EFFECT OF DEMONEYTIZATION ON FOREIGN EXCHANGE VOLATILITY AND INDIAN BANKING SYSTEM: AN EMPIRICAL STUDY

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ABSTRACT

The announcement of Demonetization has led the whole country in a great delusion was the time when all the sectors were planning to grow and expand their businesses on a larger scale the news fled their Plans leaving them with no Options. Indian economy is mixed economy where all the sectors have their contribution in raising the National Income and GDP. The impact of demonetization has also affected the Stock Exchange rate of Indian banking system. The detrimental effects of which has made the growth rate to go down from expected 8.1 % to 6%.

KEYWORDS: Demonetization, Exchange Rate, Insurance, Volatility, Banking Sector, Stock Exchange,

INTRODUCTION

Demonetization is in the news since November 8th 2016 when our Prime Minister made the historic decision about discontinuing the 500 and 1000rupee notes. This historic decision has affected almost all the sectors of Indian economy. Proven good for some while some suffered. This paper intends to describe the effects of demonetization and its impact on exchange rate volatility on the major financial institutions, the Indian economy, and few some other sectors of Indian Stock Exchange.

Volatility (in Forex trading) refers to the amount of uncertainty or risk involved with the size of changes in a currency **exchange rate**. A higher **volatility means** that an **exchange rate** can potentially be spread out over a larger range of values.

The relationship between exchange rate volatility and EXIM flows has been studied in a large number of theoretical and empirical papers.

Few models have suggested that higher levels of exchange rate movements offer greater opportunity for profit and therefore might lead to an increase in exports. On the contrary, some researchers have suggested that it is possible to Counterpoise potential unexpected movements of the exchange rate by investing at the forward market causing producers to be unaffected by movements of the exchange rate. These different ranges of results have been supported by a large variety of experimental studies causing the effects of exchange rate volatility on exports to be one of the most debated topics of international trade.

LITERATURE REVIEW

Demonetization is a one step of many steps in fighting corruption, black marketing, and financing insurgency. However preparation for demonetization was lop-sided, and its impacts was terrible on Indian public. If 86% of cash is taken out, with a meagre amount available, all market transactions have been killed. The people, who were targeted, did not come on streets, but common folk are out from their work places as well as homes. , Somebody put a parable on social net. For killing ten crocodiles, government pumped out all water from the pond results killing ten thousand fish in pond but Crocodiles walked off on dry sand. With an intention to rid the country of black money and dig out tax defaulters and black money holders, government has taken step to demonetized Rs 500 and Rs 1000 notes.- **Ayash Yousuf Shah**, March 2017.

Ansari (1982) examined the impact of real per capita GDP, the size of overseas trade and density of population on the tax revenue by making an inter country comparison. Data was collected for the period 1972 to1976 from IMF publications, earlier studies and World Bank publications relating to 79 62 countries. The author employed regression analysis on the basis of two equations. In the first equation real per capita GDP and size of trade were taken as independent variables and tax revenue as dependent variable. In the second equation population factor was also included as independent variable to assess the impact of all three factors (GDP, size of overseas trade and density of population) on tax revenue. The study concluded that real gross domestic product and foreign trade were positively correlated with tax revenue, whereas density of population was negatively correlated with tax revenue.

Arpit Guru and Shruti Kahanijow (2010) researcher analyzed the black money income. Need for amendment in DTAA &ITEA and analyzed that black money is spread everywhere in India up to a large extent which continuously stashed towards abroad in a very large amount. The researcher also identified how black money had caused menaces in our economy and in what ways it is used.

Sukanta Sarkar (2010) conducted a study on the parallel economy in India: Causes, impacts & government initiatives in which the researcher focused on the existence of causes and impacts of black money in India. According to the study, the main reason behind the generation of black money is the Indian Political System i.e. Indian govt. just focused on making committees rather than to implement It. The study concludes that laws should be implemented properly to control black money in our economy.

Tax Research Team (2016) in their working paper stated in favor of demonetization its main objective is to analyze the impact of demonetization on Indian economy. This paper shows the impact of such a move on the availability of credit, spending and level of activity and government finances.

