

A Study on Impact of Union Budget on Nifty50 and Volatility

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Abstract: The study examines the impact of Union Budget announcements on the Indian stock market, focusing on key indices such as NIFTY 50. Using a descriptive research design, the study employs historical data from NSE/BSE spanning 2020 to 2024 and applies statistical tools such as the T-test to assess market volatility and rate of return before and after budget announcements. The findings suggest that while long-term volatility increases significantly post-budget announcements, short-term and medium-term volatility remain statistically insignificant. Similarly, the analysis of NIFTY 50 returns indicates no significant impact of budget announcements across different time frames. The study concludes that although budget announcements may trigger short-term fluctuations, they do not have a sustained influence on market performance. Investors should exercise caution around budget periods due to short-term volatility, while regulators may consider real-time market monitoring. Future research could explore sector-wise impacts of budget announcements to provide more granular insights into market behavior.

Keywords: Union Budget, Stock Market, Volatility, NIFTY 50, Market Reactions, Investor Sentiment, Statistical Analysis, Event Study, Fiscal Policy.

1. INTRODUCTION

Union Budget keeps the account of the government's finances for the fiscal year that runs from 1st April to 31st March. According to Article 112 of the Indian Constitution, the Union Budget of a year, also referred to as the annual financial statement, is a statement of the estimated receipts and expenditure of the government for that particular year. Revenue budget includes the government's revenue receipts and expenditure. Capital Budget includes capital receipts and payments of the government.

An Interim Budget is not the same as a 'Vote on Account'. While a 'Vote on Account' deals only with the

expenditure side of the government's budget, an Interim Budget is a complete set of accounts, including both expenditure and receipts. An Interim Budget gives the complete financial statement, very similar to a full Budget. While the law does not debar the Union government from introducing tax changes, normally during an election year, successive Governments have avoided making any major changes in income tax laws during an Interim Budget.

OBJECTIVE OF THE STUDY

"To examine the impact of the Union Budget announcements on the Indian stock market, focusing on key indices. The study aims to analyze short-term and long-term market responses, identify patterns in investor behavior, and assess the implications of budgetary allocations and policy changes on stock market volatility and performance."

Key Components:

1. To analyze how the stock market (e.g., Nifty 50,) reacts on the day of the budget announcement and in the short term (e.g., one week after the budget).
2. To assess changes in investor sentiment and trading volumes around the budget announcement.
3. To investigate the long-term effects of the budget on stock market performance, considering factors such as economic growth, inflation, and fiscal deficit.
4. To compare the impact of the current budget with previous years' budgets to identify trends or shifts in market behavior.

HYPOTHESIS

Hypothesis Test - 1

- H₀: There is no significant impact of announcement Union Budget on Volatility in Stock Market.
- H₁: There is significant impact of announcement Union Budget on Volatility Stock Market.

Hypothesis Test - 2

- H₀: There is no significant impact of announcement Union Budget on Rate of Return in Stock Market.
- H₁: There is significant impact of announcement Union Budget on Rate of Return in Stock Market.

LITERATURE REVIEW

Various authors have studied different aspects of investor's reaction on stock market. Some researches try to establish day of the week and calendar effect on movements in stock market.

Rao (1997) studied for period from 1991 to 1995; it was found that budget contributed to the volatility in stock prices but other studied policy announcement did not.

Thomas and Shah (2002) analyzed the Indian stock market index from April 1979 to June 2001 covering 26 Budget dates in this period and finds that in some years, post-budget returns are positive; in other years post-budget returns are negative; on average, there is no clear pattern about movement in the Index after budget date. They report no evidence of over-reaction or under-reaction prior to Budget date, or immediately after it. Thus concludes that the information processing by stock market participants is rational, and that the Indian stock market is semi- strong efficient.

Mohanty, M. (2004) examined the stock price reaction to announcement of various policy issues by Government of India. The study covered the three industries, viz. The telecom sector, the banking and financing sector and the pharmaceutical sector. He used the event study methodology to assess the speed and accuracy of stock price reaction to public announcement. The results show that the stocks generally react to public news quite quickly, but the first adjustment is not always the correct one.

In another study, Sabnavis (2005) examined the effect

of various economic events, natural disasters and political disturbances on Sensex, for the period 1991 to 2005. The study also captured the turnaround time for each of the events. Economic events and natural disasters were not found to have much impact on the Sensex movements. However political events like resignation of Prime Minister or attack on parliament had more effect on Sensex. But, in all the cases, except after Babri Mosque demolition in 1992, the markets were found to recover within next few days only.

Sharma & Singh (2006) examined calendar effects during the post reform era in the Indian stock market. The study concluded that the Indian stock market exhibited some seasonality in daily returns over the period January 1, 1996 to August 10, 2002. The major findings are the Monday-Tuesday, Monday-Friday, and Wednesday-Friday sets have positive deviations for all the indices.

Gupta and Kundu (2006) analyzed the impact of Union Budget on stock market considering the returns and volatility in Sensex. They found that budget 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.

