

The Effect of the U.S Presidential Election Result on Stock Returns of the Indian Stock Exchange

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Abstract

Stock market fluctuation is based on news. The stock market's swings may be influenced by news about the economy, politics, weather, and international relations. The objectives of the study are to analyze the effect of the U.S Presidential election result announcement on 3 November 2020, where Joe Biden became the 46th U.S President on BSE Sensex Listed Stock returns. The study adopted event study methodology and analyzed secondary data collected from the BSE websites considering the S&P BSE 500 as a proxy market. According to the research, the announcement of the U.S Presidential election result had a significantly positive impact on the security returns of BSE Sensex stocks. Also, it suggests abnormal returns in the market before as well as after the occurrence of the event.

Keywords: Presidential Election, Event Study, Abnormal Return, Proxy Market, BSE Sensex.

1. Introduction

The stock market (financial system) has a significant function in the economy for economic progress, as history has shown. Additionally, the state of the nation is reflected in the stock market. Many elements, including politics, the environment, and other issues, now have an impact on the stock market. In today's technologically advanced society, news can spread quickly over the entire world. As a result, any news item may reach the general public and be analyzed by investors for its potential impact on the stock market. News so influences stock market fluctuations. Stock market swings may be influenced by news about the economy, politics, the environment, and international relations. Political risk and the capital market have a substantial relationship. It is important to realize that those interested in learning about the next government formation include corporate organizations, farmers, professionals, etc. In his study, Campello (2007) noted that general elections may lead to uncertainty, which might influence investors' choices and actions and lead to irregularity and market abnormalities. Political risk is an international phenomenon that has impacted several national stock markets all over the world (Ziobrowski et al., 2004). 2001's Brealey & Myers According to his analysis, "Markets display a rather good efficiency, and any accessible news is rapidly reflected in the stock price. Therefore, it is challenging to develop a strategy that aspires to continually outperform the market. However, according to

contemporary research (Shiller, 2000), investors can behave irrationally in reaction to specific information, which again contradicts the idea of an efficient market. The government's choices regarding the economy, trade regulations, taxes, and other business-related issues have an impact on the stock market. The availability of alternative investment assets, changes in the makeup of investors, and market mood are further factors that influence market performance (Mendelson, 1976). An important factor in today's investing is emotion. Based on presidential elections that take place every four years, this article investigates the existence of the presidential election cycle in the USA. One potential underlying factor is that stock values may fall after a presidential election when the newly elected leader implements unpopular economic policy changes. Stock prices may start to increase in the mid-term as investors prepare for a better economy at election time. The research will assist investors in making prudent investments and serve as advice for their choice of investments during and after the election period. Due to the announcement of elections in a certain financial year, investors might comprehend market volatility. It assists investors in reducing overall risk and maximizing investment returns at this time.

2. Review of Literature

Using the Markov Switching Process, Khalid et al. (2010) investigated how political events affected market volatility. The study examined data from Pakistan during the time frame of January 1999 to September 2006 in order to investigate political shocks, whether they were good or negative. The analysis comes to the conclusion that many political events have had negative effects and negatively affected the economy.

L., & Christopher, D. (2019), found by employing event study methodology that Donald Trump becoming the United States president had a significant negative impact on the Indonesian Stock Exchange Companies.

Kabiru et al. (2015), in their research on "The Effect of General Elections on Stock Returns at the Nairobi Securities Exchange (NSE)," . Their research sought to understand how the general election outcomes affected share performance at the NSE. Based on market volatility, it was discovered that the market's response to the election was largely favorable or negative. The author advises participants to pay attention to electioneering activities, and she also listed macroeconomic indicators such as inflation, shilling devaluation, and the global financial crisis as factors that may be impacting the stock market.

Balaji et al. (2018), in research on the effect of general elections on the Indian stock market, discovered that elections had an impact on the stock market's performance. In their study, they employed analytical techniques including t-tests and f-tests to analyze data from the BSE and NSE for a sample of thirty days from the five-year general election. The author comes to the conclusion that the Nifty Index has not been significantly impacted. The study also reveals that market volatility only exists in the short term and not over an extended period of time.

In his research, Teddy Chandra (2015) looks at how Indonesia's 2014 presidential election affected the country's stock exchange. The research looks at 45 firms that were listed on LQ-45 between February and July 2014. The author was able to determine that there is an anomalous return for each event during a presidential election using the implications of the event study research model.