DEMONITIZATION IMPACT ON INDIAN STOCK MARKET

In the past many countries have attempted demonetization, some successfully and some unsuccessfully, but all of them were done when their economies were having major problems like manic-inflation in Germany in the 1920s. This is the first time that a seamlessly healthy economy has attempted it and that too to target black money. Because this is a first, there are varied opinions amongst economists on what the impact will be in the future.

The immediate impact of removing so much money from circulation is of course the impact it can have on several sectors that are driven by the black economy like real estate, construction etc, but more so also the sectors that are more driven by cash, because they are the first that are affected when so much money is suddenly removed from circulation.

Here is how the various sectors have been impacted after the demonetization move and what we think could happen in the future:

Real Estate

Since Real Estate is driven by the black economy, this sector has got hit of almost all the sectors. The Nifty Realty index gapped down after the day of the demonetization move and corrected -25% (as indicated in the chart below, the NIFTYREALTY bounced of the Auto-SR very strong support of 152.5 on a weekly chart) before recovering a bit. It is still down almost -16% from 8th Nov.

Consumer Durables

This sector is primarily driven by cash and hence has also been hit hard. It is down by almost 11.7% since the demonetization announcement.

Banking

The Banking sector took an immediate hit the day after the announcement but recovered on Nov 10th. But, it has been afterwards correcting as it is still grappling with trying to replenish the cash in the economy. However, this is one sector which is expected to benefit in the long term because a lot of the black money will be deposited in bank accounts and the excess funds in the banking system will also help address the ***non-performing assets*** (NPA) problem that many of the banks are facing due to bad loans. Due to these NPA problems, a lot of the infrastructure funding etc has also been affected and hopefully, that should also be addressed when the current cash crunch is reduced and economy claws back to normalcy.

Infrastructure

The infrastructure sector is driven by huge investments from government as well as loans from banks. One of the healthy effects of demonetization is to increase the liquidness in the banking system as well as increase the funds that the government has for spending on items like infrastructure, welfare etc, so the Infrastructure is an obvious beneficiary of that.

Information Technology

The IT sector has been largely unaffected by the demonetization as it is export oriented and hence relatively better positioned to handle shocks in the Indian economy. Moreover it is probably also largely a cashless sector and hence also not affected due to the cash being taken out of the economy.

Other models suggest that higher levels of exchange rate movements offer greater opportunity for profit and therefore might lead to an increase in exports. Alternatively, some researchers have suggested that it is possible to offset potential unexpected movements of the exchange rate by investing at the forward market causing producers to be unaffected by movements of the exchange rate. These different ranges of results have been supported by a large variety of empirical studies causing the effects of exchange rate volatility on exports to be one of the most controversial topics of international trade.

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Since the advent of asset quality review (AQR), there has been a rise in the number of NPAs. To get an idea, the GNPA of banks is 6 lakh crore as of June, 2016 which is 8.2% of the total loans1. These are only the NPAs as there are an equal number of restructured loans which might transform to NPAs in future.

