

Dissertation Report on

STUDY OF IMPACT OF DEMONETIZATION ON

INDIAN STOCK MARKET

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CERTIFICATE FROM THE INSTITUTE

This is to certify that the Project Report titled “**Study of Impact of Demonetization on Indian Stock Market**”, is a bonafide work carried out by Ms. Barnaa Lohitaa Dekaa of MBA 2015-17 and submitted to Delhi School of Management, Delhi Technological University, Bawana Road, Delhi – 42 in partial fulfilment of requirement of the award of the Degree of Masters of Business Administration.

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DECLARATION

I, **Barnaa Lohitaa Dekaa**, student of MBA 2015-17 of Delhi School of Management, Delhi Technological University, Bawana Road, Delhi-42 declare that Dissertation Project Report on “**Study of Impact of Demonetization on Indian Stock Market**” submitted in partial fulfilment of Degree of Masters of Business Administration is the original work conducted by me.

The information and data given in the report is authentic to the best of my knowledge.

This Report is not being submitted to any other University for award of any other Degree, Diploma and Fellowship.

Barnaa Lohitaa Dekaa

Place: New Delhi

Date:

ACKNOWLEDGEMENT

This project has been a very good learning experience for me in the way that it has given me the opportunity to learn about the financial events like “Demonetization” and how it impacts various economic variables. This project also helped me in understanding how to analyse stock market data and how to understand the effect of any event on time series data.

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Barnaa Lohitaa Dekaa

ABSTRACT

On 8th November 2016, the then Prime Minister of India, Mr. Narendra Modi announced that the Indian Currency Notes of value 500 and 1000 will no more be a legal tender. This news came as storm for the Indian which was received with mixed feelings. Prior to Demonetization, cash in circulation was nearly 220 Billion dollars of which approximately 87% i.e. nearly 190 Billion Dollar was in INR 500 & INR 1000 currency notes. This meant its impact was bound to be felt by all sections of the society. In this present paper, we wanted to analyse the impact of this event of demonetization particularly on Indian Stock Market.

We have gathered stock market data of last one year and have tried to study its behaviour before and after the demonetization in order to understand its impact.

Keyword Index: Demonetization, Stock Market, NSE, BSE, SENSEX, NIFTY

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LIST OF ABBREVIATIONS AND ACRONYMS

BSE	Bombay Stock Exchange
CNX	CRISIL NSE Index
FMCG	Fast-moving consumer goods
FY	Financial Year
GDP	Gross Domestic Product
GVA	Gross Value Added
HDFC	Housing Development Finance Corporation
IISL	India Index Services and Products
INR	Indian Rupee
IPO	Initial Public Offering
IT	Information Technology
NIFTY	National Stock Exchange Fifty
NIPFP	National Institute of Public Finance and Policy
NSE	National Stock Exchange
SAIL	Steel Authority of India
SENSEX	Sensitive Index
TV	Television

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CHAPTER – 1

INTRODUCTION

1. INTRODUCTION

Demonetization is the process of making certain legal tender or currency invalid, that is, rendering it useless. It involves recalling of the now illegal currency back into the system and remonetizing with new currency of same or different denominations. Demonetization exercise is not done frequently by the Government as it can send shock waves through the whole economy. But in certain cases, Government may feel it is a necessary step. However, that does not negate the terrible impacts that demonetization can bring. It can lead to liquidity crunch, chaos in the economy, loss of faith in the government, loss of trust in banking and financial institutions, discourage saving habits, lower the growth rate of different sectors, hamper the GDP growth rates and kill small cash run businesses, to name a few.

It is therefore only rational to study the impact of demonetization on Indian Stock Market as almost all the sectors and companies trading their shares on Stock Market were impacted by this event.

1.1. Problem Statement

On 8th November when Indian Prime Minister announced that currency note of value INR 500 and INR 1000 will not be a legal tender then the country was shaken as it come as a surprize to everyone and at a time when 87% of the cash in the economy was in the demonetized notes. This study tried to answer the question that “how demonetization impacted the Indian Stock Market”.

1.2. Rationale of the Study

India is a country which has highest currency in circulation which 12.1% of GDP. In this scenario when most of the day to day trades happen in cash

when suddenly 87% the cash is declared to be illegal, it is bound to impact all economic variables in some way or other.

This study tries to analyse the impact of the demonetization in a rational way without judging whether it was right or wrong decision. All the remarks in this report are based on the data and various test results run on the data.

1.3. Organization of Report

The entire report has been organized in various chapters. The 2nd chapters outlines the literature review which were done to understand what works has been already done which is relevant to this study. All the papers and articles which has been studied in order to start this work has been briefly discussed a in the chapter 2 “Literature Review”.

In 3rd Chapter discusses about the methodologies used in this study which includes the setting up of objectives, explaining data gathering process and tests and analysis methods used.

Chapter 4 details the processing of data and explains and interprets the outcomes of the data analysis. These analysis results become the basis of our conclusion and recommendations.

Chapter 5 discusses upon the findings of the study along with concluding remarks and recommendations from our side.

After 5th chapter the report is finished with the references used in this study followed by the appendix.

CHAPTER – 2
LITERATURE
REVIEW

2. Literature Review

Demonetization in India has been a hot topic for researchers and financial experts all over the world and a lot has been already written about this topic. In order to complete this project, we have gone through many research papers, articles and media reports. Some of them are briefly explained below.

The research Paper “IMPACT OF DEMONETIZATION ON INDIAN ECONOMY”^[1] published by Dr. Pratap Singh and Dr. Virendra Singh published in International Journal of Science, Technology and Management has tried to study the impact of demonetization on economy as a whole, they have given references to the past events of demonetization in other countries like Russia, Ghana, Nigeria, Zaire, Myanmar etc. and using their model they have tried to predict the consequences India will be facing due to the demonetization.

The article “IMPACT OF DEMONETIZATION ON INDIAN STOCK MARKET”^[2] published in a blog portal ‘Dialwealth’ as an exclusive article lists all the positive and negative impacts in point form but this article doesn’t present any supporting data and analysis. This article speculates what could happen after demonetization and how shares of different segments can be impacted and what investors should do in the current scenario.

The article titles “DEMONETIZATION’S EFFECT ON SHARE MARKET”^[3] published on motilaloswal.com also tries to predict qualitatively what should be the impact of the sudden decision of demonetization on the share market of India. This article tries to analyse the impact separately on Debt, Loans & Investments and tried to guide the investors what to expect in the coming times, both in the short term and in the long term.

The paper titled “Demonetisation: Impact on the Economy”^[4] by Tax Research Team of NIPFP Working paper series published one week after the

demonetization does a detailed analysis of short term, medium term and long term impact of demonetization on Indian Economy. The Authors have given reasons both in support of the move as well as in opposition by questioning the actual intention.

The report titled “Impact of demonetization on GDP growth in FY17” [5] published by ‘Care Rating - Professional Risk Opinion gives both conservative and aggressive figures on the impact of Demonetization on the GVA. It estimates the impact separately on Agriculture, Industry and Services. The figures estimated by care are given in the table 2.1.

