

IMPACT OF GENERAL ELECTION ON INDIAN STOCK MARKET An Event Study on 2019 Lok Sabha Election

Rinki Gour

Assistant Professor, Shaheed Bhagat Singh (Evg) College, University of Delhi, Delhi, India

ABSTRACT: Political condition of the country greatly influences sentiments of investors across the world which in turn affects economy of the country. Thus, elections results are also important factor behind movements of index. Investors' sentiments can be analyzed on the basis of the same. The purpose of the present study is to show the impact of the results of Lok Sabha Election 2019 on Indian Stock Market. Although various studies have examined this association on SENSEX and NIFTY but little attention has been given on the impact of General election on various sectors. Thus, the emphasis of this study is on S&P BSE SENSEX, NSE NIFTY and four Sectoral indices (Bank, FMCG, IT, Pharma). To identify the immediate impact of such an event, an Event study methodology is adopted by taking a period of 40 days prior and 40 days after the result got announced. This empirical study shows that collapsing stock returns around the election result is reversed by positive return on the next day, except some cases where negative responses are observed following the vote count. As per this study, the winners are SENSEX, NIFTY and Banking sector and the loser is FMCG sector whereas the IT and Pharma sectors are not affected by the result of Lok Sabha election 2019.

KEYWORDS: *General election, Sectoral indices, Event study methodology, Empirical study*

I. INTRODUCTION

Indian stock market is an emerging market. The stock market plays an important role in economy for economic growth. It also reflects the country's status. Diverse financial literature has established that stock market return can mainly be explained by economic events. But economic news is not the only news that influences stock market movements. Political, environmental and other events are repeatedly considered responsible for such movements. Political uncertainty in the environment of emerging markets can influence the stock markets heavily. Especially General Elections are events which are of high informational value for investors in that context.

Evidence is provided by Nofsinger (2004), who contends that the stock market is a barometer of public sentiment. Investors may be over-optimistic about the implications of the impending elections, but their optimism wears off quickly once the new administration fails to keep its election campaign promises. The investigation into return volatility is warranted on at least three grounds. First, the uncertainty about the election outcome has important implications for risk-averse investors. Since they hold predominantly domestic assets, the country specific political risk will not diffuse in their portfolios. Consequently, the sole event of elections in their home country could have serious implications for the risk level of their portfolios. Second, any market-wide fluctuations in response to election shocks will augment the systematic volatility of all stocks listed. Finally, the results reported here can be of interest to pollsters as they provide indirect evidence on whether the accuracy of pre-election forecasts suffices for practical applications.

There is bountiful evidence that political uncertainty stemming from General elections or doubt about the direction of future policy make financial markets significantly volatile, especially in proximity to close elections or elections that may prompt radical policy changes. Although several studies have examined the association between National elections and stock returns, very little attention has been given to the impacts of elections and election induced uncertainty on different sectors of Indian stock market. This research will explore, at sectoral level, the

reaction of markets to the arrival of unanticipated information. For this we will adopt an event study methodology that examines return behavior around the election result date. The concept of event study methodology was first pioneered by James Dolley (1933), who used this method to investigate the returns patterns on stock split announcement. Today, the event study methodology is one of the most applied analytical tool in financial literature and has emerged as a very important statistical technique for analyzing the impact of events and announcements on the security prices.

The efficient market hypothesis known as EMH claims that in informationally efficient markets, stock prices fully reflect all the relevant information that is available in the market about a stock. The EMH concept has been studied since its inception. It assumes that market absorb news and political trends into asset prices in anticipation of election results. Much of the uncertainty surrounding the outcome may be resolved prior to the election date. Such policy changes are typically associated to a decrease of stock prices, particularly if the uncertainty is greater. Once the political uncertainty is mitigated, stock prices would rise again. On the contrary, if the election outcome does not permit market participants to immediately and effectively evaluate the effect on the nation's future, then the election result constitutes an uncertainty inducing surprise.

Elections in India

Elections in the Republic of India include elections for the Parliament, Rajya Sabha, Lok Sabha, the Legislative Assemblies and numerous other Councils and local bodies. Elections for the Parliament and State Legislative Assemblies should take place every five years, unless a state of emergency has been declared. The elections to the lower houses (in Parliament and in the states) use the first-past-the-post electoral system (i.e., the candidate with the majority of the votes wins the election) Elections to one-third of the seats of the upper house of the Parliament, the Rajya Sabha, are conducted every two years. The members of the upper house are elected indirectly by the state legislative assemblies based on proportional representation. Members of the state legislative councils (in states having an upper house) are elected indirectly through local bodies.

The Indian general election of 2014 was held to constitute the 16th Lok Sabha Election by an electorate of 863,500,000 people. It was conducted in nine stages. In the 2014 election, the National Democratic Alliance led by the Bhartiya Janata Party (BJP) came to power and the UPA era came to an end after a decade. The BJP secured a majority of 282 seats. Narendra Modi of the BJP became Prime Minister of India. It was the first time since the 1984 Indian general elections that a party has won enough seats to govern without the support of other parties.