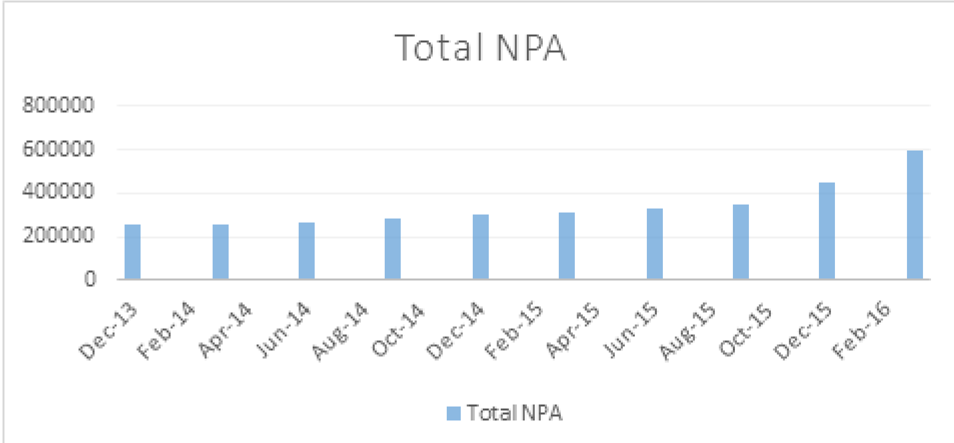

Figure 1: Total NPAs as of March 2016, Source: Finance Ministry

A recent data provided by the Finance ministry, which has been depicted in Figure 1, shows that 5.3 lakh crore of the 6 lakh crore NPAs are under the public sector banks. It's clearly visible that there has been a rise in the NPAs from October 2015. This can be attributed to the ever greening of loans which led to the creation of a distorted picture of the banks. Though the asset quality review led to the identification of such NPAs which were previously classified as standard, the problem of NPAs existed since the 2008 financial crisis but remained hidden due to the above mentioned reason.

The data provided by the Finance ministry also had the top 10 sectors with highest NPAs which has been shown in Figure 2.

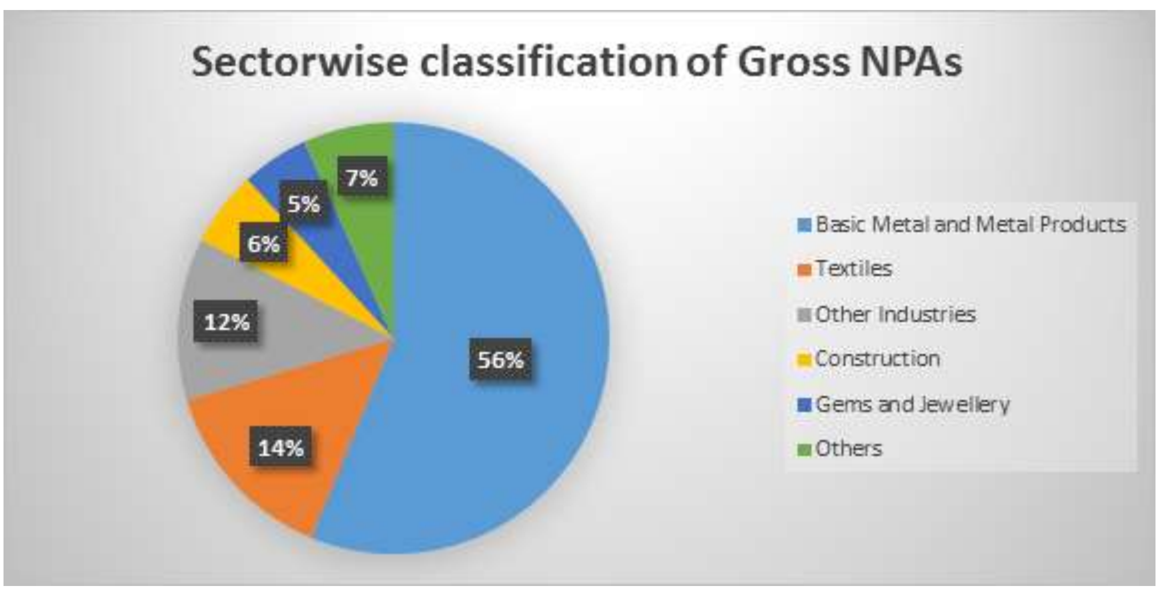

Figure 2: Top 10 sectors having highest NPAs, Source: Finance Ministry.

It's clearly visible that the Basic Metal and Metal products sector has more than 50 % of the NPAs. Demonetization has affected the industrial production significantly. The recent industrial production data for October 2016 shows us that the industrial production went down by 1.8 % for October 2016 YoY. This was before demonetization. The November 2016 IIP data shows that industrial production increased to 5.7% YoY while in December, the value reduced to -0.4%. But again, this is a YoY data. To compare the effects of demonetization, one has to compare the actual IIP of the current month with the previous month. The actual data shows that the IIP has fallen from 178.1 in October 2016 to 175.8 in November, 2016 but increased to 183.5 in December, 2016 which can be seen in Figure 4. This is an interesting phenomenon because the IIP was expected to deteriorate further. But in contrast, the IIP MoM data increased. It can also be observed that the YoY data has decreased by -0.4% which means that even though the IIP has increased compared to the previous month, compared to last year's December data, IIP has fared badly. So the increase in IIP MoM data can be attributed to a seasonal trend and that the overall outlook still looks edgy.

