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An Empirical Study On The Impact Of Demonetisation With Special Reference To Stock Exchanges Of India

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Abstract: Demonetization refers to an economic policy where a certain currency unit ceases to be recognized or used as a form of legal tender. Demonetization has also been defined as the process of moving people from a cash-based system to a cashless system (digital system).The government takes such decisions to stop the circulation of a denomination of notes or coins in the economy. A lot of black money circulates in the economy and it becomes difficult for the Govt to track this black money as these are mostly unaccounted. To mop up this money out of circulation, the government can demonetize so that the money holders are forced to deposit the cash with the banks or lose their wealth. It is a strategy that has worked quite well for some countries. With the objective of wiping out the black money and corruption from our country, the Government of India on the 8th November 2016 announced demonetization of high denomination currency notes of Rs 500 and Rs1000.Demonetisation was a major step taken by the Govt and it has its impact on various sectors of the economy. This paper tries to study the impact of demonetisation on the stock market. Data has been collected from the websites of stock exchanges for a period before and after the demonetisation in order to observe the effect of demonetization.

Keywords: Demonetisation, Black Money, Stock Exchange, Index

I. PROLOGUE

Demonetization refers to an economic policy where a certain currency unit ceases to be recognized or used as a form of legal tender. Demonetization has also been defined as the process of moving people from a cash-based system to a cashless system (digital system).The government takes such decisions to stop the circulation of a denomination of notes or coins in the economy. A lot of black money circulates in the economy and it becomes difficult for the Govt to track this black money as these are mostly unaccounted. To mop up this money out of circulation, the government can demonetize so that the money holders are forced to deposit the cash with the banks or lose their wealth. It is a strategy that has worked quite well for some countries.

The announcement of demonetization policy on 8th November 2016 was a big and extremely bold step taken up by the Govt. of India. This has led to a number of problems for the masses like queues in front of banks, cashless ATMs, difficulties in the purchase of daily items etc. The pain of demonetisation was mainly felt by the weaker section of the society. However the impact of this sudden shock has been traced and felt in the entire economy of the country. Most efficient way to judge the immediate economic impact of this sudden and brave economic policy is to look at the stock market trends. Stock market indices are normally taken as the barometers of the economy. Sudden drop or sudden rise in the major stock market indices are the result of the some important events in the economy. Sharp decline in the stock market indices are the predictor of deterioration in the economic activities of the country. Hence, by observing at the importance of the stock market in the economy, the researchers have framed the following research question:

What is the Impact of Demonetisation on National Stock Exchange of India Indices (Nifty 50) and Bombay Stock Exchange of India Indices (BSE Sensex).

II. REVIEW OF LITERATURE

Chellasamy and Anu (2017) conducted a study on the impact of demonetisation on the Indian stock market. The study made use of secondary data. Regression analysis was used by the researcher to analyse the data of the study.The study concluded that public sector banking segment, pharma sector, energy sector and IT has shown an increase of returns during the post demonetisation period. The study also found that many of the sectors were negatively affected during the post demonetisation period.

Singh Pratap and Sing Virender (2016)[2] conducted a study entitled "Impact of demonetisation on the Indian Economy". Demonetisation has been introduced by the Govt. of India in order to cope up with the problems like black money and terrorist activities. The study was based on secondary data only. The study focused on the various probable consequences of this decision on various sectors of the economy.

Kumar Siva *et al* (2017)[3] made a study entitled "A Study on the impact of demonetisation on Bombay Stock Exchange". The objective of this research paper is to evaluate the impact of demonetization on sectoral indices of Bombay Stock Exchange. The collected data has been divided into two parts i.e. pre and post demonetisation period. The study concluded that the cash dependent and consumption based sectors were negatively affected while the financial sectors were the biggest beneficiaries of demonetisation.

Chauhan Swaty and Kaushik Nikhil (2017)[4] conducted a study entitled "Impact of Demonetisation on Stock market: Event Study Methodology". The objective of the paper is to analyze the impact of demonetization on Indian Stock market. The Event Study Methodology has been used study the impact of demonetisation on the stock of S&P BSE 100 companies. Period of the study has been divided into two parts pre and post event period. It has been found that there is no significant impact of demonetization on the stock market. The study also observed that short period fluctuations l in the stock prices can be due to some other factors.

HYPOTHESIS

The following null hypothesis has been framed in the present study:

There is no impact of demonetisation on the structure of the Stock Market indices.

III. METHODOLOGICAL DESIGN

The objective of this research work has been to investigate the impact of demonetisation on BSE Sensex and NSE Nifty. The study used the closing index for the period from October 3rd to December 9 2016 which consists of 47 observations. The study period has been divided into two parts i.e pre and post demonetisation. Pre demonetisation period consists of 25 trading days and post demonetisation period consists of 22 trading days. All the data have been obtained from the BSE and NSE website.

All the data have been analysed using Chow test. A series of data may contain a structural break due to a change in Govt. policy or sudden shock to the economy like demonetisation. In order to test for any such structural break, Chow test can be used. The model of Chow test uses an F-test distribution to find out whether a single regression is more efficient than two separate regressions involving splitting the data into two sub-samples.

