Impact of Union budget on NIFTY

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Abstract

Union budget is one of such important policy factor which brings volatility and greater returns to the stock market. If investor can take wise and informed decision well in advance before the declaration of budget and after the declaration of budget he, may gain good returns out of this. Generally past researches are done by taking shorter period so in this study researcher has taken a longer period i. e. from 1996 to 2013 which covers 21 total budgets, and this time period was again divided into short term (3 days), medium term (15 days), long term (30 days) before and after the declaration of the union budget. The findings are that there is no significant impact of union budget on the NSE index called NIFTY.

In this study, S&P CNX NIFTY (a well-diversified 50 stock index accounting for 24 sectors of the economy) is being used to check whether announcement of union budget has any impact on these or not in 60 days' time span. Index is used for a purpose such as bench marking fund portfolios, index based derivatives, structured products, ETFs and index funds. S&P CNX NIFTY stocks represent about 64.38% of the total free float market capitalization of the universe of the stocks traded on NSE as on March 31, 2011.

Fact about Budgets:

The National Stock Exchange (NSE) is stock exchange located at Mumbai, India. It is the 11th largest stock exchange in the world by market capitalization and largest in India by daily turnover and number of trades, for both equities and derivative trading. NSE has a market capitalization of around US\$1 trillion and over 1,652 listings as of July 2012. Though a number of other exchanges exist, NSE and the Bombay Stock Exchange are the two most significant stock exchanges in India and between them are responsible for the vast majority of share transactions. The NSE's key index is the S&P CNX Nifty, known as the NSE NIFTY (National Stock Exchange fifty), an index of fifty major stocks weighted by market capitalization.

Keywords:

NIFTY, Union Budget, National Stock Exchange.

Introduction

Union Budget

In India, the budget is an annual financial statement containing the estimated receipts expenditure of the government of India, which has to be laid before parliament in respect of every financial year, which runs from 1st April to 31st March under article 112 of the constitution. A budget is a powerful tool in the hand of the government to control the economic resource of the country. It contain proportion regarding changes in tax policy industrial policy trade policy, exchange rate policy and financial sector reforms which may have favourable or adverse impact on stock market. Per budget economic survey, reviews the economy as a whole covering banking and capital market, prices, industry, agriculture and infrastructure etc. Read under economic survey the macroeconomic review of trends in GDP, Demand/supply factor fiscal development, balance of payment etc. While issues and priorities discusses current situation, key problems, possible solution, domestic reforms etc.

Literature Review

Keeping in view the specific objective of the study, there views of earlier studies have been shown below:

Gupta and Kundu (2006) analyzed the impact of Union Budgets on stock market considering the returns and volatility in Sensex. They found that budgets have maximum impact in short-term post-budget period, as compared to medium term and long term average returns and volatility does not generally increase in a post-budget situation as the time period increases.

Porwal and Gupta (2005) examine the hot issue of volatility in the Indian stock markets. The study is based on a daily prices of S&P CNX Nifty for the period of 10 years .They found 1996 was the most volatile year in the past 10 years, this is due to the political instability and absence of proper regulation.

P.Varadharajan **Dr. P Vikkraman have studied the stock market volatility and have it impacts on the major four indices of India.

Mohanty (2004) examine the stock price reaction to announcement of various policy issues by government of India. The result show that the stocks generally react to public news quite quickly, but the first adjustment is not always the correct one

Rao (1997) studied the impact of macroeconomic events like union budgets and the credit policy announcements on stock prices from 1991-1995. He found that budgets increased the volatility of stock prices of the market portfolio. However, the credit policy announcements were found to have no impact on stock price behavior.

Soni Anil (2009) studied the Reaction of the stock market to union budget and monetary policy announcements. This paper sets to examine the impact of the announcement of union budget and monetary policy on the stock market. The time period covered is 10 years i.e. from the year 2000-2009. Paired t-test is carried out among different periods during announcements days. F-tests are also carried out to compare the last 30 days returns with next three fifteen and thirty days. The findings of the paper are that the union budget and monetary policy announcements have no impact on the stock market in the long run. However in the short run impact may be either way i.e. positive as well as negative.