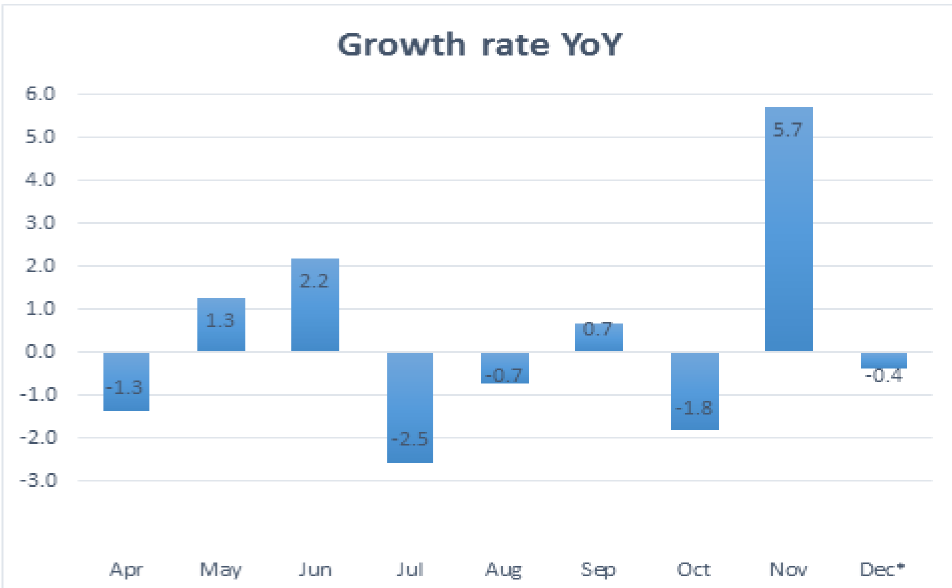

Figure 3: Industrial production data (YoY), Source: CSO

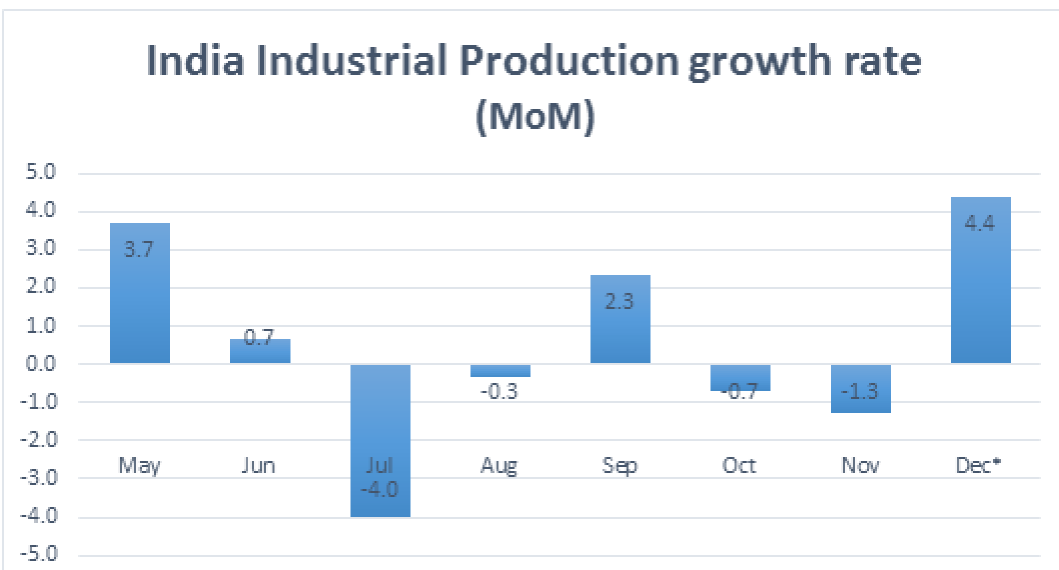

Figure 4: Industrial production data (MoM), Source: CSO

The decrease in the IIP can be attributed to the decrease in demand in many sectors which consumes metals. One such sector is the Automobiles. Post demonetization period has been a challenging one for the Auto industry as the demand for all types of vehicles has taken a dive. A recent data released by SIAM (Society of Indian Automobile Manufacturers) indicates that the total sales of cars, two wheelers, and commercial vehicles shrank by 18% in December 2016. Such a dive was last witnessed during December 2000. But the segment that was hit the most was the two-wheeler segment where there was a drop in sales by 22.5%. This can be attributed due to the fact that more than half of the motorcycle sales happen in the of cash led to reduced/conservative spending in the rural areas and this led to the fall in sales in the rural market where cash transactions are typically high. Post demonetization, the dearth in availability motorcycle segment. This trend might continue until the situation normalizes with RBI printing enough notes to satiate the demand of the economy.

The industrial sector includes manufacturing, mining, and utilities of which manufacturing accounts for 75.5 % of the total output. As mentioned earlier, it's the manufacturing sector which relies on the metal industry for raw materials. And since there is a clear decline in the manufacturing sector due to the reduced demand post demonetization, the metal industry too will take a hit and their production would fall affecting their revenues. And since more than 50% of the NPAs are from the metal industry, the banks might face a challenging situation wherein the NPAs might worsen unless the RBI is able to stimulate the demand in the economy by printing more notes.

Due to demonetization, the banks received a total of Rs. 12.4 trillion rupees. Due to this, it was expected that the banks would lend more at lower interest rates. But again, as mentioned above, when the demand in the system is low, the probability of these industries borrowing from the banks is quite low. A recent report by the famous credit rating agency, Moody's Investors service, suggested that there would be an increase in deposits by 1 to 2 percent post demonetization which would happen after the initial inflows and sharp outflows of deposits until the situation stabilizes within a span of 3 months which would lead to lower lending rates. But these effects may be negated if sufficient liquidity does not return to the system.