Joshi, M. (2013) has studied various factors affecting Indian stock market. He has observed and ranked various factors directly related to stock market and economy. In his study he found major five important factors affecting Indian stock market are Foreign Institutional Investors (FII) flow, Political Stability, Inflation, Govt. Policy, GDP growth rate, Performance of Companies and Global level information.

Gakhar, Kushwaha, & Ashok (2015) stated that budget did not have a significant impact on the CNX NIFTY. They found that the impact of budget on average returns is not significant whether in pre or post budget period, for short term, medium term & long term. They also found that short term and medium term period were more volatile than the long term period when compared to similar long term period before the budget, in just one case, but mainly there was no significant difference. They observed that the budget has more effect in short term, less in medium term and it diminishes in the long term.

RESEARCH DESIGN

The research design used in this study is Descriptive Research Design. Descriptive research aims to accurately and systematically describe a population, situation or phenomenon. It can answer what, where, when and how questions, but not why questions.

SOURCE OF DATA

For the study we have used secondary data because the price of the stock market are set by demand and supply basis and it's very fluctuating. All the data is managed by NSE/BSE therefore we can't do primary data collection.

DATA COLLECTION METHOD

We collect historical volatility and nifty indices data from NSE/BSE websites. Date includes price movement of short term (3 days), medium term (10 days), and long term (30 days) before and after the budget announcement.

SAMPLING METHOD

Judgmental Sampling Technique of Non-Probability Sampling Technique is used to select indices of NSE. Judgmental sampling is a non-probability sampling method where a researcher selects a sample based on their judgment and expertise.

DATA COLLECTION INSTRUMENT

We have used Nifty50 indices. The Daily Closing prices of various indices of nifty50 have been collected from the NSE Website for the period from 2020 to 2024, during which includes 5 Union Budget and 1 Interim Budget were announced. The time period of the study has been classified into Pre-Budget and Post-Budget period. Data of 30 trading days during the budget period were considered, the event window is divided into Short Term, Medium Term and Long Term before and after the declaration of the Budget. The Daily returns have been found over the Previous Day's Closing Price during the entire 5 years period. After finding the returns the Statistical tools used is T Test.

DATA ANALYSIS

RESULT AND FINDINGS

From the table 4 we can observe that only in case of long term, the volatility of stock market is greater than the critical value. Hence in this cases only we can reject the null hypothesis. Thus, this suggests that there is a significant difference in the % change before and after the Union Budget announcement in stock market volatility.

From the table 5 and 7 we can observe that in case of 10 days and 3 days stock market volatility is lesser than the critical value of 0.05. Hence in this cases we can accept our null hypothesis. Thus, The calculated t-value (-0.2812) is less than the critical t-value (2.571). This means there is no statistically significant impact of the Union Budget announcement on the Volatility of the Stock Market at a 95% confidence level.

From the table 9 we can observe that only in case of 30 days before and after of announcement Union Budget on Rate of Return in NIFTY50 is less than critical value. Hence in these cases only we can accept our null hypothesis. The calculated t-value (-1.0395) is less than the critical t-value (2.571). This means there is no statistically significant impact of the Union Budget announcement on the Rate of Return in NIFTY50 at a 95% confidence level.

From the table 11 we can observe that only in case of 10 days before and after of announcement Union Budget on Rate of Return in NIFTY50 is less than critical value. Hence in these cases only we can accept our null hypothesis. The calculated t-value (-0.6021) is less than the critical t-value (2.571). This means there is no statistically significant impact of the Union Budget announcement on the Rate of Return in NIFTY50 at a 95% confidence level.

From the table 13 we can observe that only in case of 3 days before and after of announcement Union Budget on Rate of Return in NIFTY50 is less than critical value. Hence in these cases only we can accept our null hypothesis. Since the calculated t-value (-1.4702) is less than the critical t-value (2.571), we fail to reject the null hypothesis. This means there is no significant impact of

the Union Budget announcement on the Rate of Return in NIFTY50.

From the hypothesis test 1 we find that during the announcement of union budget the stock market volatility get effected in case of 30 days before and after announcement of union budget. In all other cases the stock market volatility get not effected.

From the hypothesis test 2 we find that during the announcement of union budget the rate on investment not significant effected. The data suggests that stock price movements before and after the period are statistically similar, indicating that other factors might also be influencing the market movements.

CONCLUSION

The results show that budget does not have a significant impact on the NIFTY. After using the paired T- Test, we found that the impact of budget on average returns is not significant whether in pre or post budget period, for short term, medium term & long term.

The results of T-Test on the variances of returns reveal that short term and medium term period were more volatile than the long term period when compared to similar long term period before the budget.

It was also seen that the budget has more effect in short term, less in medium term and it diminishes in the long term after the budget announcement. So, the investors should invest more cautiously around the budget day as volatility in the market is high in short term during the budget announcement days. As a speculator by making investment strategies one can earn extra profits during this time. For the government and regulators, when markets are more volatile they should monitor the market movements on a real time basis and take corrective measures.

There is a scope to carry on further research in this area by doing sector wise impact of budget. Finally it can be concluded that in the Indian scenario in last five years budget had some impact in the short run but no impact of budget is seen in the medium term and long term.

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