Prime Minister Narendra Modi remains highly popular after four years in office, and the BJP has managed to methodically expand its footprint in the numerous state elections since 2014. The 2019 General Election was held in seven phases from 11 April to 19 May 2019 to constitute the 17th Lok Sabha Election. The votes were counted and the result was declared on 23 May 2019. The BJP won 303 seats and again Mr. Narendra Modi become the Prime Minister of India. He became the third prime minister of India who retained power for a second term with full majority in Lok Sabha.

II. LITERATURE REVIEW

The event study methodology is one of the most used tools in economics, accounting and financial research. The first event study documented in the financial literature was by James Dolley (1933)^[1], he tried to explore how share prices react to stock splits announcement and found that there was an impact to the extent of 60 percent. In simple words, event study methodology examines the behavior of corporates' stock and bond prices (returns) around specific events.

Stock market attitude during general elections was examined by various researchers. However, Nordhaus (1975)^[2] created the first political business cycle. In this pioneering study he deliberated the various issues like the political decisions pertaining to the current or future welfare. In a study by Sathyanarayana and Garagesha (2016)^[3] with an objective of impact of Brexit referendum on the Indian stock markets found a significant impact of Brexit referendum on NIFTY fifty and SENSEX indices on the event day. Sathyanarayana and Pushpa B. V. (2016)^[4] tried

to investigate the impact of Brexit referendum on global stock markets found a significant impact only on European stock markets and not on Asian and American stock markets.

Since Efficient Market Hypothesis (EMH) has arisen in the 1960s (Fama, 1965 1970) ^{[5][6]}, it has been subject to a huge number of researches. Under the assumption of rational investor, this hypothesis postulates that share prices completely reflect information and expectation, and that any new information is incorporated into equity prices very quickly. In contrast, empirical studies showed that stock prices do not often fully reflect all information. The notion of Efficient Market Hypothesis has been explored on numerous occasions over the years for various economic and dramatic events like general elections. Cutler, Poterba and Summers (1989) ^[7] in their study argued that returns on the special event days are more volatile than returns on the non-event days. Some empirical studies tried to investigate the unfavorable political news and its impact on stock markets for example, Schwert (1989) ^[8] concluded that the favorable political news have a positive impact on stock market. However, unfavorable political news has a negative impact on stock returns and creates turmoil in stock market. Majority of these studies documented that most of the political events such as general elections, policy announcements, favorable political news, terror attacks, re-elections, political instability have a greater influence on stock movements. Moreover, the stock markets are highly sensitive to both national and international events and react spontaneously after their occurrence. Volatility in security prices during such political events is an opportunity for testing the validity of the efficient market hypothesis.

III. SIGNIFICANCE OF THE STUDY

India is being in race to become super power of the world. As Economy of the country is considered blood of the country, stock indices are considered barometer which reflects actual position of the economy of the country. Stock market also shows belief of other country in Indian economy through FII. Political condition of the country also greatly influences sentiments of investors across the world which in turn affects economy of the country. Thus, elections results are also important factor behind movements of index. Investors' sentiments can be analyzed on the basis of the same. So, influence of election results on Indian stock market indices, at sectoral level, are needed to be studied as this additional information would be interesting for investors who wish to distribute money to-or are already holding a portfolio of assets in the country that is subject to the election shock.

IV. RESEARCH OBJECTIVES

[1] To Study the effect of General Election on Indian Stock market performance through an event study of the impact of General Election 2019 on NSE NIFTY, S&P BSE SENSEX and on other Sector-wise Indices namely, Bank, FMCG, IT and Pharma.

[2] To investigate the Indian stock market reaction reflects the market efficiency in semi-strong form or not.

V. RESEARCH METHODOLOGY

An event study methodology, which tries to measure the effect of an event and how quickly these events get reflected in stock prices, is used to analyze the effect of the event that is General election 2019. The data from NSE Index (NIFTY), BSE Index (SENSEX) and 4 Sectoral Indices (Bank, FMCG, IT, Pharma) are used to study the impact of 17th Lok Sabha Election result on Indian Stock Market. Data are collected from NSE and BSE website. Stock market absorbs new news and events quickly, so closing prices of indices 40 days before and 40 days after the declaration of election result are used to analyze the impact. The event date is 23 May 2019, when the election result was announced.