Another positive effect of demonetization on banks is the increase in the number of card transactions. Though there has been a surge in the number of e-wallets, the banking sector still dominates the retail payment segment. Post demonetization period has witnessed a rise in the number of card transactions. ICICI has reported a 100% increase in debit card transactions and 40% increase in credit card transactions. SBI reported a 35% increase in card transactions. Overall, all banks observed a similar trend of increase in the number of card transactions with the data heavily skewed in the favor of debit cards. Another interesting observation was that the rise in the number of requests for PoS (Point of Sale) terminals. Large banks like HDFC, Axis bank, and ICICI have reported huge growth in the number of such requests post demonetization. According to the above three banks, most new requests were from new categories of merchants like beauty salons, the self-employed segment such as doctors, CAs, vegetable vendors etc. This is a positive impact for both the government as well as banks for two reasons. Firstly, merchants, who previously preferred cash, now opting for PoS terminal helps in realizing government's objective of a cashless economy, which would, in turn, increase the tax base and help in faster fiscal consolidation. Secondly, banks will be able to realize a bigger bottom-line due to this entire exercise as the RBI is not inclined to cut the MDR (Merchant Discount Rate or in general known as the card transaction fees) as is the wish of the central government in order to promote the idea of cashless economy.

Overall, the demonetization move can help the banking sector make huge gains if the government and the RBI treads carefully by implementing policies to stimulate growth in other sectors of the economy and increase the liquidity in the system.

Effects of Demonetization on Microfinance

Microfinance in India

The various MFIs coming together have also constituted a self-regulatory organization called MFIN (Microfinance Institutions Network) to address grievances of microfinance clients and ensure that MFIs stick to their code of conduct.