Objective of the study

- To examine the impact of union budgets of index NIFTY of NSE in terms of returns.
- To study the impact of announcements of union budget into the pre-budget period and post budget period.

3.4 Research Hypotheses

The test tried to compare the average returns during various time periods with one another and also the budget day impact with average returns from previous period. In the hypotheses, $\mu(RX1)$, $\mu(RX2)$, and $\mu(RX3)$ represent the average daily returns during the previous 30;15 & 3 trading day. $\mu(RY1)$, $\mu(RY2)$ and $\mu(RY3)$ represent the average daily returns during the next 3,15 & 30 trading days. RZ represent the budget day (Event day-end) returns.

In the next part of the study, the variance of returns (6^2) have been compare between various time periods in order to find out the extent of volatility

Nifty Index

 $H_{1:}$ There is significant impact of Budget on Nifty average returns.

 $H_{2:}$ There is significant difference among the average returns of the pre budget period and post budget period for Nifty Index.

 $H_{3:}$ Volatility of second period is more than first period for Nifty Index.

 $H_{4:}$ The volatility for period Y1 (Short term), Y2 (Medium term) & (Long term) are more than period X1 (Long term budget) for Nifty Index.

Research Methodology

Research Design

The study aimed at exploring pre budget returns and volatility with after budget returns and volatility. For this purpose, the results for the period 1996 to 2013 (21 union

budgets were presented during this period) taking 30 days before and 30 days after the budgets.

Following variables have been used for the study:

- Average returns
- Pre-budget trading period
- Post-budget trading period
- Short Term period
- Medium Term period
- Long Term period

Average returns are calculated based on the closing prices of respective scripts on NSE.

- 1) The starting investment value (C0)
- 2) The ending investment value (C1)

The general formula is:

 $ROI = \frac{C1-C0}{C0}$

Study period covers 60 trading days for all budgets. These trading days are divided into Pre budget (30 trading days before the budget is declared) and post budget (30 trading days after the budget has been declared). Again this period is divided into 3 days (Short term period), 15 days (Medium term period) and 30 days (Long term period) before and after the budget.

Sources of the data

The study is mainly based on secondary data which is collected from the official website of NSE, website of finance ministry, websites of respective companies & various other websites. The closing price of S&P CNX Nifty was collected from the official website of NSE.

Population

1) Researcher has used S&P CNX NIFTY index for the study as it considered being an important indicator of trading activities of the Indian stock market. Moreover, it also accounts for two thirds of the turnover.

Sampling method:

In this study researcher has used non-probability "Judgmental convenience sampling" looking at the research objectives and data needs. Index has been collected for the period January 1996 to April 2013.

Sampling frame:

The sampling frame for the research study is NSE nifty Index and sector indices which are nearly eighteen.

Study period

The period covered under study starts from 1st January 1996 to 31th March 2013. This period include a total of 21 budgets (Appendix A-list of budgets with period) (include three interim ones) being presented by various Finance Ministers in the parliament. A total of 60 trading days before and after the budget is considered to study the impact of budget. The study considered only trading days and not considered the trading holidays when the market remained closed. These trading days are divided into Short-term (3 trading days), Medium term (15 trading days), and long term periods (30 trading days) both before and after the budget.

Statistical Tools

The study has used the statistical techniques of paired T test and F test on average returns and variance in returns respectively over different periods around the budget.

Findings

Budget day returns are more than the returns during the previous 30, 15, and 3 trading days in case of Nifty Index. The result of Paired t test for Average returns (Dependent variable) for Nifty in all 12 cases is not significant. Therefore the researcher failed to reject null hypothesis. This means that there is no significant impact of union budget (Independent variable) on average returns provided by Nifty in short term, medium term and long term period.

