getting higher value at lower cost. Its macroeconomic impact is primarily due to the following factors:

- a) Lower cash printing and handling cost
- b) Higher potential tax revenue

- c) Reduction in grey economy and greater overall formalization
- d) Greater financial inclusion
- e) Greater intermediation by the formal financial sector which help improve monetary transmission

A study of Moody's Analytics shows that the payment cards (can be extended to include all forms of electronics payments) are not just convenient but also help stimulate economic growth. As per the study, during period between 2008 and 2012, the use of cards in transactions raised consumption by an average of 0.7% across 56 countries contributing to average additional growth of 0.17% per year in GDP. It is argued that use of credit cards lead to greater consumption which causes increase in production. The increase in production create more jobs which result in to greater household income which further drives consumption upwards, thereby resulting into a virtuous cycle. As per another study by Moody's, there was a 0.1% cumulative increase in global GDP and \$74 billion contribution each year. Real consumption grew at an average of 2.3% of which 0.01% can be attributed to card penetration which resulted in an estimated increase of 2.6 million jobs over the period.

Electronic payments bring about savings in the costs of all the stakeholders, viz. Central bank, Commercial banks, Government and merchants. Around the world, the cost of printing the currency has been steadily increasing. In India, it was a whopping Rs 37.62 billion in 2015-16 as against Rs 34.21 billion in 2014-15. In 2015-16, an amount of approximately Rs 1 billion was spent by RBI towards currency remittances to its currency chests with various banks. These banks in turn send the cash to their various branches. No estimate has been made of the cost incurred by the banks in remitting and storing the cash, dispensing through branches and ATMs, staff cost associated with handling the cash, security arrangements and cost of cash related infrastructure including ATMs. Merchants also incur huge costs in managing the cash. These costs, mainly unproductive in nature, though directly borne by the banks or merchants, ultimately get passed on to the consumer and affect the economy. A study by Mackinsey in 2013 shows that the cost of cash to countries with high cash usage can be as high as 1% of GDP and the annual cost per household may be in the range of 2% of the income.

Secondly, prevalence of cash is one of the factors responsible for the informal economy. Transactions of this informal economy are not taxed and increase the corruption in the society. Prices of physical assets such as real estate get artificially inflated because of informal economy creating risks. Higher value currency notes turn the currency into commodity rather than medium of exchange. Transactions through electronic means leave a trail leading to better tax compliance and easier follow-up by the Government.

Electronic payments bring down the transaction costs for the financial intermediaries to a great extent making it easier for them to reach out to financially excluded population more as business opportunity rather than social obligation. On the other hand, it is easier for the customers in the aforesaid strata of the society to transact with much more convenience.

## **6. Current Status**

As can be observed from the following tables containing monthly data on retail electronic payments being released by RBI since November 2016, there has been a surge in all types of electronic payments post demonetization.

<b>RETAIL ELECTRONIC PAYMENT SYSTEM DATA - VALUE</b>								
							<i>Value in Rs. Billion</i>	
	<b>NEFT</b>	<b>IMPS</b>	<b>NACH</b>	<b>UPI</b>	<b>CARDS</b>	<b>PPIs</b>	<b>MOBILE BANKING</b>	<b>TOTAL</b>
Nov-16	8807.8	324.8	606.6	0.9	352.4	13.2	1244.9	11350.6
Dec-16	11537.6	431.9	626.8	7.0	522.2	21.3	1365.9	14512.7
Mar-17	16294.5	564.7	829.4	23.9	416.2	21.5	1499.9	19650.1
Jun-17	12694.2	596.5	708.6	30.7	468.2	24.1	1584.7	16106.3
Jul-17	12115.1	604.8	771.7	33.8	439.3	25.1	1019.2	15009.0

In volume terms, the data is as under:

<b>RETAIL ELECTRONIC PAYMENT SYSTEM DATA - VOLUME</b>								
							<i>In Millions</i>	
	<b>NEFT</b>	<b>IMPS</b>	<b>NACH</b>	<b>UPI</b>	<b>CARDS</b>	<b>PPIs</b>	<b>MOBILE BANKING</b>	<b>TOTAL</b>
Nov-16	123.0	36.2	152.5	0.3	205.5	59.0	72.3	648.8
Dec-16	166.3	52.8	198.7	2.0	311.0	87.8	70.2	888.8
Mar-17	186.7	67.4	182.1	6.2	229.7	90.0	60.8	822.9
Jun-17	152.3	65.8	197.3	10.2	232.4	84.7	77.1	819.8
Jul-17	149.5	69.1	204.3	11.4	237.6	88.7	69.5	830.1

**[SOURCE : RESERVE BANK OF INDIA]**

**Note:** The data is representative to some extent as the data includes transactions from 4 banks at Point of Sale Terminals for cards, from 8 non-bank issuers for PPIs and from 5 banks for mobile banking.