VI. DATA ANALYSIS

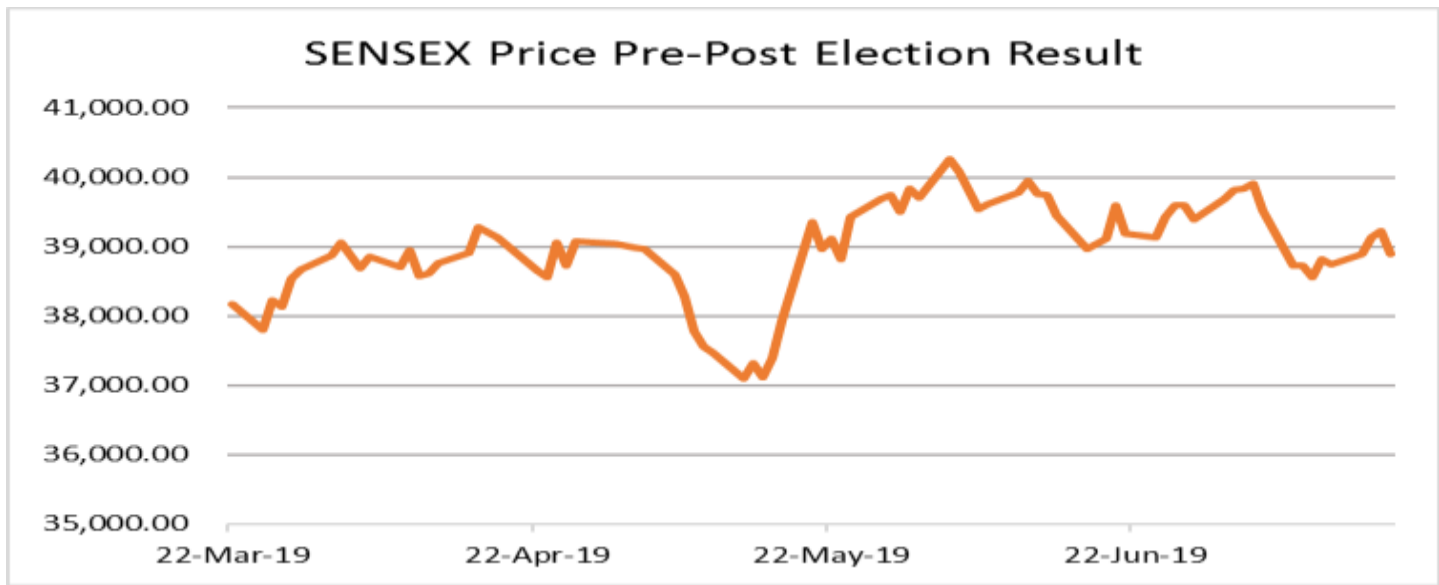
Table 1: NIFTY, SENSEX and 4 Sectoral Index (Bank, FMCG, IT & Pharma)
Closing Prices Pre-Election Result date

DATE	SENSEX	NIFTY	BANK	FMCG	IT	PHARMA
22-Mar-19	38,164.61	11,456.90	29,582.50	30,198.85	15,551.10	9,199.35
25-Mar-19	37,808.91	11,354.25	29,281.20	29,921.45	15,416.85	9,170.15
26-Mar-19	38,233.41	11,483.25	29,882.15	29,957.80	15,356.60	9,245.00
27-Mar-19	38,132.88	11,445.05	30,019.80	29,891.35	15,339.40	9,148.80
28-Mar-19	38,545.72	11,570.00	30,420.55	30,243.25	15,566.75	9,199.40
29-Mar-19	38,672.91	11,623.90	30,426.80	30,321.40	15,628.20	9,346.55
01-Apr-19	38,871.91	11,669.15	30,326.50	30,193.15	15,840.65	9,375.40
02-Apr-19	39,056.65	11,713.20	30,354.25	30,073.15	15,988.40	9,296.95
03-Apr-19	38,877.12	11,643.95	30,093.30	29,969.00	15,962.95	9,180.30
04-Apr-19	38,684.72	11,598.00	29,904.90	29,998.70	15,744.80	9,263.40
05-Apr-19	38,862.23	11,665.95	30,084.65	29,869.15	15,923.05	9,271.55
08-Apr-19	38,700.53	11,604.50	29,845.30	29,804.45	16,028.25	9,243.90
09-Apr-19	38,939.22	11,671.95	30,113.85	30,019.25	16,121.60	9,333.30
10-Apr-19	38,585.35	11,584.30	29,803.50	29,994.95	15,999.15	9,407.90
11-Apr-19	38,607.01	11,596.70	29,786.10	30,151.15	15,874.75	9,391.15
12-Apr-19	38,767.11	11,643.45	29,938.55	30,533.70	15,911.10	9,426.45
15-Apr-19	38,905.84	11,690.35	30,104.25	30,547.40	16,113.70	9,417.75
16-Apr-19	39,275.64	11,787.15	30,531.35	30,742.60	16,084.90	9,417.80
18-Apr-19	39,140.28	11,752.80	30,223.40	30,558.95	16,079.30	9,409.90
22-Apr-19	38,645.18	11,594.45	29,687.95	30,418.10	16,150.60	9,285.45
23-Apr-19	38,564.88	11,575.95	29,479.70	30,495.05	16,166.30	9,388.80
24-Apr-19	39,054.68	11,726.15	29,860.80	30,631.25	16,370.35	9,459.00
26-Apr-19	39,067.33	11,754.65	30,013.50	30,440.75	16,504.45	9,461.70
30-Apr-19	39,031.55	11,748.15	29,764.80	30,336.90	16,705.40	9,402.50
02-May-19	38,981.43	11,724.75	29,708.60	30,091.25	16,403.70	9,291.30
03-May-19	38,963.26	11,712.25	29,954.15	29,750.55	16,092.90	9,220.45
06-May-19	38,600.34	11,598.25	29,618.45	29,575.85	16,111.35	9,189.75
07-May-19	38,276.63	11,497.90	29,288.20	29,557.05	16,135.75	9,148.20
08-May-19	37,789.13	11,359.45	28,994.40	29,395.70	16,061.60	9,003.35
09-May-19	37,558.91	11,301.80	28,884.60	29,474.80	16,132.85	8,976.90
10-May-19	37,462.99	11,278.90	29,040.50	29,359.05	15,949.60	8,944.60
13-May-19	37,090.82	11,148.20	28,659.95	29,061.00	15,955.30	8,553.50
14-May-19	37,318.53	11,222.05	28,829.20	29,235.10	15,762.75	8,683.90
15-May-19	37,114.88	11,157.00	28,616.45	29,185.10	15,776.80	8,595.75
16-May-19	37,393.48	11,257.10	28,855.30	29,228.70	15,933.95	8,577.35
17-May-19	37,930.77	11,407.15	29,450.15	29,962.15	15,843.35	8,448.95
20-May-19	39,352.67	11,828.25	30,759.70	30,547.65	15,968.20	8,505.95
21-May-19	38,969.80	11,709.10	30,308.40	30,537.90	15,766.95	8,488.25
22-May-19	39,110.21	11,737.90	30,526.80	30,247.65	15,666.15	8,510.85

