A STUDY OF BUDGET IMPACT ON STOCK MARKET

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ABSTRACT: This study focused on the event of budget impact on Indian markets, the analysis period has been considered from 2004-05 to 2013-14. Augmented dickey fuller test has been applied for the stationery of the data. Budget is considered as one of the major economic event which takes place every year. The direction of the Indian economy will be drafted by the Government of India through Union Budget. Volatility of the equity market was observed high during the speech time of budget in parliament. Sharpe differential Measure indicated that the performance of markets were better after the budget announcement. Regression weight estimation initiated that Indian growth is influenced by the fiscal deficit. This analysis is useful for the equity investors namely DII, FII, regulators, MF managers, etc…

Keywords: Union Budget, Stock Market Capital, GDP, Nifty, Fiscal Deficit, Budget Speech Time & Date.

INTRODUCTION:

The economic and political changes like budget announcement, election etc occurring locally and globally influence the share prices of the stock market and it is seen by the public. The stock market returns and its volatility have become increasingly important in recent times to all the participants in the stock market and the people dealing with the shares, with the increase in the FII's investment. In the past few years Indian capital market has undergone tremendous reform. Every segment of Indian capital market namely primary market and secondary market and derivative products has experienced tremendous change. Indian capital market has been recognized as one of the most transparent, efficient and clean market. In the recent years there has been a perception that the volatility has gone up. Volatility is an important indicator of fluctuation of stock market prices. This will effect the investor to move away from the stock market. It is essential for the investors to know the variation in the stock market from time to time and understand the changing pattern of the capital market prices, in order to buy/sell the securities. The present study is aimed at examining the pattern, trends, causes and volatility of the stock market.

The budget has traditionally been an important part of the financial year and to the Economy. The budget impacts the economy, the stock markets and interest rates. The budget announcement by the finance minister includes investing and spending money. The government plans what they except to do in the future year. And what had happened in the last year. The deficit occurred in last year, which will influence the liquidity and the interest rates. High interest rates will lead to higher cost of capital, lower profits for companies and also it affects the stock prices.

OBJECTIVES:

1. To know the relation between budgets allocated amount, nifty, GDP, and market Capital.
2. To measure the volatility of bench mark during the budget speech.
3. To find the performance of nifty returns before and after month budget.
4. To measure the risk of nifty year on year based on budget.
5. To find the impact of physical depict on budget and nifty.

SCOPE: The analysis has been emphasizing to measure the volatility specifically during the finance minister budget speech announcement time. For this analysis 10 budgets session were considered that is 2004 – 2014 year.

EMPIRICAL STUDY:

- Budget speech time
- Budget speech date
- Nifty
- GDP
- Market

NEED OF THE STUDY: Budget is one of the fixed economic factors. Which occurs once in a year spending in to the different sector will be enunciated by the budget? This budget will changed the economy of the country investor in the equity market will wait for the budget announcement so that we can take an informed decision to invest in the market.

LITERATURE REVIEW:

1. **Susan Thomas:** In this paper, we look about the relation between the budget and the stock market, in the following areas--firstly information efficiency, we try to find out the extent to which the stock market react to the budget is consistent with the behavior that we may expect in an efficient market, i.e. with speculation by rational economic agents across the world. This probe may be characterized as to utilize the Union Budget as lucky chance to learn about Indian equity market efficiency.

2. **S.Ajay:** In this paper we analyze that the impact of Budgets on Indian stock prices, as constitute by the Sensex, Index of Bombay stock Exchange. The impact of budget on stock market is perceived in terms of volatility and returns. over a period of 15years from 1991 to 2005.the statistical tests were applied on returns around the time of budget and the average returns of 3, 15 and 30 shows around the budget over the years, a budget bring to bear the maximum impact, related to absolute return instantly on and around the budget day, which moderately brings down as one moves at a greater distance from the budget day. As time period increases volatility does not generally increase the post budget situation. After the budget the long term period tends to be more volatile when compared to the medium and short term periods and when contrast to similar long term periods before the budget.

3. **Kirti Khanna and Neeraj Gogia:** The stock market will be affected by the different micro economic, internal, and external and macro economic factors. Due to the nature some events that definitely occur can't be envisaged by stock market. For Government budget is the influential instrument in their hands to control fiscal resources of country. For financial or economic health of the country the government budget announcement is one of the important factors. This analysis has considered the stock market behavior on pre and post announcements of Government budgets with period from 2008-09 to 2010-11. Only trading days have been taken into consideration and different statistical measures.
4. **Bradely t. Ewing:** In this paper we are going to examine whether federal budget deficits impact on stock market of Australia and France or not. Due to the deficits in the past the stock prices have been effected and it fully incorporates all the past policy actions in stock market efficiency hypothesis. There is an evidence that fiscal policy actions, which have been measured by the size of past federal budget deficits, show a significant influence upon stock market movements.

