

Impact of Gujarat Election Result on Sensex Stocks

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ABSTRACT

The 14th Gujarat Legislative Assembly election, 2017 was held on 9 December 2017 and 14 December 2017. The counting of votes took place on 18 December. The election was won by the incumbent Bharatiya Janata Party with a reduced majority, following losses to the opposition Indian National Congress. The stock market is sensitive. It discounts every inside and outside information. Hence it started reacting to the results of the Gujarat election results. The behaviour of the stockmarket during the election result has motivated the researchers to undertake research to test whether the reaction or impact is significant or not. We have studied the behaviour of Sensex stocks as they are representative of the entire stock market in India. It was found in the study that there is no significant impact on the behaviour of stock prices due to the results of the Gujarat election.

Key Words: Abnormal returns, election, result, stock market

INTRODUCTION

The 14th Gujarat Legislative Assembly election, 2017 was held on 9 December 2017 and 14 December 2017. The counting of votes took place on 18 December. The election was won by the incumbent Bharatiya Janata Party with a reduced majority, following losses to the opposition Indian National Congress. As the nature of the stock market, it had reacted immediately to the time-to-time results of the election. The extent of the win, which was lower than what the exit polls predicted, kept a lid on stock gains. Benchmark indices ended almost 0.5% up after rising as much as 1.2%, recovering from an early slump. The stock gauges had dropped as much as 2.6% in opening trades after early counting showed a neck-and-neck contest between BJP and Congress. But a late surge in BJP votes caused the markets to rebound as traders rushed to cover bearish bets. Sensex ended at 33,601.68, up 138.71 point. The happenings in the stock market during the announcement period of the election result induced the authors to research the reaction of the capital market for the announcement of the election result.

OBJECTIVES OF THE STUDY

The study is conducted with the main objective to find out the reaction of the stock market to the announcement of the result of the Gujarat Election 2017. It has the following specific objectives too.

- To find out pre-and post-announcement average abnormal returns of Gujarat Election result announcement.
- To know the Cumulative Abnormal Average Returns for the pre and post announcement day of Gujarat Election Result

- To find out whether there is any significant impact of the announcement of Gujarat Election Result on the Stock market.

SCOPE OF THE STUDY

The present study is an attempt to know the reaction of the capital market to the announcement of Gujarat Election results in 2017. The study is undertaken as an even study and the date of announcement of the result of the Gujarat Election (18/12/2017) is taken as the event date. The event window is 41 days and the estimation window consists of 250 days before the event window. The sample size of the study is BSE index stocks and SENSEX is considered as the benchmark index.

METHODOLOGY

The entire study is based on the secondary data extracted from various sources like websites, books, etc. It is an event study and the event window is 41 days consisting of 20 days before the event and 20 days after the event and the date of the announcement of the Gujarat Election result is considered as the event date. The sample size of the study is BSE index stocks and SENSEX is considered as the benchmark index.

TECHNIQUES OF ANALYSIS

Daily Returns:

Daily returns for each stock and SENSEX has been computed by using the following model:

$$R_i = \text{Log}()$$

Where, P1 = Closing price of the stock and P0 is the opening price of the stock

$$R_m = \text{Log}\left(\frac{P_1}{MP_0}\right)$$

MP₁ = Closing price of the Sensex and MP₀ is the opening price of the Sensex

Average Daily Returns

Average Daily returns have been computed as follows: $ADR = \frac{\sum_{t=1}^N DR}{N}$

Daily expected return

$$E(R_{it}) = \alpha + \beta \times R_m + \epsilon_t$$

In the Equation E(R) is the expected return of a particular stock on day t, α and β are calculated as follows

$$\beta = \frac{n \sum xy - \sum x \times \sum y}{n \sum x^2 - \sum (x^2)}$$

$$\alpha = \bar{y} - \beta \bar{x}$$

Average Abnormal returns

Average Daily Abnormal return on a particular day t is the excess of the average actual return on the day t over the expected return on that day.

$$AAR = R_{it} - E(R_{it})$$

Where R_{it} is the actual average daily return at time t , and $E(R_{it})$ is the expected return on the same day.

The study period used in this analysis is 41 working days. In this, the day of the announcement of the Gujarat Election result (event) is designated as 0. Trading days before the announcement are numbered as event days -1, -2, and so on. The event days following the announcement are numbered +1, +2, and so on. The maximum time involved in this study is 20 pre-announcement days to 20 post-announcement days.

