

Impact of REPO Rate Announcement on Index Price Movement of NSE and BSE

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Abstract

The Reserve Bank of India (RBI) credit policy announcement is the most considerable event in the stock market practices. Whenever the RBI announces information on credit policy, the market has become vibrant and there is some impact on the market index. Repo rate plays the most important key factor for lending of the economy of the country hence the market tendency has been analysed at the time of repo rate announcement. The study has been made at what extent the market has reacted when changes occurred on the repo rate. The study undertakes to know the volatility, range of risk and return and investors' reactions on the basis of descriptive and analytical nature. The researcher has used the statistical tools like, Wilcoxon signed rank test and paired sample t test to find out the before and after effect of the repo rate announcement on the stock market index price.

Keywords: Repo rate announcement, Index Price movement, Stock market Volatility,

Introduction

Indian financial system has intermix deal with all industries in which financial market performs based on the several market determinants such as demand and supply, investors emotions, international dealings, government initiatives, industry performances, special announcements, other economic factors and so on. The financial market is being as an important component to contribute more in the economic development and it is also performing as a pulse of an economic condition of the nation. Especially the stock markets have given a significant cradle to gather money from various investors to distribute their investment in various fields for the business growth. The market contribution has a significant role on the Indian economy. Indian economy is also functioning with different components and it has unique structure to monitor and control it. Each country has different regulated financial system. India also has an important regulator such as Reserve Bank of India (RBI), Securities and Exchange board of India (SEBI), Unit Trust of India (UTI) and so on. It regulates monitor and control activities. In this context, their initiatives and announcements have been creating an influence on the stock markets. Hence the researcher has focused to analyse the impact of repo rate announcement on the stock market. The study would help to recap about the economic factors which influence on the stock market.

Statement Of The Problem

Repo rate provides a significant impact on the monetary activity of the country because most of them deal with the banks like big corporates, small and medium enterprises, farmer community, individuals and so on. Every business organisations are working towards the profit intension. Business development can be achieved by yielding more profit but higher borrowing cost is the biggest challenges for business development. Higher interest rate is being a road block to the growth of entire business process and it is also hurting overall profitability of business enterprise. Every organisation has to know, if any substantial change in the interest rate which will reflect in the business performance and market price of the share. Market index price movement is based on the companies' performances, investors' behaviour, internal and external factors and so on. Repo rate has a considerable factor to know how it will stimulate the volatility of the stock market and this announcement has huge possibilities to create significant influence on the stock price movement positively or negatively.

Objectives

1. To find out the influence of repo rate announcement on the price movements of NSE and BSE Index.
2. To analyse the performance of price movements in NSE and BSE Index after the announcement of repo rate.

Review Of Literature

Yu Hsing (2011)¹ examined the relationship between stock market index of Hungary and relevant macro-economic variables. The study has concluded that the stock market index of Hungary has a positive relationship with macroeconomic variables such as the real GDP, ratio of government debt to GDP, nominal effective exchange rate and German stock market index. Further, the signal indicated that the market index of Hungary has negatively related to real interest rate, expected inflation rate and government bond yield in Euro region.

S. Vanitha (2013)² the study showed that the security prices reacted to the announcements of reverse repo rate and cash reserve ratio. The reaction took place for very few days only. In this study clearly indicates that that reverse repo rate and cash reserve ratio has such influence on the price of Indian Banking Stocks. Indian Stock Market was able to capture the RBI announcement information immediately. Indian Stock Markets in respect of banking companies in general are efficient to some extent, but not perfectly efficient in responding to the RBI Announcements.

Vivek Sharma (2013)³ Post Sep, 2010 till Jul 2011, whenever repo rate was increased Sensex reacted negatively to the news. In fact, when RBI hiked repo rate by 50% basis point on 03rd Mar, 2011, Sensex points improved almost 460 point. This was the time when market realized that the hike

would make a significant impact on the cost of capital of the companies and will drive profitability down for the companies in general. However, when repo rates were upped to 8.25 percent and 8.50 percent respectively from their previous levels market has reacted positively as there was a confidence built in the market that the rates won't go up significantly.

Hypotheses

1. **H₀**-There is no significant difference between before and after the announcement of repo rate in each quarter towards price movement of NSE Index.
2. **H₀**-There is no significant difference between the before and after the announcement of repo rate in each quarter towards price movement of BSE Index.
3. **H₀**-The repo rate announcement does not create any impact on the Index price performances of NSE in each quarter.
4. **H₀**-The repo rate announcement does not create any impact on the Index price performances of BSE in each quarter.