It can be seen that the transactions in NEFT spiked in March 2017, possibly because of bunching of Government payments, but with cash again flowing in the system, the volume appears to have been stabilized at the current levels. The transactions through mobile valets(PPIs) also appear to have reached plateau and so are the mobile banking transactions. The later in fact have registered a steep decline in July 2017 over June 2017. But it is UPI which appear to show a steady increase. Now, for a less cash economy, it is important that the retail small value transactions pertaining to purchase of goods and services transactions also take place through electronic medium. Therefore, the focus needs to be on instruments used for retail transactions such as cards, mobile valets and UPI. Presently, anecdotal evidence will suggest that most of the electronic payments in day to day retail transactions in India take place through e-market places and large super store chains. There is a strong need to popularize these for all other neighbourhood retail shops.

## 7. Opportunities, Challenges and Strategy

Real opportunity to push electronic payments in India arises from the number of mobile phone users in the country. As per the figures released by TRAI, as at the end of May 2017, there are 1180.82 million active mobile connections in the country of which 1019.55 million are active.

In rural areas, there are 504.18 million mobile connections. Even presuming that many users have multiple connections, the number still is very high. However, the payment applications such as UPI, mobile valets or mobile banking are designed for smart phone users which count to roughly 125 million only. Cost of data subscription is a major challenge as most of these users find it difficult to incur extra expenditure.

The USSD based payment applications work without data connection and can be used by a vast majority of non-smart phone users. In Kenya, M-Pesa is so extensively used that, as per estimates, at least one individual in 96% of Kenyan households and 75% of the unbanked population use the application. In India, USSD based app was launched by National Payments Corporation of India (NPCI) in August 2016. But neither the banks nor Government has so far taken concrete steps to give it the desired push.

Yet another major challenge is the cost devolving on merchants in the form of cost of POS machine with telephone line and the charges levied by the banks on digital transactions as Merchant Discount Rate (MDR). Large stores and retail chains do not face these problems because they chase volumes working on lower margins and expect impulse purchases from their customers on the strength of a card or mobile wallet. Many of them even offer discounts to customers for paying by cards. RBI is yet to rationalize the MDR framework despite placing the draft guidelines on its website in February 2017.

For promoting electronic payments, development of infrastructure and ecosystem will not be sufficient but the Government will have to offer support from the exchequer in the form of financial incentives. In South Korea, one of the most wired countries, the central bank aims to go for cashless by 2020. Most important incentive given by the Government of South Korea was a 2% VAT reduction on all card transactions for merchants and 20% of total card spending by individuals. The measures helped in sizeable increase in Government's income through VAT because of better compliance. Several countries such as Mexico, Singapore and Brazil have constituted funds for promotion of innovation in the digital payment industry.

In India also, there are reports that the Government is considering to offer a rebate of 2% in GST on all electronic transactions for purchase of goods and services for transactions of a value below Rs.2000. This could prove to be a master stroke for proliferation of electronic transactions as the small value day to day transactions are the key to a less cash economy.

On the other hand, there is a strong need of some disincentive for cash transactions of high value. If banks are given freedom to impose a cash handling charges from merchants above a certain threshold value, which may appear to be despotic initially, merchants will go all out to encourage their customers for electronic payment. Coupled with rationalization of MDR charges for small retailers and rebate in GST for both merchants and consumers, disincentive for handling cash will have the potential of bringing in significant changes in the landscape.

## **8. Conclusion**

It can be concluded that post-Demonetization, people have largely realized the potential and benefits of electronic payments although cash continues to be the most convenient form of medium of transaction particularly for small value retail day to day transactions for a vast majority. Infrastructure and ecosystem is already available now and the mind set of people has also changed. There is a strong need for having a cohesive national strategy to exploit the full benefits of electronic payments. The strategy has to be different for different groups of consumers/merchants and different strata of society. To illustrate, population groups belonging to urban

middle class and rural lower middle class have to be enticed differently to switch over to electronic payments. Government has to commit itself by providing appropriate tax incentives or subvention to merchants and individual users for embracing electronic payments.

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