Table 2.1. Impact GVA

Sectors	GVA for FY16	Expected Impact on each Sector (FY17) (+/-)		Estimated GVA post impact (FY17)	
		Conservative Approach	Aggressive Approach	Conservative Approach	Aggressive Approach
Rs. Crore					
Agriculture	16,04,044	(-)604	(-)1,271	16,51,562	16,50,894
Industry	23,71,531	(-)3,016	(-)7,826	25,76,775	25,71,965
Services (incl. construction)	64,51,616	(-)29,420	(-)45,130	69,55,195	69,39,484
Total	104,27,191	(-)33,039	(-)54,227	111,83,531	111,62,344

Source: Impact of demonetization on GDP growth in FY17, CARE Ratings

- Under the conservative approach GVA will grow by 7.3% which is 0.3% less than what was projected.
- Under the aggressive approach GVA will slow down to 7.1% which is 0.5% lower than the initial estimate.
- Assuming that the transition from GVA to GDP would remain unchanged at 0.2% (i.e. GVA 7.6 & GDP 7.8%) as per initial estimate, overall GDP growth would be affected by 0.3 to 0.5%

The research report titled “India: Assessing impact on GDP from demonetization – a J-curve effect” [6] by the research analyst Deepali Bhargava of Credit Suisse tried to analyse the J-Curve effect of demonetization on the Indian GDP. The paper suggests that other than temporary destructions caused by the demonetization there

will be some long term adverse impact on India due to factors like wealth destruction, coming down of demand for certain assets and level shift down in the parallel economy. The analyst also suggests that temporarily there will be a disruption in the supply side and sectors like real estate will be blown away. The author sees the impact as J-Curve effect.

The paper “Demonetization: Impact on the Economy” ^[7] elucidates the impact of such a move on the availability of credit, spending, level of activity and government finances. The argument posited in favour of demonetisation is that the cash that would be extinguished would be “black money” and hence, should be rightfully extinguished to set right the perverse incentive structure in the economy. While the facts are not available to anybody, it would be foolhardy to argue that this is the only possibility. Therefore, it is imperative to evaluate the short run and medium-term impacts that such a shock is expected to have on the economy. Further, the impact of such a move would vary depending on the extent to which the government decides to remonetise.

Demonetization has been a hot topic of interest for all the major economists of the world and many economists have written about it. Many different papers, articles were published at many places. Some of them were discussed above in this section and references of many others are given in the reference section of this report.

CHAPTER – 3

RESEARCH

METHODOLOGY

3. RESEARCH METHODOLOGY

3.1. Objective

The objectives of this study are:

- Analysing impact of demonetization on Indian Stock Market
- Analysing impact on different sectors of the economy.
- Finding Structural Breaks in the time series stock market data corresponding to taking place of the event which is demonetization of currency.

3.2. Scope of Study

The scope of this study was limited to the impact on Indian Stock Market only and not on other economic and non-economic impacts it did or is supposed to do in future. This study is focused on analysing time series data of Indian Stock Market and analysing the impact of an event i.e demonetization, whether it gave a boost to the stock market or it caused a depression in the market. We tried to find out whether all the impacts on Demonetization was temporary or it will have some impact in the long term also.

3.3. Data Collections & Processing

The study was based on secondary data. The Data was collected from the National Stock Exchange Website, Bombay Stock Exchange Website, other third party websites and from the internet.

The 10 Sectoral Indices included in the study are:

- Nifty Auto
- Nifty Bank
- Nifty Energy
- Nifty Financial Services
- Nifty FMCG
- Nifty IT

- Nifty Media
- Nifty Metal
- Nifty Pharma
- Nifty Realty

All data collected is for the Financial Year 2016-17, that is, from 1st April 2016 up to 31st March 2017. The sectoral indices were chosen from Nifty Sectoral Indices which are 12 in number. The two sectoral indices that have been left out are the Nifty Private Bank Index and the Nifty PSU Bank Index. The rationale behind this is we want to study impact on entire banking sector which can be done using data of Nifty Bank Index. So, in order to avoid the repetition of data we have excluded those two Indices.

To process the data various techniques and tests were applied. Some of them are:

3.3.1. Technical Analysis

Technical Analysis is the method by which time series data are plotted and studied. Technical Analysis makes use of different models and techniques to analyse price of the stocks in the stock market. Various tools and techniques ranging from very simple like Moving Average to complex ones like Fibonacci Series can be employed to analyse price data. Technical analysts believe that the price reflects all the information of the market and no other variable needs to be studied to understand the market sentiments or to predict future trends.

In our study, we have used Moving Average as a Technical Analysis tool to fulfil our objectives of analysing impact on stock market as well as on various sectors of the economy.

3.3.2. Moving Average

Moving average is a simple technical analysis tool which smoothes the curve which removes small distortions. Moving Average helps in tracking trends and help us to be on the right side of the market. Moving average is based on

past prices and can be calculated based on past 3 days, 5 days, 9 days, 12 days, 30 days, 50 days, 120 days' data. It is called a lagging indicator as it lags behind the actual price.

We have used 3-day lag in calculating the moving average as the time period under study is just one year. This will give us enough data points to make a reasonable analysis.

3.3.3. Structural Break Test

Structural Break is a term of econometrics. Econometrics is the use of mathematical and statistical models to represent, understand and analyse data of economic systems. In time series data (data collected over some time period mostly at equal intervals) sometimes some shifts or breaks can be observed at certain points of time. These are called Structural Breaks. This shift in values can be caused by various reasons which can be external or internal in nature. Structural breaks are normally breaks that happen suddenly and could not have been predicted beforehand. Identifying and understanding these breaks are important because they can seriously alter future predictions of the time series data under study. Finding these break points in the data, that is, on which dates breaks have abruptly occurred can help in identifying what caused it and why.

We have applied Break Test using Eviews software to help us understand the impact of the event we are studying and whether the effect was significant or not.

CHAPTER – 4

ANALYSIS

4. ANALYSIS

4.1. Introduction

To do the analysis the data was gathered of last one year of Nifty 50, BSE Sensex from respective websites. Also 10 Sectoral Indices data was collected only from NSE website. The 10 Sectoral Indices included in the study are:

- Nifty Auto
- Nifty Bank
- Nifty Energy
- Nifty Financial Services
- Nifty FMCG
- Nifty IT
- Nifty Media
- Nifty Metal
- Nifty Pharma
- Nifty Realty

All data collected is for the Financial Year 2016-17, that is, from 1st April 2016 up to 31st March 2017.

4.2. Data Analysis

4.2.1. NIFTY & BSE

We took three days moving average for NIFTY 50 and BSE Sensex and it clearly shows that after 8th November both fell down drastically. On 8th November NIFTY 50 was closed at 8543.55 and BSE Sensex was closed at 27591.14 and immediately after the announcement of Demonetization NSE NIFTY fell down to 8108.45 by 15th November 7929.10 by 21st November 2016 on the other hand BSE Sensex also fell to 25765.14 by 21st November 2016.

The three-day moving average smoothed plot of the NSE NIFTY 50 and BSE Sensex is shown below.