Ali, N. P., & Saha, A. (2020), in their study, using event study methodology Announcement of Results of Lok Sabha Election 2019 found that there is a significant negative impact of the announcement on the BSE Sensex companies.

3. The objective of the Study

The goal of the research is to examine the impact of the announcement of the U.S Presidential election result on November 3, 2020, on the S&P BSE Sensex Stocks. The research will aid in determining whether or not there were any unusual returns in the days leading up to the announcement date.

4. The hypothesis of the Study

H_0 = Average Abnormal Return tends to be insignificant around the announcement of the U.S Presidential election 2020 in S&P BSE Sensex.

H_0 = Cumulative Average Abnormal Return tends to be insignificant around the announcement of the U.S Presidential election 2020 in S&P BSE Sensex.

5. Data and Methodology

The present study has taken the thirty (30) largest and actively traded stocks of various sectors forming Sensex.

Table -1 Samples under study

Asian Paints	Larsen & Toubro
Axis Bank	Mahindra & Mahindra
Bajaj Finance	Maruti Suzuki India
Bajaj FinServ	Nestle India
Bharti Airtel	NTPC
Dr Reddy's Laboratories	Power Grid Corp of India
HCL Technologies	Reliance Industries
HDFC Bank	State Bank of India
Hindustan Unilever	Sun Pharmaceutical Industries
Housing Development Finance Corp	Tata Consultancy Services
ICICI Bank	Tata Steel
IndusInd Bank	Tech Mahindra
Infosys	Titan Co
ITC	UltraTech Cement
Kotak Mahindra Bank	Wipro

Source: Compiled by Author (bseindia.com)

The U.S Presidential election result announcement date i.e., event day is 3 November 2020. The analysis relied on these companies' daily closing prices, which were obtained from the BSE India official site. For the analysis, the S&P BSE 500 is used as a representative of the Indian stock market. To examine the influence of the various events, the data is divided into two portions for the study: pre- and post-announcement periods.

Event Study Methodology.

It is employed to detect stock price patterns in response to a variety of occurrences (Fama, 1969), (Brown, 1980). The event research identifies and analyzes the importance of the gap between expected and actual

security prices. Based on (Peterson, 1989), (MacKinlay, 1997), (Anwar et al., 2017), and (Dahal & Das, 2021), event research involves the following steps.

Event window:

An Event window is a time frame for analyzing the effect of an event. The current analysis takes into account a 21-day timeframe (-10....0...+10).

Here,

“-10 day to -1 day” are the days before the declaration of the event.

“0 day” is the day on which the declaration was done.

“+1 day to +10 days” is the days after the declaration of the event.

Estimation period:

During this period, the parameters alpha (α) and beta (β) are estimated. The study takes into account an estimation period of 120 days prior to the event window.

Here, “-130 day to -11 day” is the estimation period in the current study.

Actual Return calculation:

A log return of stock ‘s’ on time ‘t’ is calculated.

$$R_{st} = \ln (P_{st}/P_{st-1})$$

Here, R_{st} = Return of stock ‘s’ at time ‘t’.

P_{st} = Price of stock ‘s’ at time ‘t’.

P_{st-1} = Price of stock ‘s’ at time ‘t-1’.

Model Estimation:

The OLS Market Model, also known as the Risk-Adjusted Model of Sharpe (1964), is used to calculate the Expected Return E (R) of the securities.

Expected Return Calculation

$$E(R) = \alpha + \beta * R_{mt}$$

So, E(R) is the expected return, and are parameters estimated from the estimation period, and R_{mt} is the return of S&P BSE Sensex 500.

Calculation of Abnormal Return:

It is the difference between the actual return and expected return.

$$Abnormal\ Return = R_{st} - E(R)$$

Calculation of Average Abnormal Return (AAR) and Cumulative AAR (CAAR):

$$AARs = \sum_{t=1}^N AR_{st}/N$$

Here,

AR_{st} is the abnormal return of security 's' on time 't'.

N is the number of firms under study.

$$CAARs(t, t + 1) = \sum_{t=1}^{t+1} AARs$$

As, to quantify the cumulative effect on the sample stocks under research, the average abnormal returns are averaged across all days (from -10 to +10 in this study).