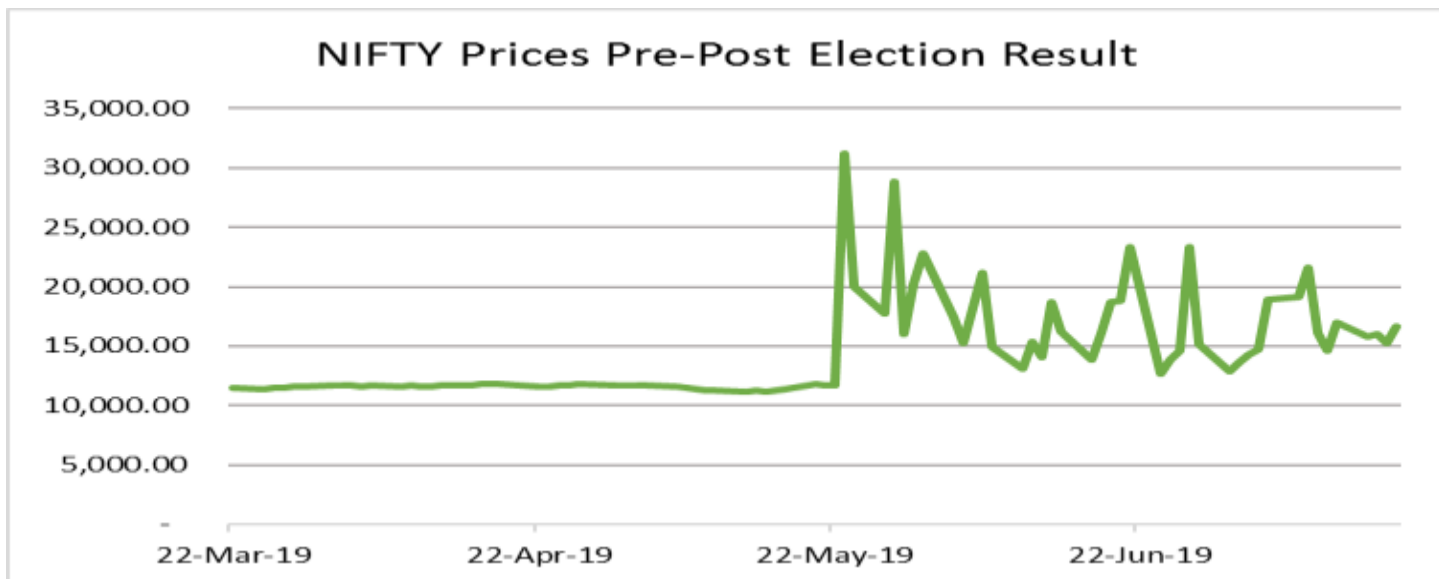
Table 2: NIFTY, SENSEX and 4 Sectoral Index (Bank, FMCG, IT & Pharma)
Closing Prices Post-Election Result Date