NIFTY 50

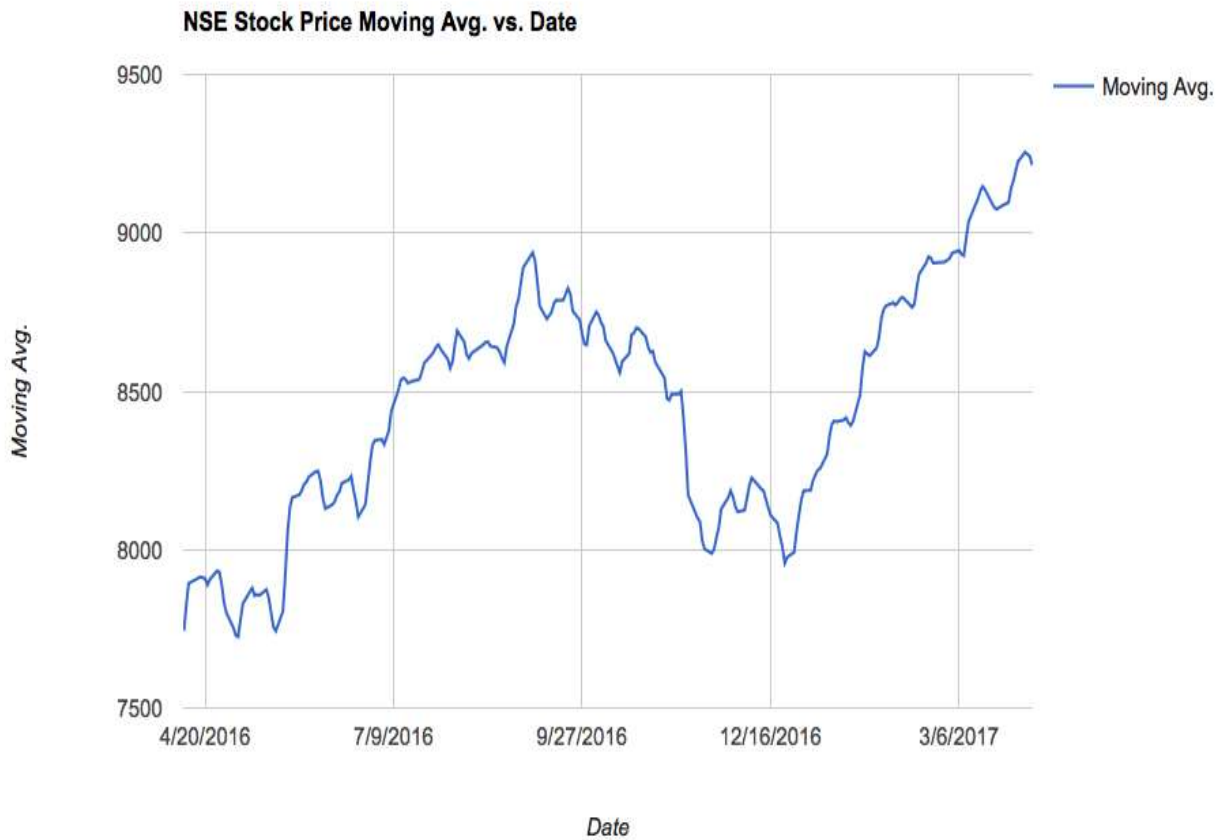


Fig.4.1. NIFTY 50 Plot of Adjusted Closed (Moving Avg.) V/S Time

The plots shown above clearly shows that there has been a significant drop in Nifty 50 data in the month of November and the Index started recovering from end of December.

BSE SENSEX



Fig.4.2. BSE SENSEX Plot of Adjusted Closed (Moving Avg.) V/S Time

Both the plots show similar trend. There is a sharp decline after November 2016 which led to a short term downward trend in these Indices. These Indices are a reflection of the entire stock market. Hence BSE and NSE graph can give insight into the scenario of the Stock Market after events like Demonetization of legal tender takes place. The short term downward trend lasted up to 2-3 months and the stocks started gaining back momentum after the end of the year, that is, in the new year 2017.

Although these graphs give a big picture idea but different sectors of the economy may show different reactions to the same event called Demonetization.

Now let us analyse various sectors separately and see how it is impacting the overall behaviour of the stock market.

Breakpoints in NIFTY 50

According to the above figure, there has been a structural break on the date 11-Nov-2016 corresponding to the demonetization event. This is in tandem with our graph analysis that re-establishes the fact that the event has made a significant impact on the time series data and has altered their course over the future.

Dependent Variable: CLOSE				
Method: Least Squares with Breaks				
Date: 05/18/17 Time: 21:24				
Sample: 4/01/2016 3/31/2017				
Included observations: 248				
Break type: Bai-Perron tests of L+1 vs. L sequentially determined breaks				
Break selection: Trimming 0.15, Max. breaks 5, Sig. level 0.05				
Breaks: 6/30/2016, 8/30/2016, 11/11/2016, 1/25/2017				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
4/01/2016 - 6/29/2016 -- 61 obs				
C	7955.029	20.40639	389.8302	0.0000
6/30/2016 - 8/29/2016 -- 41 obs				
C	8559.970	24.89082	343.9006	0.0000
8/30/2016 - 11/10/2016 -- 49 obs				
C	8692.297	22.76843	381.7697	0.0000
11/11/2016 - 1/24/2017 -- 52 obs				
C	8180.563	22.10190	370.1295	0.0000
1/25/2017 - 3/31/2017 -- 45 obs				
C	8909.483	23.75882	374.9968	0.0000

Fig.4.3. Nifty 50 results of Structural Break Test in Eviews.

Breakpoints in BSE Sensex

Corresponding to the data, we can see that BSE Sensex also experienced same break date on the 11-Nov-2016 when market crashed due to the event of demonetization in the economy. This has definitely stunted the future growth of the Index .

Dependent Variable: CLOSE				
Method: Least Squares with Breaks				
Date: 05/18/17 Time: 21:21				
Sample: 4/01/2016 3/31/2017				
Included observations: 248				
Break type: Bai-Perron tests of L+1 vs. L sequentially determined breaks				
Break selection: Trimming 0.15, Max. breaks 5, Sig. level 0.05				
Breaks: 6/30/2016, 11/11/2016, 1/25/2017				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
4/01/2016 - 6/29/2016 -- 61 obs				
C	25967.18	66.95185	387.8486	0.0000
6/30/2016 - 11/10/2016 -- 90 obs				
C	27993.68	55.11962	507.8714	0.0000
11/11/2016 - 1/24/2017 -- 52 obs				
C	26552.58	72.51466	366.1685	0.0000
1/25/2017 - 3/31/2017 -- 45 obs				
C	28793.68	77.95091	369.3822	0.0000

Fig.4.4. BSE Sensex results of Structural Break Test in Eviews.

4.2.2. Automobile

Nifty Auto is an Index represented as CNX Nifty Auto Index that gives an impression of the performance of the automobile sector in India. The Automobile sector consists of different types of vehicle manufacturers, tyre manufacturers, auto part manufacturers and the like. This index shows the

free float market capitalization of Automobile Sector. It consists of 15 Automobile company stocks. Interestingly, Auto accounts for 7.15% of the stocks that are traded on the National Stock Exchange.

Here, we have calculated moving average of last one year stock data of NIFTY Auto to smoothen the plot and analyze the pattern.



Fig.4.5. Auto Plot of Adjusted Closed (Moving Avg.) V/S Time

The plot of automobile sector also indicates sharp fall in stock prices after 8th November 2016 which continued till 29th December 2016 and after that the sector started picking up again. According to our observations, the price fell lowest on the 11th of November as the economy felt the shock of share market crashing due to a rare unpredictable event like demonetization. The stock fell a few times before reaching the highest point on 1st February 2017 after which it has shown signs of an upward trend.

Table 4.1. Auto Stock Price Variation

Auto		
Price on 8-Nov-16	10079.7	Percentage change (%)
Highest price (after 8-Nov-16)	10191.95 (1-Feb 2017)	1.11
Lowest price (after 8-Nov-16)	8681.6 (26-Nov-16)	-16.1
Price on 31-Mar-2017	9880.2	-2.02

The table above confirms the negative impact immediately after demonetization where the stock prices of the automobile sector dipped as much as by 16.1% since demonetization, even after it started recovering from January 2017 still it has not been able to touch the level of 10079.7 which it was on 8th November. The price on 31st March 2017 is still 2.02% less than the price on 8th Nov 2016. Through the market has shown recovery at brisk pace but in longer term it can be vulnerable.