In all the nine cases (3 short term, 3 Medium term & 3 Long term period) actual values are lower than table values which shows that Null hypotheses are accepted in all the 3 time periods. Which indicates that budget have no significant impact at all on post budget short term, medium term as well as long term average returns of Nifty Index.

References

- Arindam Gupta and Debashis Kundu (2006): "The ICFAI Journal of Applied Finance Arindam Gupta and Debashis Kundu November' 06", vol 12, no. 12
- Debashis Kundu (2009): "NSE New Sletter", Aug 2009
- H.K.Porwal & Parul kansotia (2012): "Rising Research Journal Publication", ISSN. 2249-2658 (Online)
- Stock Market Volatility Between 2001 to 2011, JOURNAL OF CONTEMPORARY RESEARCH IN MANAGEMENT October - December, 2011
- Anil Soni , APJRBM, Vol 1, issue 2 (Nov, 2010) ISSN 2229-4104
- S Thomas and J Shah, Economic and Political weekly, 2002 – JSTOR
- P.Varadharajan **Dr. P Vikkraman, Impact of Pre and Post Budget on

Annexure						
SR. NO.	YEAR	PERIOD (60 TRADING DAYS PLUS BUDGET				
		DAY)				
1	1996	31/1/96 TO 30/4/96				
2	1996	7/6/96 TO 3/9/96				
3	1997	16/1/97 TO 17/4/97				
4	1998	16/4/98 TO 13/7/96				
5	1999	14/1/99 TO 13/4/99				
6	2000	17/1/00 TO 13/4/00				
7	2001	16/1/01 TO 16/4/01				
8	2002	17/1/02 TO 15/4/01				
9	2003	16/1/03 TO 15/4/03				
10	2004	18/12/03 TO 17/3/04				
11	2004	27/5/04 TO 19/8/04				
12	2005	13/1/05 TO 12/4/05				
13	2006	13/1/06 TO 17/4/06				
14	2007	13/1/07 TO 13/4/07				
15	2008	18/1/08 TO 17/4/08				
16	2009	1/1/09 TO 2/4/09				
17	2009	25/5/09 TO17/8/09				
18	2010	13/1/10 TO 15/4/10				
19	2011	14/1/11 TO 13/4 11				
20	2012	2/2/12 TO 30/4/12				
21	2013	27/1/12 TO 29/3/13				

DATA ANALYSIS & INTERPRETATION 5.1 NSE Nifty Index:

Table 5.1: Daily Average returns In Nifty Index									
		X1	X2	X3	Z	Y1	Y2	Y3	
YEAR	DATE	LAST 30	LAST 15	LAST 3	BUDGET	NEXT 3	NEXT 15	NEXT 30	
		DAYS	DAYS	DAYS	DAYS	DAYS	DAYS	DAYS	
1996	15-Mar	0.55	-0.05	0.54	-0.94	-0.54	0.32	0.39	
1996	22-Jul	-0.02	-0.04	0.8	0.57	-1.9	-0.57	-0.31	
1997	28-Feb	-0.15	0.18	0.96	0.59	3.91	0.45	0.16	
1998	01-Jun	-0.41	-0.58	-1.26	-0.88	-0.84	-1.14	-0.26	
1999	27-Feb	-0.05	0.05	-0.29	4.26	2.02	0.53	0.06	
2000	29-Feb	0.21	0.36	0.52	-3.93	0.06	-0.4	-0.25	
2001	28-Feb	0.03	-0.45	-1.48	4.31	-2	-0.81	-0.82	
2002	28-Feb	0.3	0.45	0.74	-3.96	1.06	0.02	-0.02	
2003	28-Feb	-0.1	0.04	-0.54	0.99	-0.72	-0.31	-0.36	
2004	03-Feb	0.77	-0.53	-1.69	-2.25	1.22	0.21	-0.02	
2004	08-Jul	-0.05	0.32	0.64	-3.11	0.47	0.43	0.2	
2005	28-Feb	0.25	-0.05	0.04	2.05	0.41	-0.02	-0.12	
2006	28-Feb	0.25	0.28	0.18	0.24	0.78	0.35	0.37	
2007	28-Feb	-0.03	-0.52	-1.21	-3.82	-1.5	0.06	0.17	
2008	29-Feb	-0.32	0.22	0.54	-1.17	-1.93	-0.48	-0.14	
2009	16-Feb	0.02	0.57	0.17	-3.39	-0.69	-0.55	0.42	
2009	06-Jul	0.16	-0.22	1.03	-5.84	-0.67	0.64	0.19	
2010	26-Feb	-0.24	0.02	0.02	1.29	1.06	0.38	0.23	
2011	28-Feb	-0.26	-0.1	-1.01	0.56	1.28	0.11	0.35	
2012	16-Mar	0.1	-0.12	0.14	-1.16	0.3	-0.09	-0.04	
2013	28-Feb	-0.11	-0.19	-0.3	-1.79	0.53	0.04	-0.07	