Methodology

The research is based on the secondary data and the data have been collected from the authorised websites of RBI, NSE and BSE. 30 days closing prices of data have been considered in a chronological order to analyse based on before and after the announcement of repo rate. Four quarters of repo rate announcement have considered in the year of 2015 to retrieve the data and the announcement date has been given in Table 1. Wilcoxon signed rank test has been used to measure the influence level on the stock price movement before and after the repo rate announcement. Paired sample t test has been used to find out the performance of index movement based on before and after announcement basis.

Significance of The Study

The RBI has the most important role of monitoring and controlling the credit of the nation. The RBI has an authority to regulate and control the volume of credit through both quantitatively and qualitatively. It includes the bank rate policy, open market operations, variable reserve ratio, moral suasion publicity, credit rationing and so on. Repo rate has most possibility to create vibrations on the open market systems.

REPO Rate Announcement of The RBI

The Repo rate is the rate at which the RBI lends money to the bank for short term. It is a bench mark rate which will make influence on the people or companies borrowings from the bank. If the rate affects the borrowings of the companies, that will make some influence on the profitability and growth of the companies.

Table-1
REPO RATE DECLARATION OF RBI IN 2015

Date of Announcement	Changes	% of Repo rate
15-01-2015(Q1)	-0.25	7.75
04-03-2015(Q2)	-0.25	7.50
02-06-2015(Q3)	-0.25	7.25
29-09-2015(Q4)	-0.50	6.75

Source: www.rbi.org.in

Table 1 displays the repo rate announced by the RBI during the year of 2015. The Repo rate has consistently decreased in first three quarters upto 0.25 percent and the rate which decreased upto 0.50 percent in the last quarter of 2015. The Repo rate has been consistently decreased by the RBI hence

it will support to increase the profitability and reduce the cost of capital of the business enterprise and the decreasing trend which create some positive impact on the industries share price movement in the market.

Table-2

IMPACT OF REPO RATE ON THE PRICE MOVEMENTS OF NSE (Wilcoxon signed rank Test)

Date		Mean Value	Std.Dev Value	N	Mean Rank of NSE		/ Z / value	Asymp.sig (2 tailed)	H ₀
					Positive	Negative			
15-01-2015 (Q1)	Before	8.281	129.275	30	30	0	4.8	0	Rejected
	After	8.756	117.601		(15.5)	(0)			
04-03-2015 (Q2)	Before	8.786	113.24	30	1	29	4.6	0	Rejected
	After	8.632	144.08		(8)	(15.76)			
02-06-2015 (Q3)	Before	8.311	108.302	30	16	14	0.9	0.36	Accepted
	After	8.267	177.992		(11.75)	(19.79)			
29-09-2015 (Q4)	Before	7.951	267.802	30	24	6	1.8	0.072	Accepted
	After	8.091	147.494		(13.33)	(24.17)			

Source: www.nseindia.com, Figures in brocket indicates the mean rank

Table 2 describes the influence of repo rate announcement on NSE index closing price movement. There are no more changes on the mean value of after and before index movements. There is no higher standard deviation value when we analyse the each quarter movements. The first quarter and the second quarter /Z/ value has 4.782 and 4.618 respectively. The absolute computed value of Z is more than

the absolute critical value of ±1.96. The significant level of 2 tailed has also less than 0.05 hence that null hypothesis is rejected. Third and fourth quarter /Z/ value has 0.915 and 1.800 respectively and it is less than the absolute critical value of ±1.96. The significance level has more than the value of 0.05 hence the Null hypothesis has been accepted.

Table-3

IMPACT OF REPO RATE ON THE PRICE MOVEMENTS OF BSE (Wilcoxon signed rank Test)

Date		Mean Value	Std.Dev Value	N	Mean Rank of NSE		/ Z / value	Asymp.sig (2 tailed)	H ₀
					Positive	Negative			
15-01-2015 (Q1)	Before	2.764	551.859	30	30	0	4.8	0.000	Rejected
	After	2.897	395.033		(15.50)	(0)			
04-03-2015 (Q2)	Before	2.908	353.007	30	0	30	4.8	0.000	Rejected
	After	2.853	474.809		(0)	(15.50)			
02-06-2015 (Q3)	Before	2.743	354.756	30	17	13	0.4	0.704	Accepted
	After	2.738	608.887		(12.59)	(19.31)			
29-09-2015 (Q4)	Before	2.618	881.082	30	22	8	2.6	0.009	Rejected
	After	2.673	505.966		(16.32)	(13.25)			

Source: www.bseindia.com, Figures in brocket which indicates the mean rank

Table 3 shows the influence of repo rate announcement on BSE index price movement. There is no highest difference in the mean values. Standard deviation result shows that consistent improvement on the Index return after the repo rate announcement for each quarter. First, second and fourth quarter absolute $|Z|$ value has 4.782, 4.782 and 2.602

respectively. The absolute computed value of Z is more than the absolute critical value of ± 1.96 and the significant level of 2 tailed has also less than 0.05 hence that null hypothesis has rejected. Third quarter P level is 0.704 it is more than the significance level of 0.05 hence null hypothesis accepted.