4.2.3. Banks

CNX Nifty Bank Index is a clear representation of the situation of the Banking Sector of the country. The Index is comprised of the top banking institutions of India such as The State Bank of India, Punjab National Bank, HDFC Bank, Canara Bank etc. to name a few. The banks in the Index are a mix of foreign banks, private banks and national banks. No rural or co-operative banks are included, however. Financial Services also are excluded as they form a different Index altogether.

Since demonetization pumped lots of cash into the banks, the banks were expected to perform better than any sector. But the below graph shows that banking sector share price also fall by as much as 10.45% which indicates people's confidence in banking sector has been tarnished.

Analysis of the moving average graph shows a dip in the low side to be around 17000 which is a 10% decrease from original price on 8th November. However it is interesting to note that, the dip came much later on 26th December 2016, almost a month and a half too late. Whereas, comparatively other sector stocks felt the serious impact of demonetization within the first few days. After the dip however, the trend has been positive and highest was reached on 30th March 2017 for the Financial Year (FY 2016-17).

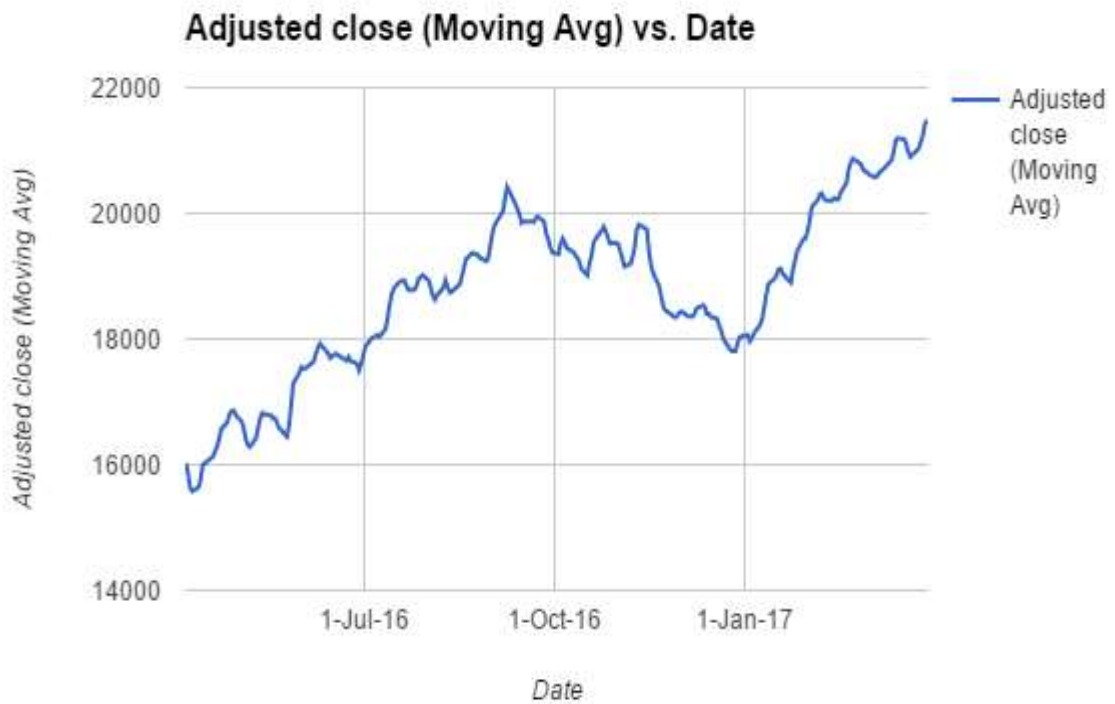


Fig.4.6. Banks Plot of Adjusted Closed (Moving Avg.) V/S Time

Table 4.2. Bank Stock Price Variation

Bank		
Price on 8-Nov-16	19500.8	Percentage change (%)
Highest price (after reaching lowest)	21620.7 (30-Mar-17)	10.87
Lowest price (after 8-Nov-16)	17655.55 (26-Dec-17)	-10.45
Price on 31-Mar-2017	21444.15	9.06

The table above shows that after reaching the low value of 17655.55 the share prices of banks again picked up and it even beat the level of 19500.8 which was on 8th November on the day of demonetization announcement and it crossed even 21000 mark. This shows clearly that the banks have been somewhat benefitted by the demonetization.

Another reason could be that Banks were functioning beyond full capacity during demonetization and the heavy reliance of people on the banks during a time of cash crisis may be one of the reasons that the Banks felt the impact a little less. Post demonetization, position of banks in the country has only strengthened because of higher deposits, capacity for more loan grants, more transaction volume because of higher denomination note on INR 2000, digital banking etc. Savings increase has also been helpful for the growth of Insurance Industry and other Wealth or Asset Management companies coming under the bigger umbrella of BFSI Sector.

4.2.4. Energy

The companies operating in the Energy Industry form a part of the Nifty Energy Index. In total, it has 10 companies that either belong to Petroleum, Gas or Power Sectors within the Energy Sector. Like in other Nifty Indices similar process of free float market capitalization is used for selecting the stocks to be included in the Index. Even a company just coming out with an IPO is eligible to be included in the Index with fulfilment of certain terms and conditions, of course.



Fig.4.7. Energy Plot of Adjusted Closed (Moving Avg.) V/S Time

Table 4.3. Energy Stock Price Variation

Energy		
Price on 8-Nov-16	9821.7	Percentage change (%)
Highest price (after 8-Nov-16)	11648.7 (31-Mar-17)	18.6
Lowest price (after 8-Nov-16)	9657.8 (16-Nov-16)	-1.7
Price on 31-Mar-2017	11648.7	15.68

Out of all the sectors that we have analysed the Energy Sector was affected the least. Only a 1.7% drop was seen after demonetization. And a high of over 18.6% was recorded. No sharp fall can be seen in the graph. After 8th November, the price actual increased upto 10th November 2016 and then a dip was seen albeit very small. Lowest price record date was 16th November

2016 and highest price recorded was on 31st March 2017, marking the end of the FY with a high of 15.68% over the price of 8th November.

4.2.5. Financial Services

Financial Services cover a broad range from banks to housing finance. All financial institutions providing some economic services can be termed as providers of financial services. The Index Nifty has designed for Financial Services is a true representation of the sector. It has 15 stocks within its purview. Approximately 13% of the traded volume on NSE is covered by Financial Services which includes banks.



Fig.4.8. Financial Services Plot of Adjusted Closed (Moving Avg.) V/S Time

Table 4.4. Financial Services Stock Price Variation

Financial Services		
Price on 8-Nov-16	8011.35	Percentage change (%)
Highest price (after 8-Nov-16)	8806.15 (30-Mar-17)	9.92
Lowest price (after 8-Nov-16)	7175.35 (26-Dec-16)	-11.65
Price on 31-Mar-2017	8734.3	8.28

Financial Services had a similar impact as Banking sector since banking sector is a part of Financial Services and both are closely related sectors. The lowest price was seen much later on the 26th of December 2016 after a month and a half had passed. However, this dip started around 21st of November and continued to 26th December. After that the prices rose to about 8.28% of the price recorded on 8th November. The impact of demonetization can be said to be positive on the financial services sector. The prices have crossed previous high and touched support level. This is an indication that people are using financial services more and more in India and the sector will flourish in the years to come.

4.2.6. FMCG

FMCG stands for Fast Moving Consumer Goods. These are the goods that a consumer can buy off the shelf in a store. They have limited shelf life. Some more than others. FMCG is an industry of standardized mass production. NSE has created the Nifty FMCG Index with 15 of the listed companies belonging to the FMCG Sector. These companies provide a glimpse of the entire sector. FMCG accounts for 4% of the stocks that are traded daily on NSE.