The t-Test Statistics for AARs

$$t = \frac{AAR}{\sigma(AAR)}$$

Where AAR = Average Abnormal Return.

$\sigma(AAR)$ = Standard Error of Average Abnormal Return.

The Standard Error is calculated using this formula.

$$S.E = \frac{\sigma}{\sqrt{n}}$$

Where, S.E = Standard Error, σ = Standard Deviation, n = Number of Observation

The t-Test Statistics for CAARs

$$t = \frac{CAAR}{\sigma(CAAR)}$$

Where CAAR = Cumulative Average Abnormal Return.

$\sigma(CAAR)$ = Standard Error of Cumulative Average Abnormal Return.

The Standard Error is calculated using this formula.

$$S.E = \frac{\sigma}{\sqrt{n}}$$

Where, S.E = Standard Error, σ = Standard Deviation, n = Number of Observation

6. Data Analysis and Interpretation

Table 2. Critical t-value 5% significance level

SECTOR	N	D.O. F	5% SIGNIFICANCE LEVEL
TOTAL COMPANIES	30	29	-2.045 TO +2.045

Table 2 displays the critical (tabulated) t-values. We examine the estimated t-values to the tabulated t-values at 5% significance levels to determine whether the hypotheses should be accepted or rejected.

Table 3: Impact of U.S Presidential election 2020 on Sensex					
DAY	DATE	AAR	T STATISTICS	CAAR	T STATISTICS
t-10	20-Oct-20	0.00180	2.6877*	0.00180	1.7583
t-9	21-Oct-20	0.00320	4.7892*	0.00499	4.8914*
t-8	22-Oct-20	0.00095	1.4152	0.00594	5.8172*
t-7	23-Oct-20	0.00140	2.0984*	0.00734	7.1900*
t-6	26-Oct-20	0.00413	6.1851*	0.01147	11.2363*
t-5	27-Oct-20	0.00305	4.5611*	0.01452	14.2202*
t-4	28-Oct-20	0.00051	0.7607	0.01503	14.7179*
t-3	29-Oct-20	-0.00170	-2.5518*	0.01332	13.0485*
t-2	30-Oct-20	-0.00099	-1.4845	0.01233	12.0773*
t-1	2-Nov-20	0.00824	12.3304*	0.02057	20.1439*
t	3-Nov-20	0.00007	0.1057	0.02064	20.2130*
t+1	4-Nov-20	-0.00004	-0.0672	0.02059	20.1691*
t+2	5-Nov-20	0.00442	6.6235*	0.02502	24.5022*
t+3	6-Nov-20	-0.00409	-6.1256*	0.02093	20.4948*
t+4	9-Nov-20	0.00171	2.5572*	0.02263	22.1678*
t+5	10-Nov-20	0.00068	1.0185	0.02332	22.8341*
t+6	11-Nov-20	0.00620	9.2847*	0.02952	28.9082*
t+7	12-Nov-20	-0.00203	-3.0366*	0.02749	26.9217*
t+8	13-Nov-20	-0.00072	-1.0835	0.02677	26.2128*
t+9	14-Nov-20	-0.00119	-1.7799	0.02558	25.0484*
t+10	17-Nov-20	0.00007	0.1005	0.02564	25.1142*
Source: Author's Calculation					
Significant at 5% level (± 2.045)					

The data in Table 3, suggest that the announcement of the U.S Presidential election 2020 was favorable to investors, as evidenced by the considerable positive CAAR persists even before the announcement date i.e., on t-9 day to t+10 day which suggests investors are positive about the economy. However, the event's cumulative effect has been consistently positive before the event which suggests that there is an information leakage and also people predicted the result of the election and positive CAAR continues even after the event which tells people are positive on the current U. S government.

On days t-10, t-9, t-7, t-6, t-5, t-3, t-1, t+2, t+3, t+4, t+6, t+7 day, the average abnormal returns are significant. While the significant AARs for days t-10, t-9, t-7, t-6, t-5, t-1, t+2, t+4, t+6 is positive, also t-1 i.e., day before the event the AAR being the maximum and significant. they are negative on days t-3, t+3, t+7 which are quite negligible besides on day 3. The findings show that the event has had a significant and positive impact on the abnormal returns of S&P BSE Sensex.