S.No	Name of MFI	Gross Loan Portfolio (₹ in crore)
1	Bandhan	9524
2	SKS	4155
3	Janalakshmi	3774
4	SKDRDP	3570
5	Ujjivan	3274
6	Spandana	2665
7	Equitas	2144
8	Satin Creditcare	2141
9	Share Microfin	1603
10	Grameen Koota	1447

Figure 5: Top MFIs as per Loan portfolio-2015 (IND)

Microcredit (small loans) is the most common product offering. In India, most microfinance loans have amounts not exceeding Rs.1,00,000. These loans are usually availed from two MFIs at most by rural households whose annual aggregate income does not exceed Rs.1,00,000 with a provision of daily loan repayment.

Growth in MFI sector

A CRISIL Report on May 18, 2016, states that MFIs are projected to grow at 125%11. The gross loan portfolio stood at Rs. 57,941 Cr in Q2FY17 as compared to Rs. 31,551 Cr in Q2FY16 growing by almost 84% YoY in Q2, MFIN said. The growth in MFI sector has been depicted in the figure 6.

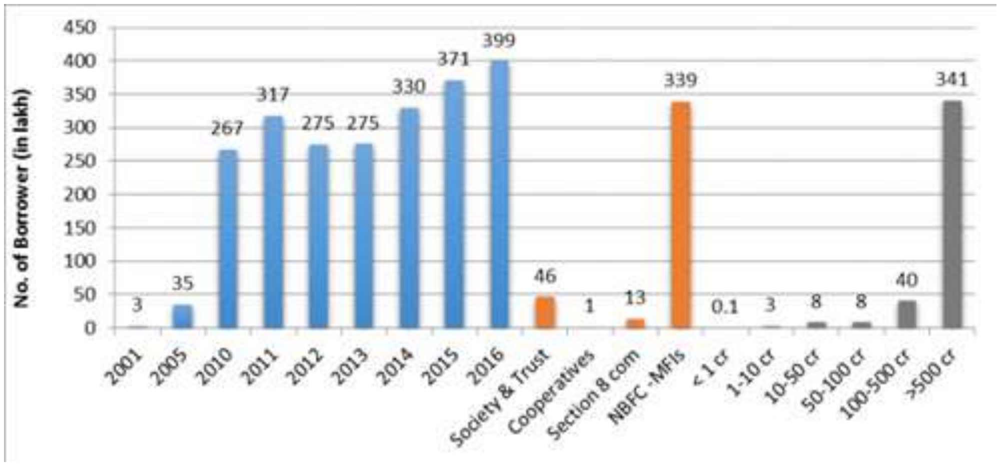

Figure 6: Growth in Microfinance Industry

Impact of Currency Ban

The currency shock is hitting the cash-driven sector at a time of high growth. The demonetization of high-value currency notes has descended down as a setback for MFIs, which have temporarily stopped providing credit to their customers at the same time taking a major hit on loan repayments, e.g. Bandhan Bank. Many MFIs had deferred the repayment schedule of their borrowers for the subsequent few days.

Usually, MFIs record a repayment rate of 99%, but it took a blow after demonetization11. The sector is worried about taking the business forward in view of the increasing risk of loan defaults as the repayment rate has dropped to approximately 70% around November 10th following the announcement.

The resultant liquidity crunch is likely to hurt repayment capacity of borrowers and lead to short-term delinquencies in loan accounts, as observed by India Ratings & Research because of demonetization hurting SMEs. In particular, a section of borrowers associated with the construction sector and unorganized sector self-employed individuals have been negatively impacted.

Issues faced by MFI sector

Some industrial experts felt that the notification on demonetization drive was overly concentrated on retail customers and that it lacked clarity when it came to institutional customers. The answer to above ambiguity came in the form of a press release on 21st November by RBI giving borrowers of loans of upto Rs.1 Crore, an additional 60-day 'forbearance' window to make loan repayments, extending the cut-off norm for NPA recognition to 150 days for loan payments due between 1st November and 31st December intended to offer respite to MFIs on loan provisioning grounds12. The short term deferment of NPA recognition norm will not only prevent a spike in bad and/or restructured loans due to temporary delays in collection of dues but also assist in re-building the collections system for NBFCs and MFIs.