The reason why FMCG was affected in a different manner than other sectors is because of the nature of the FMCG Industry and the Indian Economy. The

majority of Indian population is poor and rural based. This makes them the biggest users of the low priced FMCG products on a day-to-day basis. The urban areas also follow similar trend. FMCG products by nature are fast moving. But in the scenario of demonetization, the country faced a huge cash crisis which rendered people cash-less. Hence, they were unable to spend cash on FMCG products. Some ran out of cash and those who did not preferred to save what little they had due to uncertain times.

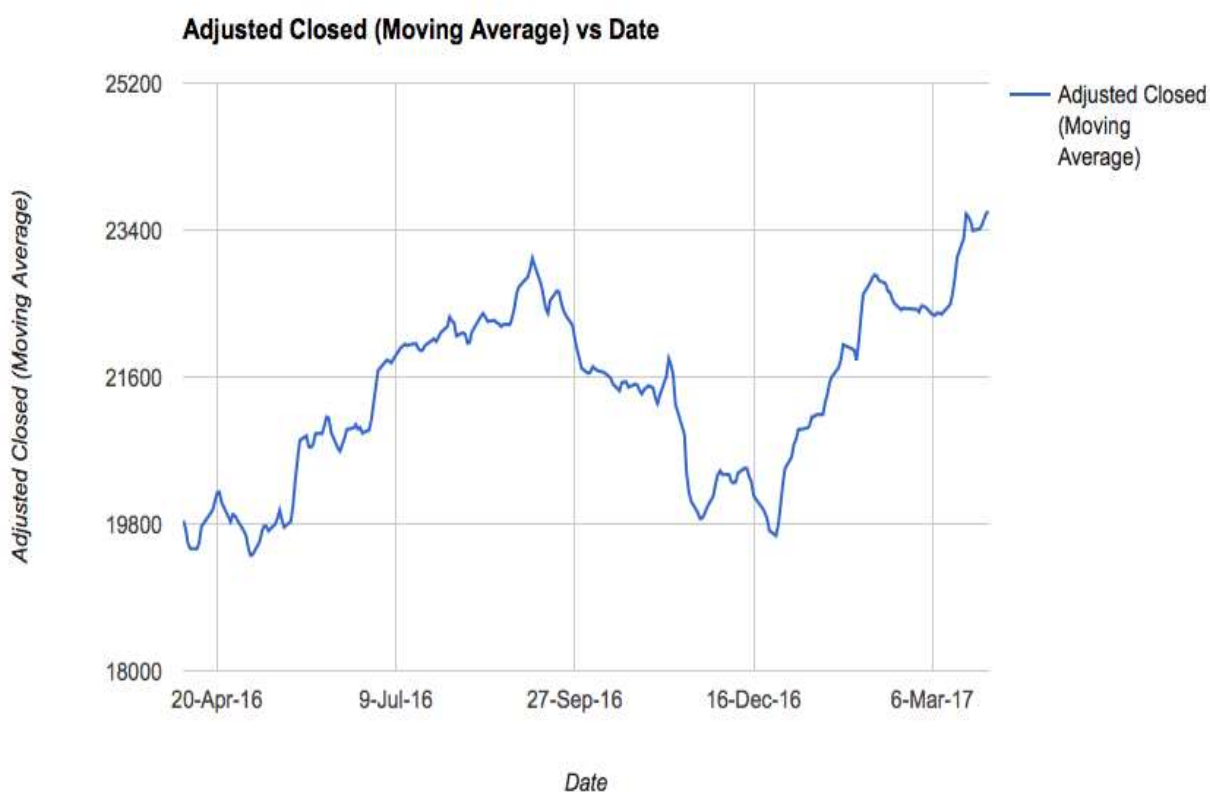


Fig.4.9. FMCG Plot of Adjusted Closed (Moving Avg.) V/S Time

Table 4.5. FMCG Stock Price Variation

FMCG		
Price on 8-Nov-16	21902.85	Percentage change (%)
Highest price (after 8-Nov-16)	23796.65 (21-Mar-17)	8.65
Lowest price (after 8-Nov-16)	19592.85 (26-Dec-16)	-11.79
Price on 31-Mar-2017	23542.3	6.96

Observations made on FMCG Sector are as follows: A sharp dip right after 8th November is seen and prices fell to a record low on the 21st of November after which it picked up again to fall even lower than the price of 21st November. This happened till the 26th of December 2016 after which FMCG started its journey to recovery with peaks and troughs along the way.

Lowest fall was around 11.79% of the price on 8th November while highest rose to 8.65%.

4.2.7. IT

IT stands for Information Technology Sector. Indian Economy has thrived because of the boom in this sector. Nifty IT Index is a reflection of the IT Sector in India. The performance of the 10 stocks in the index can give an understanding to an investor about the entire IT sector.

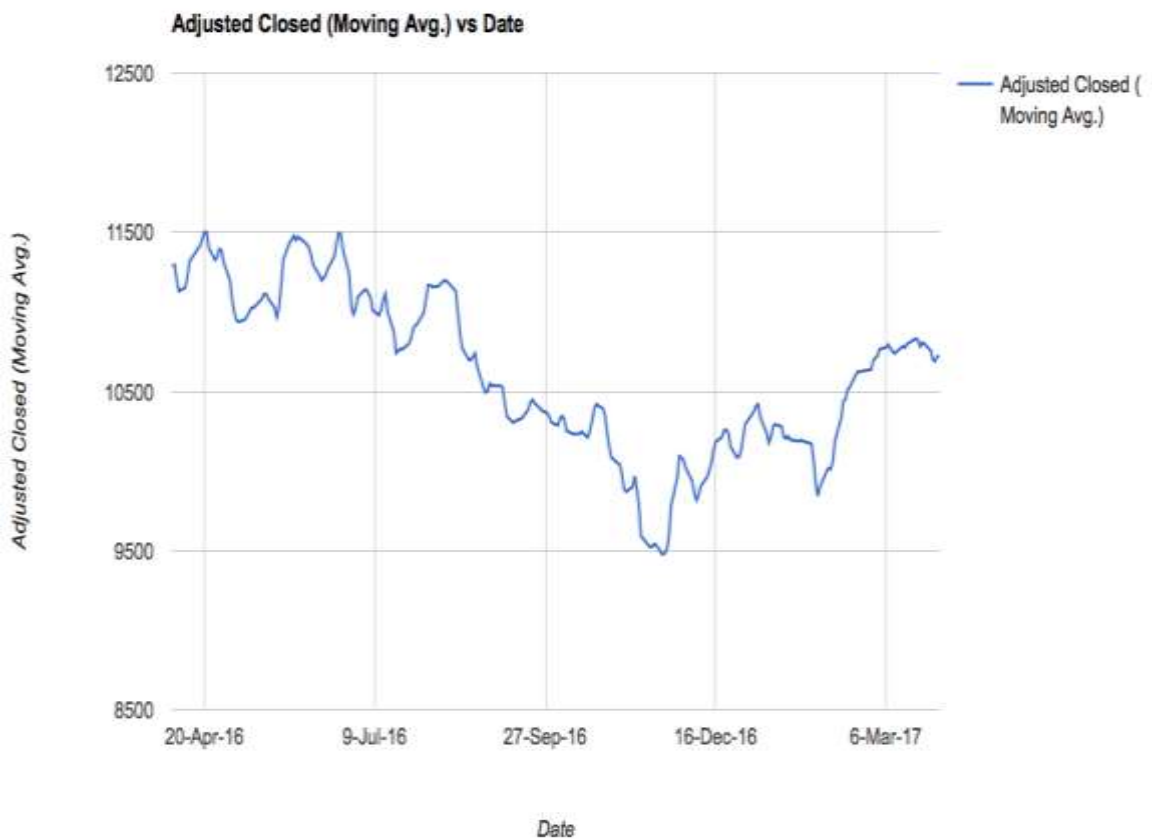


Fig.4.10. IT Plot of Adjusted Closed (Moving Avg.) V/S Time

Table 4.6. IT Stock Price Variation

IT		
Price on 8-Nov-16	10008.4	Percentage change (%)
Highest price (after 8-Nov-16)	10900.75(17-Mar-17)	8.92
Lowest price (after 8-Nov-16)	9434.6 (11-Nov-16)	-6.08
Price on 31-Mar-2017	10703.25	6.49