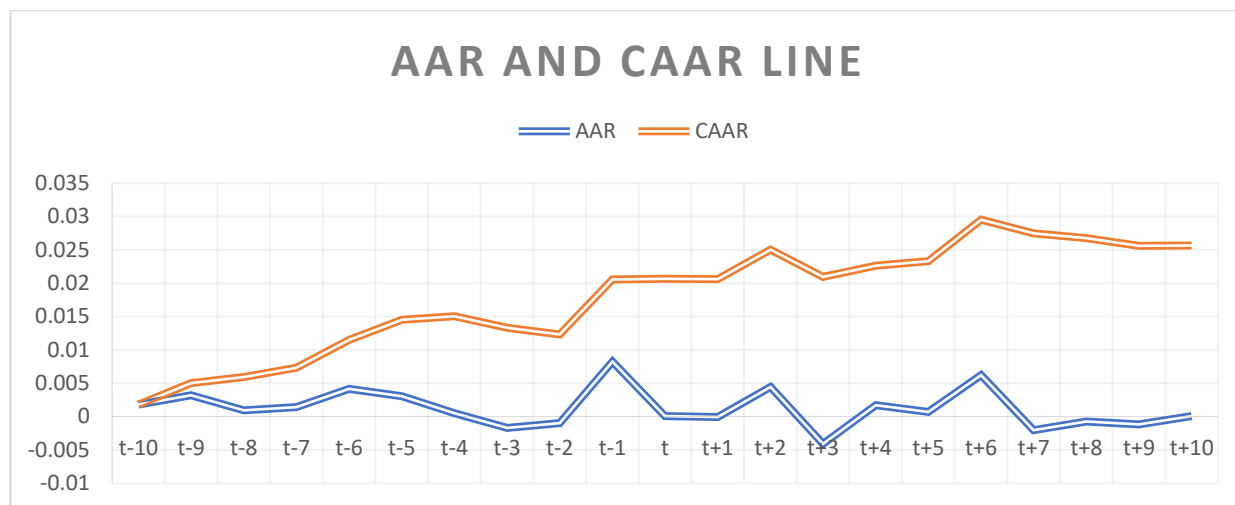


Figure 1. AAR and CAAR-line during the event window

The AARs and CAARs of the event are represented graphically in Figure 1. The distance between the AAR-line and the CAAR-line has been increasing from day t-10 and continue to broaden upward. The large difference between the AAR and CAAR line reflects the impact of the announcement which looks to be quite significant and the existence of abnormalities in the market.

Table 4: Small Window For CAAR		
Window	CAAR	T STATS
-7, +7	0.022	21.104*
-5, +5	0.012	11.598*
-2, +2	0.012	11.454*
Source: Author's Calculation		
Significant at 5% level (± 2.045)		

Small windows of (-7, +7), (-5, +5), and (-2, +2) are used to examine the effect of announcements. Such tiny windows offer a gauge for precisely assessing the effect of the event disclosed as well as any information leakage that may have occurred. The windows of (-7, +7), (-5, +5), and (-2, +2) demonstrate that purchasing securities on days 7, 5, and 2 prior to the announcement and selling them after the announcement on days 7, 5, and 2 would have resulted in Significant positive returns. From the perspective of investors, this window appears to be the best one.

7. Conclusion

The study looked at how the U.S Presidential election 2020 result announcement affected the stock market, specifically the reaction of the S&P BSE Sensex listed companies. A closer examination of the data reveals that the stock market prices had a major impact during the study period. With the sample of 30 stocks of the S&P BSE Sensex, we employed the event study method with the widely used market model to examine the stock price reaction to the U.S Presidential election 2020 result announcement on thirty (30) largest and actively traded stocks of various sectors forming Sensex. The statistical results indicate significant average abnormal returns on the event day before as well as later. As a reason, investors should be more careful around the time of the election results announcement, as short-term market volatility is high. As a speculator, you may be able to profit during this time by devising investing methods.

The present study is limited to S&P BSE Sensex. Various other sectoral indices of NSE and broad market indexes like Nifty 50 can be taken for further study. Also, the individualized return of various companies of different sectors can be taken as an area of future research.