The cash crunch has also brought out some of the irregular practices of the fast growing MFI industry. These include lack of diversification among MFI borrower profiles, surging individual size of microfinance loans, concentration of majority of the loans in few states, increased instances of multiple lending to the same set of borrowers.

It's not the case that there were no red flags before demonetization. The rapid growth in MFI industry attracted a fair share of unregistered and unregulated lenders, said Saibal Paul, Associate Director, Sa-Dhan, a self-regulatory organization (SRO) for the microfinance sector, while adding that such players are breaking rules and tempting the people to borrow more than they can possibly repay.

Also, in the August 2015 report by Religare Capital Markets titled 'Indian Microfinance – Crisis Brewing', the brokerage house pointed out "multiple weak spots" in the sector. According to the RBI rules, a borrower can't take loans from more than two lenders at a given time, subject to a total limit of one lakh rupees. However, these restrictions do not consider formal banks and informal moneylending channel. The report claimed an optimistic overlap of 25-40%.

Short term Trouble

1. Lack of sufficient liquid cash in hand for loan disbursements and fall in collections.
2. Non-payment of loans within stipulated time leading to loan defaults possibly leading to their classification as NPAs.
3. Negative implications on Credit Ratings of various MFIs and NBFCs with possible downgrading in case of some.

Long term Issues

1. Rural Economy which is majorly cash based is hit adversely as higher denomination notes are not always practical to use even if available.
2. Fight for maintaining market share under present crisis may cause weakening of credit appraisal standards by MFIs.
3. Increasing focus of Government towards Digital payments and Direct-To-Account (DTA) payments could demand a change in the collections mechanism.
4. Even if all MFIs are allowed to function as a business correspondent for banks allowing them to accept old currency notes, it would mean additional paperwork thereby adding to labour and time costs.

The additional 60-day forbearance window provided for deferring NPA recognition could be exploited by end consumers for intentionally deferring payments adding to the cash woes for MFIs.

Contradictory Opinion

A section of the industry has a contradicting opinion about the victim status of Microfinance industry. It opines that to certain extent, the microfinance industry is paying for its own relaxed attitude towards re-routing loan disbursements and repayments through bank accounts and assisting the formal banking system especially the Jan-Dhan scheme.

Way Forward

Paytm launched its new variant of Point of Sales (POS) service through their app on 26th November 2016 for users targeting SMEs, wholesale vendors and small store owners hit by cash crunch. The service provides an alternative to the conventional swipe POS machines found at retail outlets. This service does not have a daily transaction limit of Rs.20,000 as in case of mobile wallets and can thus complement the wallet payment systems for higher end transactions.

Country's largest bank SBI is also reaching to chaiwallahs (tea vendors), dabbawallas (tiffin service providers) and vegetable vendors to accept payments through SBI Buddy app and POS machines.

Born out of the need of providing financial services through institutions to low income clients, Microfinance industry has surely blossomed through years with its exceptionally high audience coverage, repayment rate among other achievements. Demonetization has certainly hit the cash-driven sector inversely affecting both its disbursements and loan repayments. As cash liquidity is poised to increase in days ahead, short term cash troubles would get resolved. Banking licences to large MFIs can aid financial inclusion drive. Also, taking cues from changing trends and many government initiatives towards financial inclusion, "less-cash" & "cash-less" future and digital payments, MFIs should on updating and upgrading their business model, including multi-modal business through banks, smartphone payments, e-wallets among many others by undertaking end-user financial education initiatives taking advantage of the mobile phone & smartphone penetration in rural, semi-urban and urban areas to ensure speedy recovery and sustainable growth in the now Volatile, Uncertain, Complex & Ambiguous (VUCA) BFSI world.

Effects of Demonetization on Insurance Sector

India's Insurance sector with around 52 insurance companies has a worth of 41 billion US dollars. This market share is divided between Life insurance and Non-life insurance companies. Since the opening up of this industry to private players in 2000, the Indian insurance sector has seen a rapid growth. In 2015, insurance market size was USD 75.88 billion and this market is expected to grow to USD 280 billion by 2020 considering the growth of Indian economy and the increasing disposable income. But the recent demonetization policy in India has brought insurance sector at crossroads.