6% of the volume of total stocks traded on NSE are IT stocks. According to the moving average figures and graph the IT stocks were already on a decline after 21st October 2016 which was before demonetization. The decline continued after demonetization. It can be said that decline was steep. This lasted when the stock took a fall of around 6% on the 11th of November 2016 and again fell on 18th November. It moved sideways after that and fell again on 1st Feb 2017 after which the stock picked up from the initial harsh blow and was at the highest on 17th March 2017 (8.92%). Price recorded at the end of FY 16-17 shows an overall increase of 6.49%. Hence we can say IT has recovered almost at the same percentage that it fell. IT stocks were affected much less than stocks belonging to other sectors. Previous 1 year returns of IT stocks have been negative according to NSE analysis. IT stocks are volatile and one has to be cautiously optimistic while investing in them.

4.2.8. Media

Nifty Media Index is a benchmark for the performance of Entertainment and Media Industry of India. 15 of the listed companies in NSE from this sector is included in the Index. Media Index contains some famous names such as Eros Entertainment, Dish TV and Zee Entertainment among others. Below is a graph of the change in Media Index value post-demonetization.

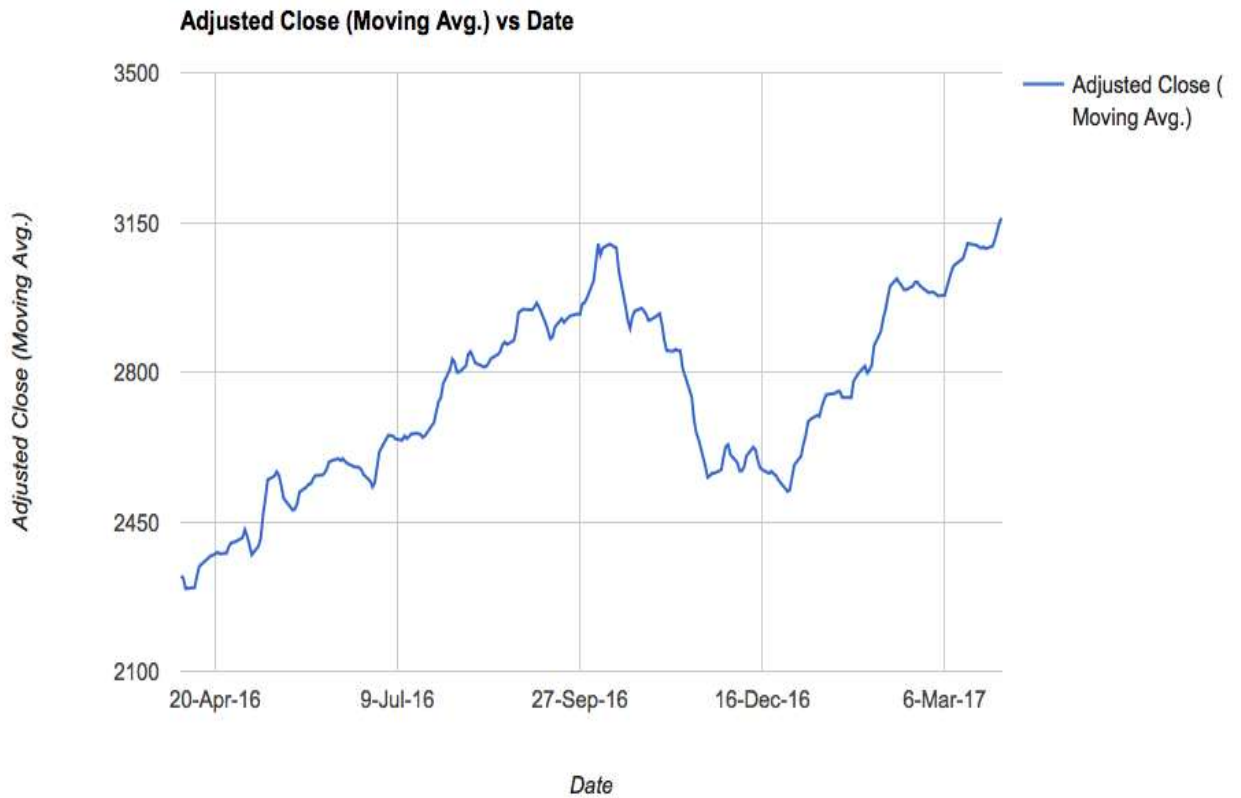


Fig.4.11. Media Plot of Adjusted Closed (Moving Avg.) V/S Time

Table 4.7. Media Stock Price Variation

Media		
Price on 8-Nov-16	2860.35	Percentage change (%)
Highest price (after 8-Nov-16)	3174.25 (31-Mar-17)	10.97
Lowest price (after 8-Nov-16)	2493.8 (26-Dec-16)	-14.7
Price on 31-Mar-2017	3174.25	9.89

Following similar pattern as IT Stocks. Media stocks were also seen to be on the decline before the demonetization process came into the picture from the 10th of October 2016. After demonetization, this decline was much sharper and steeper. Lowest price reached on 26th of December 2016. After that the stock has returned back to normal and even crossed its price as on 8th

November 2016. The decline was 14.7%. Final position at the end of FY 2016-17 was at 9.89% higher than 8th November.

4.2.9. Metal

Similar to the other Sectoral Indices of the NSE, the Nifty Metal Index is a portrayal of the workings and performance of the Metal Industry. This Index consists of 15 stocks belonging to Metal Industry. 5.41% of all traded stocks tend to be Metal Stocks. Companies such as Vedanta Ltd., Coal India, Hindalco, SAIL, Tata Steel and Jindal Steel are part of the Nifty Metal Index.