DATE	SENSEX	NIFTY	BANK	FMCG	IT	PHARMA
23-May-19	38,811.39	31,180.08	30,409.10	29,723.80	15,538.85	8,497.60
24-May-19	39,434.72	20,028.49	31,212.55	29,965.40	15,569.85	8,608.45
27-May-19	39,683.29	17,735.36	31,647.65	30,105.40	15,556.65	8,525.00
28-May-19	39,749.73	28,833.54	31,597.90	30,068.95	15,762.05	8,513.85
29-May-19	39,502.05	15,985.92	31,295.55	30,014.20	15,865.60	8,484.65
30-May-19	39,831.97	20,261.85	31,537.10	30,002.40	15,997.35	8,474.70
31-May-19	39,714.20	22,789.00	31,375.40	29,850.40	16,160.65	8,455.10
03-Jun-19	40,267.62	17,451.36	31,653.65	30,278.75	16,360.55	8,536.60
04-Jun-19	40,083.54	15,308.28	31,589.05	30,197.95	16,105.20	8,432.95
06-Jun-19	39,529.72	21,144.77	30,857.40	30,057.40	16,012.10	8,279.10
07-Jun-19	39,615.90	14,939.40	31,066.55	29,971.45	16,109.85	8,179.60
10-Jun-19	39,784.52	13,125.41	31,034.00	30,360.90	16,362.40	8,246.70
11-Jun-19	39,950.46	15,392.28	31,265.45	30,311.30	16,448.10	8,243.50
12-Jun-19	39,756.81	14,120.17	30,965.70	30,379.25	16,425.95	8,179.15
13-Jun-19	39,741.36	18,680.91	30,976.10	30,354.55	16,316.60	8,148.55
14-Jun-19	39,452.07	16,226.57	30,614.35	29,966.10	16,268.20	8,083.55
17-Jun-19	38,960.79	13,851.67	30,273.25	29,703.90	16,228.20	7,975.25
18-Jun-19	39,046.34	16,120.69	30,351.00	29,580.75	16,322.50	7,916.95
19-Jun-19	39,112.74	18,722.71	30,362.10	29,585.40	16,282.70	7,790.50
20-Jun-19	39,601.63	18,839.11	30,781.10	29,651.45	16,316.90	8,029.00
21-Jun-19	39,194.49	23,346.13	30,628.35	29,423.85	16,189.40	7,911.55
24-Jun-19	39,122.96	12,631.38	30,602.05	29,464.20	16,187.40	7,902.00
25-Jun-19	39,434.94	13,822.83	30,847.05	29,552.60	16,214.45	7,947.20
26-Jun-19	39,592.08	14,650.89	31,162.35	29,524.10	16,101.70	8,086.30
27-Jun-19	39,586.41	23,300.30	31,269.50	29,486.80	15,991.80	8,088.00
28-Jun-19	39,394.64	15,191.90	31,105.20	29,546.05	15,936.45	8,065.15
01-Jul-19	39,686.50	12,874.96	31,372.20	29,600.40	15,916.70	8,178.80
02-Jul-19	39,816.48	13,615.94	31,283.30	29,710.95	16,074.10	8,101.65
03-Jul-19	39,839.25	14,290.33	31,382.30	29,812.65	15,927.65	8,092.20
04-Jul-19	39,908.06	14,758.87	31,471.85	29,889.45	15,942.40	8,046.80
05-Jul-19	39,513.39	18,871.99	31,475.80	29,973.25	15,550.05	7,926.50
08-Jul-19	38,720.57	19,146.25	30,603.85	29,594.65	15,376.00	7,801.75
09-Jul-19	38,730.82	21,577.95	30,569.15	29,321.30	15,254.50	8,012.05
10-Jul-19	38,557.04	16,098.53	30,522.10	29,154.05	15,168.60	8,009.50
11-Jul-19	38,823.11	14,586.20	30,716.55	29,293.65	15,214.25	8,110.05
12-Jul-19	38,736.23	16,947.57	30,601.45	29,252.00	15,227.40	8,144.30
15-Jul-19	38,896.71	15,835.99	30,445.95	29,079.90	15,662.05	8,231.85
16-Jul-19	39,131.04	15,967.91	30,570.80	29,366.60	15,580.45	8,347.95
17-Jul-19	39,215.64	15,250.50	30,735.50	29,614.25	15,675.95	8,330.75
18-Jul-19	38,897.46	16,684.03	30,430.60	29,553.90	15,498.45	8,223.15