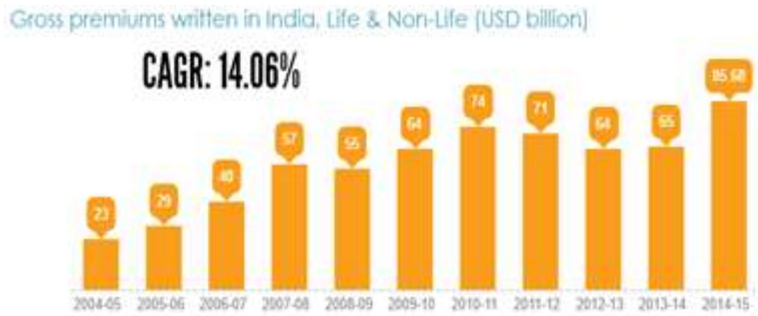

Figure 7: Ten-year growth of Insurance sector in terms of premium

In India, the primary reason for keeping cash at home has been to safeguard oneself from unforeseen medical emergencies. This is because even today most people in India prefer payments by cash and hence, hospitals, doctors, and other medical facility providers are not well equipped with digital payment facilities and likewise since hospitals are not equipped people prefer cash payments. With the implementation of demonetization, the whole chain of customers, doctors and pharmacies are severely affected. The most affected being the people with unaccounted cash who used to pay for medical treatments using lakhs of rupees. After demonetization, cashless methods of providing healthcare facilities have been a savior. In fact, health care provided by way of health insurance has come as a boon for many insurance seekers. The reason is that it is the only way to get the required treatment done without worrying about cash payments. As a result, the health insurance companies will have more buyers and there will be more people looking out for health insurance schemes offered by private and public insurance companies. Consequently, the economies of scale will bring down the cost of buying health insurance. Experts have predicted that with more frequent replenishment requirements, the demand for insurance would go up.

Penetration of insurance in India is very less as compared to that in developed countries and an initiative like demonetization is expected to expand the insurance market. A larger number of small businesses would consider buying insurance to cover the risks as the cash transactions become restricted. Also, the income at the bottom of the pyramid (individual and business) is expected to rise, which would be a positive sign for the overall insurance industry.

Insurance companies sell insurance in bulk to other companies who buy as an insurance cover for all their employees. Insurance company executives revealed that a few such companies are demanding insurance limits as high as 500 crores per location. However, insurance industry experts have said that this is a temporary situation, till the customers do not have adequate cash. But it does increase the revenue of insurance companies in the short run.

Companies that manage cash and ATM machine functioning are covered by insurance companies. Even banks take cover for ATM machines against any theft or damage. Post-demonetization, companies that took a cover of mere 1-2 crores for such purposes are now demanding as high as 20 crores. The reason is the greater amount of cash being exchanged.

The Indian insurance sector is majorly driven by the government agencies like Life Insurance Corporation of India, Oriental Insurance Co. Ltd, New India Assurance Co. Ltd, and others. Soon after the announcement of demonetization, these companies started taking steps to manage the change. LIC for example, extended its grace period for the customers to pay their premiums of several policies without any penalty, by a period of 20 days. This allowed people to have some time in order to withdraw any necessary amount from the bank ATMs.

With a shortcoming, the private insurance sector which mainly deals in cash is adversely affected by demonetization as it is not ready to except the premiums in terms of online banking or credit in terms of bank transfers.

With a few negative effects, demonetization essentially seems to be beneficial for the insurance sector due to the increase in insurance policy buyers and most importantly due to a alteration towards becoming an internet banking equipped sector.

In conclusion, we can probably summarize the effect of demonetization on the overall economy as follows:

1. In the short term, GDP will be down for at least a 1-2 quarters before recovering.
2. A lot of black money will be converted to white and be deposited into the banks which will in turn help in the NPA problem that banks are facing.
3. In the longer term, reducing of black money economy in the future should bring more people in the tax net and hence lower taxes as well as interest rates which will bode well for the overall economy.

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