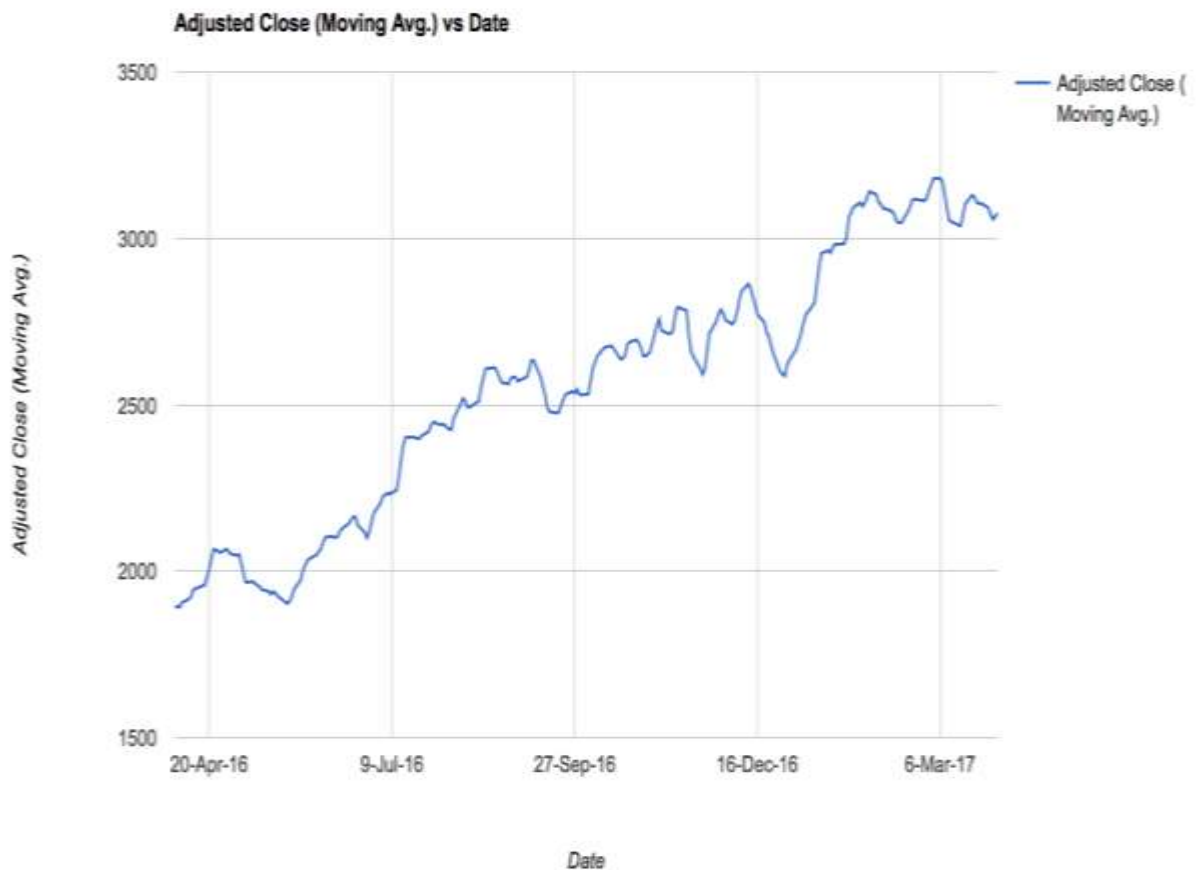


Fig.4.12. Metal Plot of Adjusted Closed (Moving Avg.) V/S Time

Table 4.8. Metal Stock Price Variation

Metal		
Price on 8-Nov-16	2739.2	Percentage change (%)
Highest price (after 8-Nov-16)	3189.4 (6-Mar-17)	16.44
Lowest price (after 8-Nov-16)	2536.2 (21-Nov-16)	-7.41
Price on 31-Mar-2017	3096.55	11.54

At the first glance, the graph of Nifty Metal shows almost no sudden discernible change. After 8th November, the price increased a bit upto 10th November and then fell to lowest on 21st November. However, the magnitude of this fall is low (7.41%). Stocks rose and fell again on 26th December 2016 (same magnitude as before) after which gradual rise is seen. Highest value after demonetization was reached on 6th March 2017 with a magnitude of about 16.44%. Metal was one of the sectors that was affected very less because of demonetization although demand for steel is said to have declined according to an article published in the Economic Times. The overall decline was not very alarming in Metals.

4.2.10. Pharmaceuticals

Nifty Pharma Index has been created by IISL to depict the situation of the entire Pharmaceutical Industry in one glance. Indian pharmaceuticals are a huge industry with focus on production of drugs that are affordable and effective. This industry has played a great role in the development of the nation.

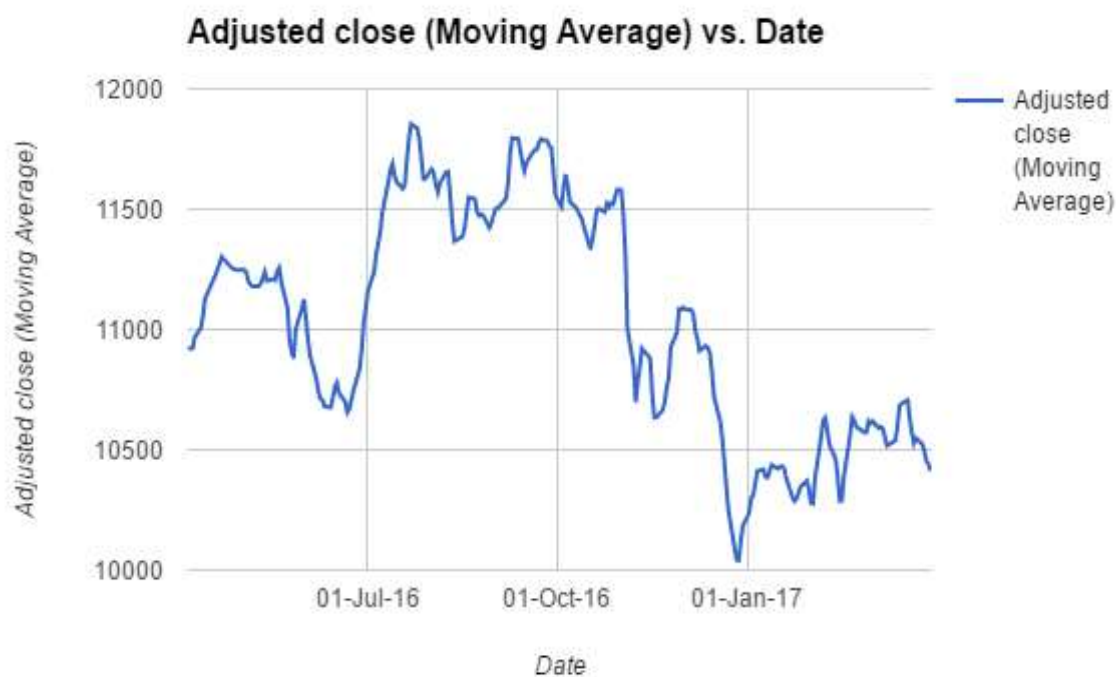


Fig.4.13. Pharma Plot of Adjusted Closed (Moving Avg.) V/S Time

Table 4.9. Pharma Stock Price Variation

Pharma		
Price on 8-Nov-16	10665.8	Percentage change (%)
Highest price (after 8-Nov-16)	11132.05 (1-Dec-17)	4.37
Lowest price (after 8-Nov-16)	9889.3 (26-Dec-17)	-7.85
Price on 31-Mar-2017	10411.15	-2.45

The Indian Pharma Industry took a big blow due to the event of demonetization. There was a sharp decline in the pharma stock prices on the 30th of October 2016. The already declining stocks felt even more downward pressure after demonetization. Interestingly, the highest price was reached on 1st December 2017 before the lowest dip on 26th December 2017 after demonetization in this particular sector. The percentage of decline was 7.85% and still pharma stocks have not recovered from the blow. Price at the end of

FY 2016-17 reflect a 2.45% decrease compared to prices prevailing before demonetization or specifically in this case before 30th October.

4.2.11. Real Estate

Realty Index of Nifty is based on the Real Estate sector of India. It provides an outlook of the performance of the sector over the years.



Fig.4.14. Realty Plot of Adjusted Closed (Moving Avg.) V/S Time

Table 4.10. Realty Stock Price Variation

Realty		
Price on 8-Nov-16	198.2	Percentage change (%)
Highest price (after 8-Nov-16)	215.3 (31-Mar 2017)	8.63
Lowest price (after 8-Nov-16)	153.85 (21-Nov-16)	-28.83
Price on 31-Mar-2017	214.95	7.79

This sector has seen a lot of decline in the last few years. However, it was experiencing a gradual increase in the year 2016 until it got hit hard by demonetization. This was the highest affected sector in terms of percentage change (28.83%) out of all the sectors we have analysed. Stock prices fell after 8th November and reached lowest point on 21st November 2016. Prices remained low till 26th December 2016 and gradual increase has been seen since then. Prices on 31st March 2017 were 7.79% higher than 8th November. Sector has recovered from the steep decline phase.