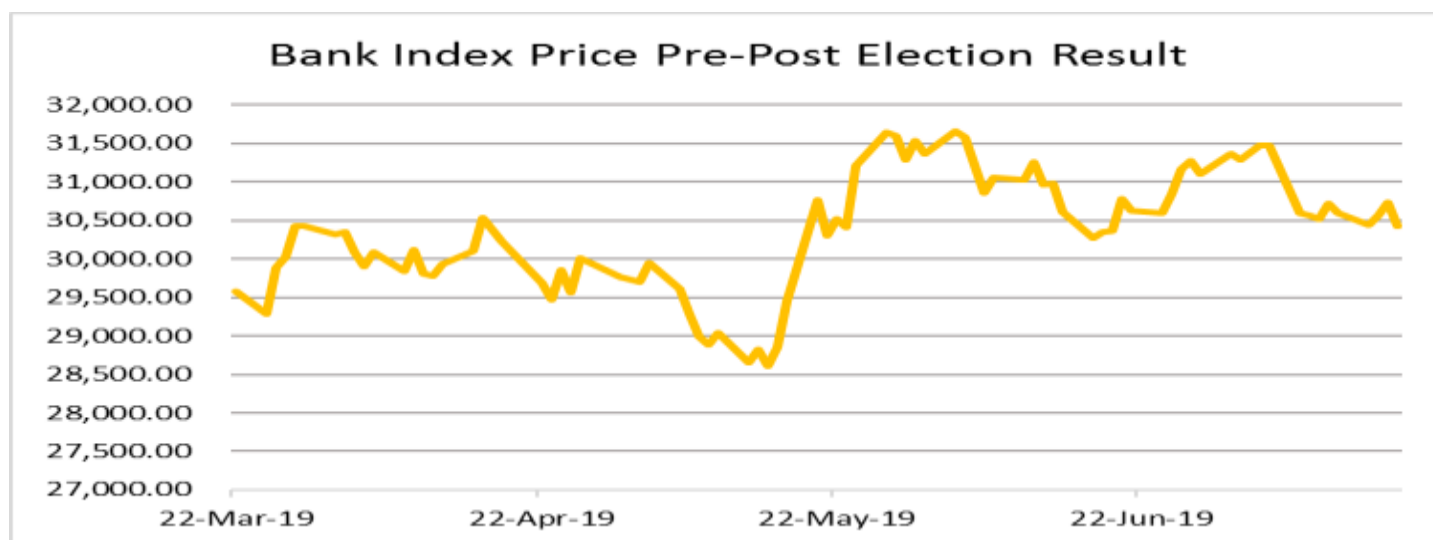
Source: NSE and BSE

Graphical presentation of Prices Pre-Post Election Result

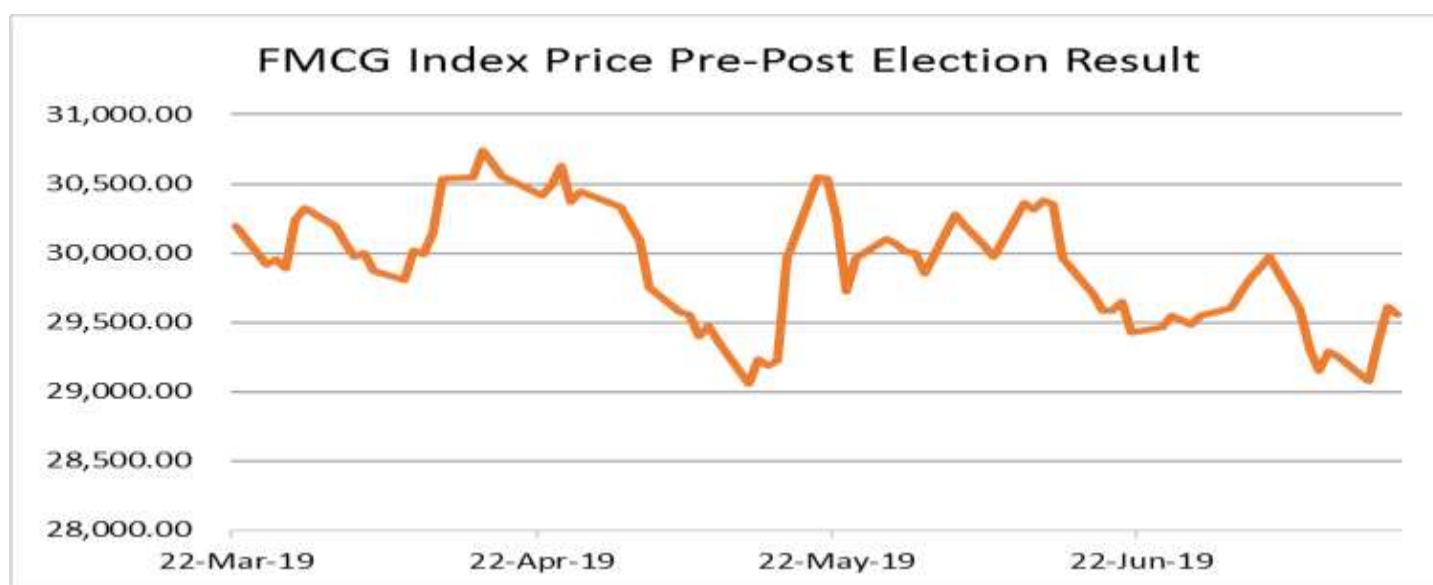
From the above chart, it can be seen that S&P BSE SENSEX pulled up after the election result was declared. There was a decline in prices before election result date but after the announcement of result there was a sharp rise in prices. This shows that the election result has an impact on the stock prices.



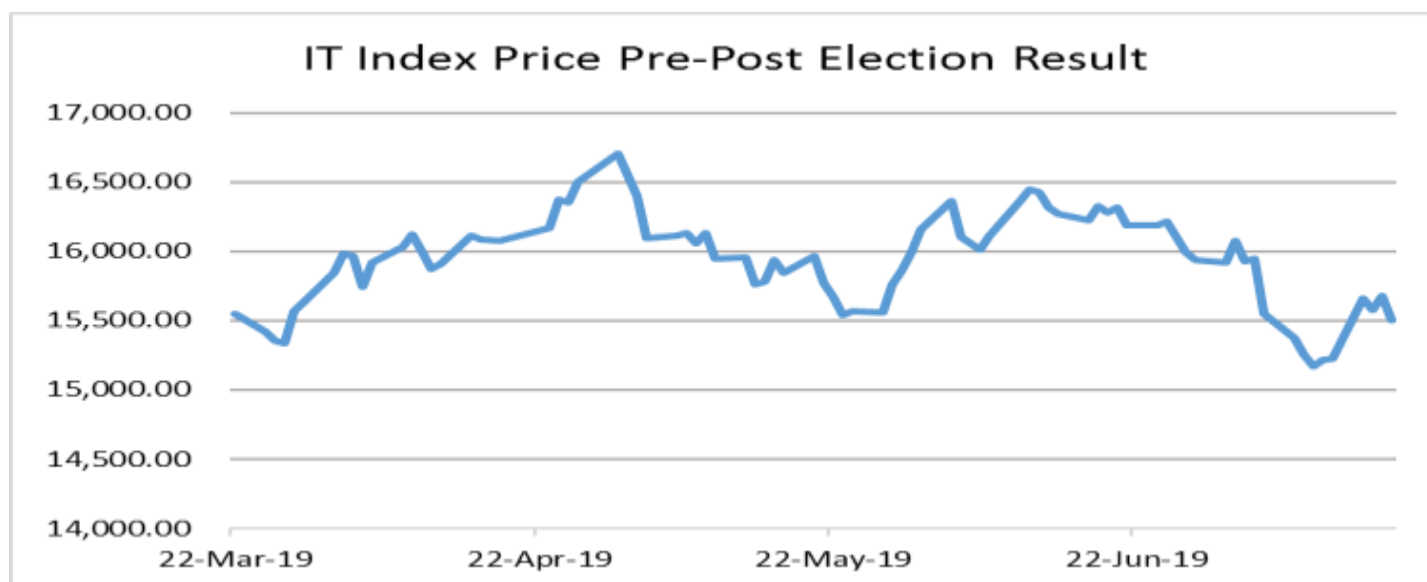
From the above chart, steady performance of NSE NIFTY can be seen 40 days prior to election result but a sharp rise in prices can be observed on the event date as prices jumped above 30,000 but post the event date correction in prices can be observed and within 40 days prices moved back near to earlier price level. This shows that the election has an impact on NIFTY prices