5. **Sisira Kanti Mishra:**The budget timing is effecting the market and with the whole world gazing at it with great interest and the ensuing media, and the market have been started reacting according to the budget on real time basis. The enormous market volatility and turnover in the stock market prior to budget have different expectations prevails with respect to taxes impact on individuals, companies and overall economy in the Union Budget. After Budget is also the impact will be there on their portfolios. In this analysis it is felt to guide hedging and trading around the budget date for certain extent. The objective of the project is to help the economic agents to speculate on movement of stock market index.
6. **Vishal Kutchu: The** security prices in the semi stock efficient market reflect all publicly available information. It means that an investor cannot earn abnormal return with the knowledge of publicity available information. After the budget announcement by the finance minister that will be affected in the stock market returns. The reports appearing in these media construe the possible impact of the budget various industrials impacts. The result of this study will show is there any chance to make abnormal returns for the investor and that impact of budget seems to be company specific.
7. **Paul Chotalia:** There is a tremendous impact of the budget on the economy of the country. The budget speech has been used as a mechanism for announcing important new policy and reforms by the government. The stock market index is the most sensible parameter that has impact of budget in the market of any policy and reforms. This study reveals the market activities are influenced by the budget or not. Researcher has attempted to measure the pre and post impact of the union budget on stock market index. They have considered six consecutive budgets from 2007 to 2011 including interim budget of 2009 and the closing price of pre and post budgets of related month.

Research Methodology:

1. Beta formula:

Beta is a measure of risk; it is used to calculate the performance of the risk. Beta coefficient is a measure of sensitivity of a share price to movement in the market price.

$$\beta = \frac{\text{Covariance of Market Return with Stock Return}}{\text{Variance of Market Return}}$$

2. **Sharpe differential measure:** Sharpe differential measure is also called as risk premium measure. This measure is used in calculating excess return of risk. This measure is totally based of the total risk of the portfolio either market risk or unsystematic risk.

Sp= (RFR+ (Excess Return Over Market)*Std Deviation of P)-1

3. **Correlation:**

A statistical measure of 2 variables with same relation moving together with each other is called as correlation. Correlation is used in advanced portfolio management.

$$r = \frac{\sum XY - \frac{\sum X \sum Y}{N}}{\sqrt{\left(\sum X^2 - \frac{(\sum X)^2}{N}\right)\left(\sum Y^2 - \frac{(\sum Y)^2}{N}\right)}}$$

4. **Augmented dickey fuller test (ADF):**

Augmented dickey fuller test is a test for unit root in time series sample. It is am augmented version of the dickey fuller test for a larger and more complicated set of time series model.

$$\nabla y_t = \delta y_{t-1} + u_t$$

5. **Volatility:**

Volatility is a measure for fluctuations of price of financial investments over time. Volatility is derived from time series of past market prices. Volatility is derived from the market prices of a particular option.

V= Standard Deviation/Period

6. **Weighted average:**

The weighted average formula is used to calculate the average value of particular values in different levels of applicability /relevance. The relevance of each number is called its weight.
W=∑wx/∑w

LIMITATIONS:

1. Midterm budgets were ignored
2. Volatility during budget speech time data has been considered from 2008-09 to 2013-14.
3. Financial year 2008-09, 2009-10, 2010-11 timings are assumed based on present timings.
4. GDP has considered in billion USD.

DATA ANALYSIS:

1. To know the relation between budgets allocated amount, nifty, GDP, and market Capital.

Correlations

		BUDGET	NIFTY	GDP	MARKETCAPITAL
BUDGET	Pearson Correlation	1	.046	.984**	.906**

	Sig. (2-tailed)		.900	.000	.000
	N	10	10	10	10
NIFTY	Pearson Correlation	.046	1	.011	-.095
	Sig. (2-tailed)	.900		.977	.793
	N	10	10	10	10
GDP	Pearson Correlation	.984**	.011	1	.920**
	Sig. (2-tailed)	.000	.977		.000
	N	10	10	10	10
MARKETCAPITAL	Pearson Correlation	.906**	-.095	.920**	1
	Sig. (2-tailed)	.000	.793	.000	
	N	10	10	10	10

**. Correlation is significant at the 0.01 level (2-tailed).

Interpretation: The above table represents the Budget and Nifty are slightly correlated, Budget and GDP are strongly correlated, and Budget and Market capitalization also are strongly correlated & Vice versa.