CHAPTER – 5

CONCLUSION & RECOMMENDATIONS

5. CONCLUSION & RECOMMENDATIONS

5.1. CONCLUSION

Based on our study following conclusions can be drawn:

- The demonetisation undertaken by the government is a large shock to the economy. The impact of the shock in the medium term is a function of how much of the currency will be replaced at the end of the replacement process and the extent to which currency in circulation is extinguished.
- While it has been argued that the cash that would be extinguished would be “black money” and hence, should be rightfully extinguished to set right the perverse incentive structure in the economy, this argument is based on impressions rather than on facts.
- All the sectors saw a fall in stock prices immediately after the demonetization.
- Most of them have recovered from the fall within the next 3-4 months.
- Real estate has been the most adversely hit sector due to demonetization
- Banking sector has been least severely hit sector. In fact it has not crossed its previous highs so we can say that banking sector has been benefitted due to demonetization.
- Financial Services were also less affected and recovered more easily than other sectors.
- IT sector has recovered almost as much as it had fell during demonetization.
- Alarming fall rate in Pharma as well and no recovery till end of FY 2016-17
- Automobiles also saw quite a negative impact however it did not seem to last long.
- Metals were less affected by the event of demonetization. The graph showed no sharp declines at all.
- Energy was also one of the sectors least affected by demonetization. Like Metals similar graph pattern was seen with no sharp declines.
- Media sector also experienced decline in a similar fashion as IT.

- FMCG was heavily impacted upon the announcement of demonetization mainly due to the sudden liquidity crunch in the economy.
- Overall all sectors faced a negative effect but in different magnitudes. This is because the nature of each industry is different and they are all interconnected in complex ways. Banks and Financial Services had similar impact because they are closely related sectors. Similar patterns were observed in IT and Media Sector as well as Energy and Metals.

5.2. RECOMMENDATIONS

Based on our study following recommendations we would like to give to the traders and investors investing on Indian Stock Market.

- Though the market has given signs of recovery, it is advisable to observe the market more closely before opting to invest on any stock.
- Demonetization was a rare phenomenon which does not happen too often in any economy, therefore looking at the sharp fall after demonetization or sharp rise after the fall we can't decide in which direction the market is going to go and get settled. The scenario makes it very difficult to speculate anything.
- In India, small and medium businesses use cash balances as a medium of exchange. Hence, cash was mediating in legitimate economic activity, if this currency is extinguished there would be a huge contraction of economic activity in the economy. This is a parameter that needs to be factored in by the government while deciding for demonetisation of currency.
- The government of India should take such decisions after better preparations and after taking into account all the variables of the economy.

REFERENCES

6. REFERENCES

[1] Dialwealth Executive, IMPACT OF DEMONETIZATION ON INDIAN STOCK MARKET, Dialwealth – The Wealth Exchange Blog at WordPress.com, November 14th, 2016.

Retrieved from: <https://dialwealth.wordpress.com/2016/11/14/impact-of-demonetization-on-indian-stock-market/>

[2] InvestarIndia, EFFECT OF DEMONETIZATION ON THE INDIAN STOCK MARKET, Investar Blog, November 30th, 2016.

Retrieved from: <http://www.investarindia.com/blog/effect-demonetization-indian-stock-market/>

[3] Motilal Oswal Investment Services, Demonetization's Effect on Share Market, January 3rd 2017.

Retrieved from:
<http://www.motilaloswal.com/article.aspx/1157/Demonetizations-Effect-on-Share-Market>

[4] Dr. Partap Singh, Virender Singh, IMPACT OF DEMONETIZATION ON INDIAN ECONOMY, International Journal of Science Technology and Management, Vol 5 Issue 12, December 2016.

Retrieved from:
https://www.ijstm.com/images/short_pdf/1482138511_210ijstm.pdf

[5] Care Ratings - Professional Risk Opinion, Impact of demonetization on GDP growth in FY17, November 18th, 2016.

Retrieved from:
<http://www.careratings.com/upload/NewsFiles/SplAnalysis/Impact%20of%20demonetization%20on%20GDP.pdf>

[6] Deepali Bhargava, India: Assessing impact on GDP from demonetization – a J-curve effect, Asia Pacific Fixed Income Research Emerging Markets, Credit Suisse, November 22nd, 2016.

Retrieved from:

https://doc.research-and-analytics.csfb.com/docView?language=ENG&format=PDF&sourceid=emcsplus&document_id=1067099671&serialid=KB3%2FGwRU6q2XqETjwJmMM5Ya8CJpfyhgFw5egBHFZuY%3D

[7] Tax Research Team, Demonetisation: Impact on the Economy, NIPFP Working paper series, No. 182, November 14th, 2016

Retrieved from:

http://www.nipfp.org.in/media/medialibrary/2016/11/WP_2016_182.pdf

APPENDIX

Definition of Some Important Terms

Shares/Stocks

A Share or Stock is the means of acquiring fractional ownership of a company. It is a part of the equity share or capital stock of the company. Shareholders or stockholders are considered residual owners of a company. Meaning in case of liquidation, shareholders will be the last ones to get their investment back, if at all. All other liabilities have to be settled before settling with the stockholders.

Share/Stock market

A Stock Market is simply a marketplace where stocks are bought and sold. It is also known as Share Market or Equity Market. Shares are nothing but ownership claim over a company. Stocks can be bought or sold publicly and privately. Stocks sold publicly are listed on a stock exchange.

Stock Exchange

A place where buying and selling of stocks take place. Earlier stock exchanges involved physical interaction while buying or selling. Nowadays, everything is computerized. The people who buy and sell shares are called traders or stock brokers. Other securities like bonds, exchange traded funds, derivatives etc. can also be sold on stock exchange. Any company wanting to raise money in the equity market has to first register itself with a Stock Exchange and then come out with an Initial Public Offering (IPO).

In India, two main stock exchanges exist. They are:

Bombay Stock Exchange (BSE)

National Stock Exchange (NSE)

Hundreds of companies belonging to every possible sector have listed on these exchanges and their stocks are traded daily.

Stock Index

A stock index is a measure of a change in the value of securities in the stock market. It represents a portfolio of different stocks that are representing a particular market or market segment. All Indices have their own calculation methodologies. To analyse the effect on an index we have to take a look at the past value and see if it has risen or fallen.

Index Value

Index value is the value of the Index that is listed on the exchange at a certain point of time. It can keep changing depending upon the market forces and consumer sentiments. It reflects all the information in the market and can provide insight into future trends.

Index Opening and Closing Value

The value of an index at the time of opening of the Stock Exchange and at the time of closing respectively. They both change daily. In our study, we have taken the closing data for analysis.

Nifty 50 Index

Nifty 50 or Nifty is a stock index of the NSE. It consists of 51 stocks in reality. These stocks cover a wide spectrum of 12 sectors. India Index Services and Products Ltd (IISL) has created the Nifty 50 Index and they are the ones who manage it. Free float capitalization of Nifty 50 stocks account for 62.9% of the total stocks traded on NSE. For the past year, Nifty 50 Traded Volume is 43.8%.

BSE SENSEX

Similar to Nifty, Sensex is the stock index of BSE. However, Sensex has top 30 stocks listed only instead of 50-51 of Nifty. It takes the free float market capitalization of the 30 most financially stable and well established companies listed in BSE and constitutes the Sensex. Sensex comes from two words - Sensitive Index. These stocks also cover various industries and they are a representation of those sectors.

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