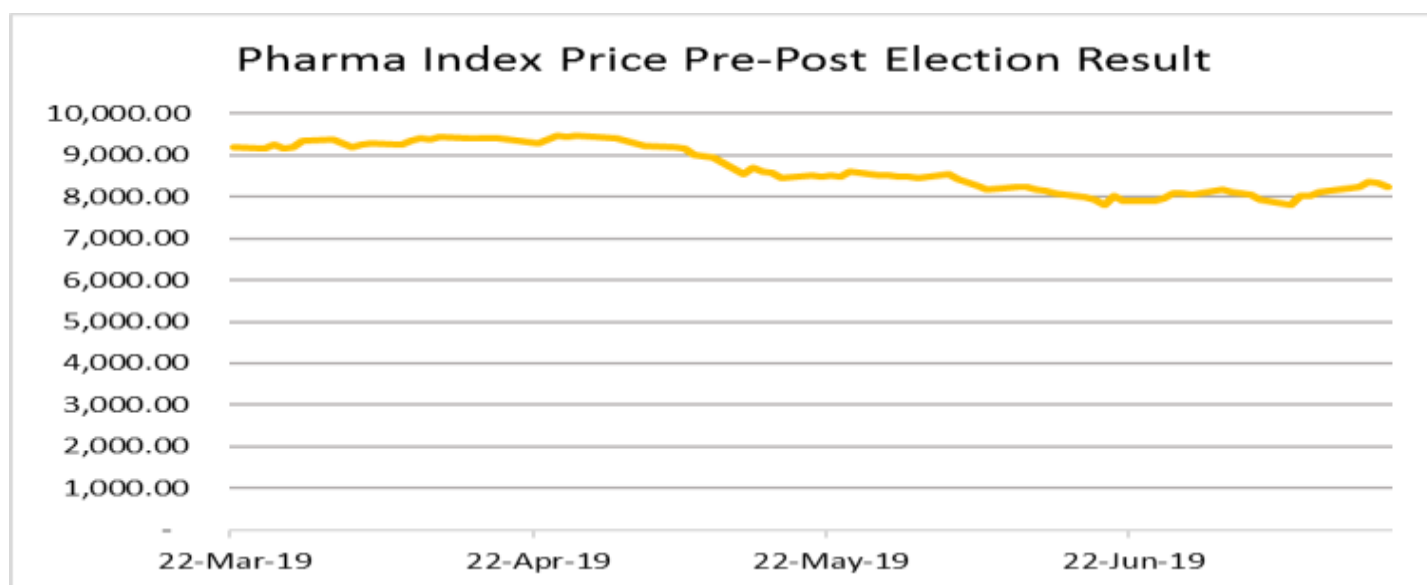
From the above chart, a fall in Bank Index prices before the result date can be observed and soon after the announcement of election result a sharp rise in prices can be seen. Bank Index prices pulled up after the event date which shows that the election result has a positive impact on the Banking sector prices.



From the above chart, a fall in prices before the result date can be observed and soon after the announcement of election result there was a rise in prices but a downward trend can be observed post-election result in FMCG sector. This shows that the General election has impacted the FMCG sector negatively.



From the above graph, it can be seen that the IT Index price have no impact of Lok Sabha election as closing prices of IT Index 40 days pre-post election result remain at same level. Thus, It can be concluded that there is no impact of General election on IT sector.