A Chow test is designed to determine whether a structural break in a time series exists. The Chow test is conducted by running three separate regressions: 1) a pooled regression with data before and after the structural break, 2) a regression with data before the structural break, and 3) a regression with data after the structural break. The residual sum of squares for each regression is used to calculate the Chow statistic using the following formula:

$$F - \frac{RSS_c - (RSS_1 + RSS_2)/k}{RSS_1 + RSS_2 / n - 2k}$$

After calculating the Chow test statistics, it has to be compared with the critical values in the F-test tables and the conclusions have to be made accordingly.

IV. RESULTS & DISCUSSION

All data has been analysed using Chow test.

Results of the Regression analysis for the BSE Sensex closing indices has been tabulated below:

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	824262.2	824262.2	16.14428	0.000577
Residual	22	1123232	51055.99		
Total	23	1947494			

Table1: Showing the Results of Regression Analysis before Demonetisation

In the above table, it has been observed that the residual sum of squares for regression analysis of the pre demonetisation data set is 1123232.

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	536315.4	536315.4	2.549738	0.125252
Residual	21	4417169	210341.4		
Total	22	4953484			

Table 2: Showing the Results of Regression Analysis after Demonetisation

In the above table, it has been found that the residual sum of squares for regression analysis of the post demonetisation data set is 4417169.

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	23394722	23394722	137.6387	2.77E-15
Residual	45	7648740	169972		
Total	46	31043462			

Table3: Showing the Combined Results of Regression Analysis

Table 3 shows the residual sum of squares for regression analysis of the pooled data set i.e including both pre and post demonetisation data set is 7648740.

Results of the Regression analysis for the NSE Nifty closing indices has been tabulated below:

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	96890.31	96890.31	22.59684	9.58E-05
Residual	22	94331.19	4287.781		
Total	23	94331.19			

Table 4: Showing the Results of Regression Analysis before Demonetisation

In the above table, it has been observed that the residual sum of squares for regression analysis of the pre demonetisation data set is 94331.19.

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	61059.46	61059.46	2.573477	0.123603
Residual	21	498255.4	23726.45		
Total	22	559314.9			

Table 5: Showing the Results of Regression Analysis before Demonetisation

In the above table, it has been found that the residual sum of squares for regression analysis of the post demonetisation data set is 498255.4.

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	2499777	2499777	140.4159	1.97E-15
Residual	45	801119.9	17802.67		
Total	46	3300897			

Table 6: Showing the Combined Results of Regression Analysis

Table 6 shows the residual sum of squares for regression analysis of the pooled data set i.e including both pre and post demonetisation data set is 801119.9

The residual value found in each of the cases i.e before demonetisation, after demonetisation and residual value for the entire period has been put in the Chow test formula. The Chow test statistics for the BSE Sensex is 7.57 and for NSE Nifty is 8.94.The tabulated value is 3.212.Since the Show test statistics is higher than the tabulated figure, the null hypothesis has been rejected. Therefore, the null hypothesis has been rejected and it can be concluded that there is a structural change in the stock market indices (both BSE Sensex and NSE Nifty) due to demonetisation.

V. LIMITATION OF THE STUDY

The study involves a critical period i.e the period before and after the demonetisation. The nature of the study requires in depth investigation but due to the limitation of time, study has been confined to a limited period. Moreover, the study has been made only on two types of indices but many indices like sectoral indices can also be used for this type of study. Literature regarding the effect of demonetisation is also not available and as such it becomes difficult for the researchers to complete the study.

VI. EPILOGUE

The objective of the study was to find out the impact of Demonetisation on Stock Market of India. Result from the Chow test demonstrates that demonetisation or withdrawal of higher denomination currency has a profound impact on the Stock market of the country. The results reveal that the major indices of the country i.e BSE Sensex and NSE Nifty have undergone a significant structural change after the demonetisation. This shows that the flow of stock market indices before and after the event has significant difference. Therefore, it has been observed from the present study that the stock market which is the barometer of the economy got affected due to the demonetisation and as such it affects different sectors of the economy because BSE Sensex and NSE Nifty are the major indices of the country which contain all the important sectors of the economy. However, the structural change does not indicate whether the impact of demonetisation is good or bad and it will be also too early to comment on that because the effects of any such economic policy can be better felt after a considerably long period of time.

REFERENCES

[1] Chellasamy P and M.K Anu, "*Impact of Demonetisation on Indian Stock Market: With Special Reference to Sectoral Indices in National Stock Exchange of India*", IOSR Journal of Economics and Finance (IOSR-JEF Volume 8, Issue 3 Ver. I (May. - June. 2017), PP 51-54.

[2] Singh Pratap and Sing Virender, "*Impact of Demonetization on Indian Economy*", International Journal of Science Technology and Management, Vol.4, Issue 12, 2016.

[3] Kumar Siva, Robert William and Rao Bala CH, "*A Study on the impact of demonetisation on Bombay Stock Exchange*:" IJARIIE, Vol-3 Issue-5 2017.

[4] Chauhan Swaty and Kaushik Nikhi, "*Impact of Demonetisation on Stock market: Event Study Methodology*" Indian Journal of Accounting (IJA), Vol. XLIX (1), June, 2017, pp. 127-132.