Table 5.2 shows Paired t test results for Nifty Index

	X1 & Z	X2 & Z	X3 & Z
Actual value	1.44	1.35	1.14
Table value (5%)	2.09	2.09	2.09

. In all the three cases table values are found to exceed the actual values leading to acceptance of Null hypothesis.

Table 5.3:	Impact	of budgets	on Nifty

SHORT "	TERM PE	RIOD	MEDIUM	TERM PE	RIOD	LONG TERM PERIOD		
X1& Y1	X2&Y1	X3&Y1	X1 & Y2	X2&Y2	X3&Y2	X1&Y3	X2&Y3	X3&Y3
-0.21	-0.41	-0.52	-0.80	0.19	-0.17	0.43	-0.30	-0.44
2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09

		X1	X2	X3	Y1	Y2	¥3
YEAR	DATE	LAST 30 DAYS	LAST 15 DAYS	LAST 3 DAYS	NEXT 3 DAYS	NEXT 15 DAYS	NEXT 30 DAYS
1996	15-Mar	0.048	0.018	0.009	0.047	0.02	0.027
1996	22-Jul	0.014	0.016	0.047	0.014	0.019	0.017
1997	28-Feb	0.027	0.018	0.017	0.32	0.101	0.088
1998	01-Jun	0.017	0.022	0	0.054	0.108	0.078
1999	27-Feb	0.032	0.024	0.012	0.069	0.027	0.031
2000	29-Feb	0.027	0.029	0.028	0.094	0.054	0.076
2001	28-Feb	0.017	0.016	0.01	0.05	0.101	0.068
2002	28-Feb	0.011	800.0	0.013	0.033	0.016	0.012
2003	28-Feb	800.0	800.0	0.007	0.002	0.013	0.018
2004	03-Feb	0.037	0.054	0.003	0.041	0.026	0.025
2004	08-Jul	0.028	0.017	0.019	0.03	0.011	0.011
2005	28-Feb	0.01	0.004	0	0.017	0.006	0.011
2006	28-Feb	0.008	0.006	0.003	0.007	0.01	0.014
2007	28-Feb	0.016	0.018	0.017	0.088	0.047	0.041
2008	29-Feb	0.12	0.056	0.005	0.101	0.097	0.063
2009	16-Feb	0.06	0.039	0.025	0.032	0.029	0.049
2009	06-Jul	0.039	0.036	0.006	0.04	0.043	0.039
2010	26-Feb	0.014	0.011	0.001	0.012	0.006	0.006
2011	28-Feb	0.018	0.022	0.041	0.039	0.019	0.014
2012	16-Mar	0.013	0.018	0.022	0.02	0.019	0.012
2013	28-Feb	0.003	0.005	0.022	0.009	0.009	0.008

Table 5.4: Variances of Returns in Nifty Index

Table 5.5 : F Test Results comparing Variance among the returns (Post Budget) with one another for Nifty Index