From the above chart, it can be concluded that the Lok Sabha Election 2019 has no impact on Pharma sector. As, there is no sharp decline or rise in Pharma Index prices can be observed on near election result date

Table 3: The result of t-test summary using Excel

	SENSEX		NIFTY		BANK	
	<i>Variable 1 (Pre-test)</i>	<i>Variable 2 (Post-test)</i>	<i>Variable 1 (Pre-test)</i>	<i>Variable 2 (Post-test)</i>	<i>Variable 1 (Pre-test)</i>	<i>Variable 2 (Post-test)</i>
Mean	0.0511	-0.0108	0.0510	5.5575	0.0649	-0.0033
Variance	0.9063	0.5886	0.9008	1275.8555	1.5253	0.9456
t Stat	0.3244		-0.9699		0.2691	
t Critical value	2.0227		2.0227		2.0227	
Cumulative Return	1.6100		224.3393		2.4700	

	FMCG		IT		PHARMA	
	<i>Variable 1 (Pre-test)</i>	<i>Variable 2 (Post-test)</i>	<i>Variable 1 (Pre-test)</i>	<i>Variable 2 (Post-test)</i>	<i>Variable 1 (Pre-test)</i>	<i>Variable 2 (Post-test)</i>
Mean	-0.0012	-0.0558	0.0146	-0.0225	-0.2065	-0.0793
Variance	0.5892	0.4405	0.7960	0.8978	1.1002	1.3724
t Stat	0.3212		0.1965		-0.4235	
t Critical value	2.0227		2.0227		2.0227	
Cumulative return	-2.2836		-0.3200		-11.4298	

The above table shows the mean of return of indices. The mean of returns pre and post election result for all indices is very close to zero and there is a reduction in mean return post-election result except for NIFTY. In case of NIFTY mean of return before the announcement of election result is 0.05% and after the result date it increased to 5.56%. But to further ascertain and confirm whether this difference in return is significant or not, t-test was conducted. The paired sample t-test is a statistical tool used to determine whether the difference between two sets of observations is close to zero. The t-test results indicate that the difference in prices before and after the Lok Sabha election 2019 result are not significant at 5% level of significance as t-stat value is less than the t-critical value for all the indices.

Cumulative return (CR) of SENSEX, NIFTY and Bank Index is positive and not very close to zero shows that the election result has a positive influence on these prices whereas CR of FMCG and Pharma sector is negative and not very close to zero indicates that the election result has a negative influence on these prices. The CR of IT sector index is negative and very close to zero which indicates that there is no impact of election result on the prices of IT companies.

Table 4: F-Test Two-Sample for Variances using Excel

	SENSEX	NIFTY	BANK	FMCG	IT	PHARMA
Variance (Pre-test)	0.9063	0.9008	1.5253	0.5892	0.7960	1.1002
Variance (Post-test)	0.5886	1275.8555	0.9456	0.4405	0.8978	1.3724
Change	-0.3177	1274.9548	-0.5797	-0.1487	0.1018	0.2721
F stat	0.6495	1416.4112	0.6199	0.7477	1.1279	1.2474
F Critical one-tail	0.5867	1.7045	0.5867	0.5867	1.7045	1.7045

This present study (Table 4) is conducted to analyze the possible shifts in the volatility of chosen indices. It is evident from the table 4 that there is a decrease of 0.3177 in the volatility of SENSEX. The F value for SENSEX was 0.6495 which was greater than the critical value 0.5867. Therefore, we can reject the null hypothesis, meaning that there was a significant change in volatility in the pre-post election result. Similarly, the F value of NIFTY, Bank and FMCG Indices were also greater than the critical value. Therefore, it can be concluded that there was a significant change in the volatility between pre-test and post-test period for NIFTY and for both Bank and FMCG Sectoral Indices.

In case of IT and Pharma, the F value is less than the critical value therefore, we cannot reject the null hypothesis. This implies that there was no significant change in the volatility between pre and post election result in case of IT sector and Pharma sector indices.

Cumulative return has been found to be positive for SENSEX (1.61), NIFTY (224.34) and Banking sector Index (2.47) which confirms that the event that is General election has a positive impact on the performance of stock in Indian Capital market. Also, as per F-test, Volatility in return of SENSEX, NIFTY and Banking sector is significant between pre-post election result. It is evident from this study that the General election has an impact on Indian stock market. Thus, Semi-strong form of Efficient Market Hypothesis does not hold true. So, Indian Capital market is weak form efficient.

VII. CONCLUSION

It can be concluded based on this study that the announcement of the 2019 Lok Sabha election result had a positive influence on the barometers of the Indian stock market i.e. on SENSEX and NIFTY whereas a more positive influence on NIFTY prices as compared to SENSEX prices can be seen post-election result, which shows that the political uncertainty has been resolved post-election result. Thus, sentiments of the investors were positive after the win of Modi government as they believe that the Modi government would be stable and progressive for the country.

In the case of 2019 Lok Sabha election, investors and traders who were skeptical to Modi government's victory some days prior to the result, are now embracing the outcome. After an initial noticeable collapse during the event date (23 March 2019) and there was a temporary setback for few sector specific indices, stocks rallied after the result announcement, with investors making quick recalculations on various sectors.

While all the Indian companies face a great political uncertainty around the General election, varying responses were found in different sectors. In particular, Modi's victory in Lok Sabha election 2019 leads to rise in banking sector index prices whereas the group of losers were FMCG and Pharma sector. It is evident from the study, that there was no impact of election result on IT sector and Pharma sector. These varying responses can be explained by the previous work of Modi government and anticipation about its future policies.

As regards the informational efficiency of the market, the results of the study suggest that the Indian stock market tends to indicate weak form of market efficiency.

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