Table-4

NSE PRICE INDEX PERFORMANCE BEFORE AND AFTER THE REPO RATE ANNOUNCEMENT
(Paired sample T test)

Date	Paired Differences					T	df	Sig. (2-tailed)	H_0
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
				Lower	Upper				
15-01-2015 (Q1)	4.75E+02	169.758	30.9934	-538.005	-411.228	-15.3	29	0	Rejected
04-03-2015 (Q2)	1.53E+02	95.4906	17.4341	117.6082	188.9218	8.791	29	0	Rejected
02-06-2015 (Q3)	4.38E+01	248.33	45.3386	-48.9262	136.5295	0.966	29	0.342	Accepted
29-09-2015 (Q3)	1.40E+02	398.331	72.725	-288.839	8.63927	-1.93	29	0.064	Accepted

Source: www.nseindia.com

Table 4 shows the descriptive statistic as well as actual result of paired sample t test to understand the performance of NSE index price movement before and after the announcement of repo rate. The first and second quarter have significant difference between the price movements of before and after repo rate announcement hence that P value

is 0.000 level and it is less than the significant level of 0.05 hence null hypothesis is rejected. Third quarter has 2 tailed P value has more than the significance level hence that Null hypothesis accepted. In fourth quarter result shows that small difference in the significant level.

Table-5

BSE PRICE INDEX PERFORMANCE BEFORE AND AFTER THE REPO RATE ANNOUNCEMENT
(Paired sample T test)

Date	Paired Differences					T	df	Sig. (2-tailed)	H_0
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
				Lower	Upper				
15-01-2015 (Q1)	-1.33E+03	550.152	100.444	-1539.41	-1128.55	-13.3	29	0.000	Rejected
04-03-2015 (Q2)	5.46E+02	289.22	52.804	437.8769	653.8696	10.34	29	0.000	Rejected
02-06-2015 (Q3)	5.63E+01	860.974	157.192	-265.233	377.7532	0.358	29	0.723	Accepted
29-09-2015 (Q3)	-5.58E+02	1320.22	241.038	-1051.42	-65.4585	-2.32	29	0.028	Rejected

Source: www.bseindia.com

Table 4 shows the descriptive statistic as well as actual result of paired sample t test to understand the performance of BSE index price movement before and after the announcement of repo rate. The first, second and fourth quarters have significant difference between the price movements before and after the repo rate announcement hence the P value is below the significant level of 0.05 hence null hypothesis rejected. Third quarter P value is 0.723 it is more than the significance level of 0.05 hence the null hypothesis is accepted.

Conclusion

Stock market deals with various industries stock and other financial instruments and so on. Stock index value indicates the performance of industries or companies listed in the market. Every business organisation has such deal and contribution on the economic development. Every nation has such system to control over the economic condition. So that, if any change in economic control factors that will make such influences on the economic conditions and which can be create vibrant on the stock markets. During such time

interval, RBI takes monetary control activities of the nation like changes in CRR, SLR, repo rate, reverse repo rate and so on. This study helps to understand whether any positive or negative impact on the stock market by the announcement of repo rate. The result of the study showed that the NSE and BSE index prices reacted by the repo rate announcement. In this study, repo rate announcement has the positive impact on the stock market index because the rate has consistently decreased by the RBI. The stock market index has the positive performance after the repo rate announcement and the effect has not continued as for long time. The investor has to consider this announcement before making their investment on the stock because it will help them to earn more return or safe their investment.

References

- Yu Husing “Effects of macro-economic variables on the stock market: The case of Czech republic „ Theoretic and applied economics, Volume XVIII (2011), No. 7(560), pp. 53-64.
- S.vanitha “Impact of reverse repo rate and cash reserve ratio in National Stock Exchange (NSE) CNX bank

index”, International Journal of Management and Business Studies ISSN: 2167-0439 Vol. 3 (1), pp. 072-081

http://www.moneycontrol.com/news/economy/do-repo-rate-changes-really-impact-stock-market_841813.html?utm_source=ref_articleThe repo rate announcement has created justifiable vibrant on the industry activities

http://craytheon.com/charts/rbi_base_rate_repo_reverse_rate_crr_slr.php

<http://economictimes.indiatimes.com/definition/repo-rate>

Websites

- www.nseindia.com
- www.bseindia.com
- www.yahoofinance.com
- www.rbi.org.in
- [www.money control.com](http://www.moneycontrol.com)