NIFTY INDEX		ACTUAL VALUE	TABLE VALUE	ACTUAL VALUE	TABLE VALUE	ACTUAL VALUE	TABLE VALUE
YEAR	DATE	Y1&Y2	DF	Y2&Y3	DF	Y3&Y1	DF
1996	15-Mar	2.41	3.74	1.36	2.31	1.77	3.33
1996	22-Jul	2.45	3.73	1.12	2.05	1.23	19.46
1997	28-Feb	3.17	3.74	1.14	2.05	3.63	3.33
1998	01-Jun	2.01	19.42	1.38	2.05	1.45	19.46
1999	27-Feb	2.51	3.74	1.12	2.31	2.23	3.33
2000	29-Feb	1.75	3.74	1.41	2.31	1.24	3.33
2001	28-Feb	2.03	19.42	1.47	2.05	1.38	19.46
2002	28-Feb	2	3.74	1.36	2.05	2.72	3.32
2003	28-Feb	8.68	19.42	1.36	2.31	11.84	19.46
2004	03-Feb	1.54	3.74	4.00	2.31	1.61	3.33
2004	08–Jul	2.72	3.74	1.04	2.31	2.63	3.33
2005	28-Feb	2.67	3.74	1.74	2.31	1.54	3.33
2006	28-Feb	1.37	19.42	1.47	2.31	2.01	19.46
2007	28-Feb	1.86	3.74	1 .15	2.05	2.13	3.33
2008	29-Feb	1.05	3.73	1.53	2.05	1.6	3.33
2009	16-Feb	1.11	3.74	1.73	2.31	1.55	19.46
2009	06–Jul	1.07	19.43	1.09	2.05	1.02	3.32
2010	26-Feb	2.02	3.74	1.01	2.32	2	3.33
2011	28-Feb	2.02	3.74	1.32	2.05	2.67	3.33
2012	16-Mar	1.09	3.74	1.52	2.05	1.66	3.33
2013	28-Feb	1.01	3.74	1.11	2.05	1.13	3.33

NIFTY INDEX		ACTUAL	TABLE	ACTUAL	TABLE	ACTUAL	TABLE
YEAR	DATE	X1&Y1	DF	X1&Y2	DF	X1&Y3	DF
1996	15-Mar	1.01	19.46	2.44	2.31	1.8	1.86
1996	22-Jul	1.02	3.33	1.4 1	2.05	1.26	1.86
1997	28-Feb	12.01	3.33	3.79	2.05	3.31	1.86
1998	01-Jun	3.12	3.33	6.25	2.05	4.52	1.86
1999	27-Feb	2.17	3.33	1.15	2.31	1.03	1.86
2000	29-Feb	3.5	3.33	2	2.05	2.82	1.86
2001	28-Feb	3	3.33	6.06	2.05	4.12	1.86
2002	28-Feb	2.92	3.33	1.46	2.05	4.12	1.86
2003	28-Feb	5.22	19.46	1.66	2.05	2.27	1.86
2004	03-Feb	1.09	3.33	1.42	2.31	1.48	1.86
2004	08-Jul	1.09	3.33	1.42	2.31	1.48	1.86
2005	28-Feb	1.69	3.33	1.58	2.31	1 .1	1.86
2006	28-Feb	1.07	19.46	1.28	2.05	1.88	1.86
2007	28-Feb	5.52	3.33	2.97	2.05	2.59	1.86
2008	29-Feb	1.18	19.46	1.24	2.31	1.89	1.86
2009	16-Feb	1.89	19.46	2.1	2.31	1.21	1.86
2009	06-Jul	1.03	3.33	1.1	2.05	1.01	1.86
2010	26-Feb	1.19	19.46	2.4	2.31	2.38	1.86
2011	28-Feb	2.15	3.33	1.06	2.05	1.24	1.86
2012	16-Mar	1.55	3.33	1.06	2.05	1.24	1.86
2013	28-Feb	2.62	3.33	2.63	2.05	2.37	1.86

Table 5.6: F Test results comparing variance among the Returns during Post budget periods with Long term Pre Budget period for Nifty Index