2. To measure the volatility of bench mark during the budget speech.

Year	Timings	SD	Period (minutes)	Volatility
2008-09	11:02am to 12:52pm	20.97368	110	0.19067
2009-10	11:05am to 12:43 pm	20.48791	98	0.20906
2010-11	11:03 am to 12:58 pm	34.58205	115	0.300714
2011-12	11:01am to 12:50 pm	19.09219	109	0.175158
2012-13	11:05am to 12:58pm	26.70733	114	0.234275
2013-14	11:02am to 12:46pm	17.91615	104	0.172271

Interpretations: Above table depicts the nifty volatility during the budget speech time. This analysis has covered six budget sessions; all the sessions were observed wild fluctations. In the year 2010-11 volatility found to be highest because speech time is having 115minutes. All the variables were less than the base value i.e., 1 even though nifty had recorded high volatility.

3. To find the performance of nifty returns before and after month budget.

For Jan

Year	EROM	SD	RFR	Performance
2004-05	-0.12355	2.377258	0.5	-0.793699718
2005-06	-0.06231	-1.60642	0.5	-0.399909837
2006-07	-0.02921	1.386238	0.5	-0.540495381
2007-08	-0.1753	1.923285	0.5	-0.837143205
2008-09	0.154875	3.369642	0.5	0.021873604
2009-10	-0.30191	3.136943	0.5	-1.447083833
2010-11	0.059803	1.219922	0.5	-0.427045018
2011-12	0.032894	1.12316	0.5	-0.463054358
2012-13	-0.04743	1.209375	0.5	-0.557359289
2013-14	0.01881	1.267171	0.5	-0.476164009

For March

Year	EROM	SD	RFR	Performance
2004-05	-0.12355	4.62552	0.5	-1.071462422
2005-06	-0.06231	8.681161	0.5	-1.040892855
2006-07	-0.02921	3.949864	0.5	-0.615385093
2007-08	-0.1753	14.26923	0.5	-3.001330764
2008-09	0.154875	8.980445	0.5	0.890847439
2009-10	-0.30191	17.87419	0.5	-5.896450503
2010-11	0.059803	3.511899	0.5	-0.289977886
2011-12	0.032894	4.577408	0.5	-0.349428995
2012-13	-0.04743	3.022985	0.5	-0.64337678

2013-14	0.01881	2.676133	0.5	-0.449660881

Interpretation: Sharpe differential measure has been applied to measure the performance of equity markets with nifty before and after budget month. The analysis shows that market performance is improving after budget announcement i.e., March month when it is compared with the January month. This method measures the performance from short to long term period. During the analysis period in spite of the higher standard deviation (Risk) performance of nifty is improving when it is compared with before month of budget.

4. To measure the risk of nifty year on year based on budget.

Year	Risk
2004-05	0.969065
2005-06	0.959162
2006-07	0.949766
2007-08	0.888874
2008-09	0.912791
2009-10	0.876845
2010-11	1.016816
2011-12	0.953648
2012-13	0.955926
2013-14	0.983644

Interpretation: The above analysis of risk depicts the nifty from budget session to budget session of the next year. All the years risk level is observed near one except one year i.e., 2010-11 risk of the nifty has crossed more than the base value.

5. To find the impact of physical deficit on budget and nifty.

ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	3.085E7	2	1.543E7	61.414	.000
Residual	1758344.097	7	251192.014		
Total	3.261E7	9			

Coefficients

	Unstandardized Coefficients		Standardized Coefficients			
	B	Std. Error	Beta	Std. Error	T	Sig.

(Constant)	-52.811	36.541			-1.445	.192
BUDGET	.001	.000	1.007	.091	11.079	.000
NIFTY	1.491E-5	.000	.288	.091	3.164	.016

Interpretation: The above table specifies that whether the Fiscal Deficit is impacting the Budget and Nifty. According to the above table we conclude that Fiscal Deficit is impacting the Budget and Nifty because the significant values are less than 0.5.

FINDINGS:

1. There is a relationship between budget amount allocated, Nifty, GDP, and market capital.
2. The volatility has been observed high during the budget speech time.
3. The Nifty returns have been performed better after the budget announcement month i.e., March month.
4. Investors were getting more returns if their investment holding time is after the budget announcement.
5. Budget amount and Nifty has been impacted by the fiscal deficit.

CONCLUSION: We conclude the analysis of budget impact on stock market returns. This study has focused from 2004-05 to 2013-2014. This analysis had proven that budget allocation helps the investors to take constructive decision on their investment the performance of budget is observed stronger in march month when it is compared with the before month of budget announcement date. Volatility of the stock market during the budget announcement by the finance minister has been measured. Risk of the investors is moving upside after the announcement of union budget. This emphasis the investors sentiment is influenced by the budget fiscal deficit is generally encouraged in the growing countries like Indian economy. But this analysis had proven that the gap of fiscal deficit is effecting the growth of the Indian economy which is putting the enormous pressure on planned spending of budget amount. Hence there is a further scope to do research from the investor's perspective where a better decision can be taken by analyzing budget allocation and its effect on Indian economy.

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