References

- Ali, N. P., & Saha, A. (2020). Market Efficiency of Indian Capital Market: An Event Study Around the Announcement of Results of Lok Sabha Election 2019. *International Journal of Financial Research*, 12(1), 60. <https://doi.org/10.5430/ijfr.v12n1p60>
- Balaji, C. H., Kusuma, G. D. V., & Kumar, B. R. (2018). Impact of General Elections on Stock Markets in India. *Open Journal of Economics and Commerce*, 1(2), 1–7. <https://www.sryahwapublications.com/open-journal-of-economics-and-commerce/pdf/v1-i2/1.pdf>
- Brooks, L. L. Z., & Johnston, J. (2012). Electronic copy available at : <https://ssrn.com/abstract=3182015> Electronic copy available. *Jm*, 4(April), 1–55.
- Chandra, T. (2015). Impacts of Indonesia's 2014 Presidential Election towards Stock Priceso Indonesia Stock Exchange. *International Journal of Business and Management*, 10(7). <https://doi.org/10.5539/ijbm.v10n7p172>
- Fama, E. F. (1991). Efficient Capital Markets: II. *The Journal of Finance*, 46(5), 1575. <https://doi.org/10.2307/2328565>
- Huang, R. D. (1985). *Stock Returns and Presidential Elections Cycle-Based Strategies*. April, 58–61. www.jstor.org
- Iyengar, M., Iyengar, N., & Sampat, H. (2017). Impact of US election results on Indian stock market. *International Jornal of Applied Research*, 3(2), 9–13.
- Kabiru, J. N., Elly, D., Hellen, O., & Kinyua, W. (2015). the Effect of General Elections on Stock Returns At the Nairobi Securities Exchange. *European Scientific Journal*, 11(28), 1857–7881.
- Kumar, D. B., Sharon, S., & Maria, J. E. (2015). Empirical Study on Effects of the Lok Sabha Election on Stock Market Performance (BSE SENSEX). *Research Journal of Management Sciences Res. J. Management Sci*, 4(2), 2319–1171.
- L., & Christopher, D. (2019). Indonesian Capital Market Reactions for the Election of Donald Trump As United

- States President (Empirical Study on Multinational Companies Listed on the Indonesia Stock Exchange). *Journal of Management and Business*, 18(1), 32–41. <https://doi.org/10.24123/jmb.v18i1.365>
- MacKinlay, A. C. (1997). 0 MacKinlay-1996-Event-Studies-in-Economics-and-Finance.pdf. In *Journal of Economic Literature*, (Vol. 35, Issue 1, pp. 13–39).
- Maros, H., & Juniar, S. (2016). *No Title No Title No Title*. 1–23.
- Nurlita, V., & Naomi, P. (2019). Do Political Events Affect Stock Return Volatility On Indonesian Stock Exchange. *Journal of Economics, Business & Accountancy Ventura*, 22(1), 29–38. <https://doi.org/10.14414/jebav.v22i1.1215>
- Peterson, P. P. (2014). *A Review of Issues and Methodology Event Studies : A Review of Issues and Methodology*. 28(3), 36–66.
- Prakash, V., & Padmasree, D. K. (2020). Impact of Election Result on the Stock Market, an Analysis of BSE (SENSEX) and NSE (NIFTY) Indexes. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3520090>
- Prechter, R. R., Goel, D., Parker, W. D., & Lampert, M. (2012). Social mood, stock market performance, and U.S. presidential elections: A socioeconomic perspective on voting results. *SAGE Open*, 2(4), 1–13. <https://doi.org/10.1177/2158244012459194>
- Sharpe, W. F. (1963). A Simplified Model for Portfolio Analysis. *Management Science*, 9(2), 277–293. <https://doi.org/10.1287/mnsc.9.2.277>
- Sharpe, W. F. (1964). 1964 Sharpe - Capital Asset Prices. *The Journal of Finance*, 19(3), 425–442.
- Stone, B. K. (1974). Systematic Interest-Rate Risk in a Two-Index Model of Returns. *The Journal of Financial and Quantitative Analysis*, 9(5), 709. <https://doi.org/10.2307/2329656>
- Ugwu, G. E. (2021). *The U . S . Presidential Election Cycle and Stock Market Returns*.
- Wong, W. K., & McAleer, M. (2009). Mapping the Presidential Election Cycle in US stock markets. *Mathematics and Computers in Simulation*, 79(11), 3267–3277. <https://doi.org/10.1016/j.matcom.2009.05.007>