LIMITATIONS OF THE STUDY

The following are the limitations of the study

- The entire study is based on secondary data. Hence, the study might suffer from the limitations of secondary data.
- Only the short-term impact of the event on the stock market is studied.

DATA ANALYSIS AND INTERPRETATION

TABLE:1 Average Abnormal Returns, Cumulative Average Abnormal Returns, T-Values, and P-Values during the announcement of Gujarat Election Result

DAY	AAR	CAAR	T VALUE	P-VALUE	DAY	AAR	CAAR	T VALUE	P-VALUE
-20	0.1521	0.1521	0.2638	0.792	0	0.1771	-0.1637	0.3069	0.7591
-19	0.1548	0.3069	0.2684	0.788	1	0.3032	0.1395	0.5258	0.5994
-18	-0.126	0.1809	-0.2185	0.827	2	0.1424	0.2819	0.2470	0.8050
-17	-0.1607	0.0202	-0.2786	0.781	3	-0.0322	0.2497	-0.0559	0.9554
-16	-0.0715	-0.0513	-0.1239	0.901	4	-0.0781	0.1715	-0.1354	0.8923
-15	0.0008	-0.0505	0.0013	0.999	5	0.1818	0.3534	0.3153	0.7527
-14	0.0393	-0.0112	0.0681	0.945	6	0.1836	0.5370	0.3184	0.7504
-13	0.0438	0.0325	0.0759	0.939	7	-0.1616	0.3754	-0.2803	0.7794
-12	0.0507	0.0832	0.0879	0.93	8	0.2311	0.6065	0.4009	0.6888
-11	-0.2404	-0.1572	-0.4168	0.677	9	0.0854	0.6920	0.14818	0.8823
-10	-0.1063	-0.2634	-0.1844	0.854	10	0.1488	0.8408	0.2581	0.7965
-9	-0.1829	-0.4465	-0.3173	0.751	11	-0.0518	0.7890	-0.0899	0.9284
-8	-0.1665	-0.6129	-0.2888	0.773	12	0.2524	1.0414	0.4376	0.6619
-7	0.2561	-0.3569	0.4441	0.657	13	0.2318	1.273	0.4021	0.6879
-6	-0.003	-0.3598	-0.0051	0.995	14	-0.0868	1.1865	-0.1505	0.8804
-5	-0.0676	-0.4274	-0.117	0.907	15	-0.0022	1.184	-0.0038	0.9969
-4	-0.0297	-0.4572	-0.0516	0.959	16	-0.0624	1.121	-0.1082	0.9138
-3	-0.1117	-0.5689	-0.1938	0.845	17	-0.0725	1.0493	-0.1257	0.9000
-2	-0.0492	-0.6182	-0.0853	0.932	18	-0.2241	0.8252	-0.3886	0.6979
-1	0.2774	-0.3407	0.4811	0.631	19	-0.6776	0.1476	-1.1749	0.2411
0	0.1771	-0.1637	0.3069	0.759	20	-0.1215	0.0261	-0.2108	0.8331

Source: Authors' compilation

Table 1 presents the Average Abnormal Returns (AAR), Cumulative Average Abnormal Returns (CAAR), t values, and p values for each day around the announcement of the result of the Gujarat Election. As per the table, there are nine positive average abnormal returns during the pre-announcement period. AAR is positive on the event day. Ten positive

average abnormal returns are found during the post-announcement period. The T-test is conducted at a 5% level of significance for abnormal return of each day. The cumulative average abnormal return is 0.8331 which is positive indicates a positive reaction of the stock market for the announcement of the election result. It is observed that not even a single average abnormal return is significant. As all the average abnormal returns are insignificant at a 5% level of confidence level, we conclude that the Gujarat Election result announcement had no significant impact on share prices.

Table 2: Paired Comparison t-Test

Parameter	Pre-announcement	Post- announcement
Mean	-0.01703679	0.009491417
Variance	0.020386678	0.050226617
Observations	20	20
Pearson –correlation	-0.037788299	
Df	0	
t Stat	-0.43900272	
P(T<=t) one-tail	0.332805648	
t Critical one-tail	1.729132792	
P(T<=t) two-tail	0.665611296	
t Critical two-tail	2.09302405	

Source: Authors' compilation

Table 2 shows the result of paired comparison T-Test conducted to test the hypothesis that there is no significant difference in average abnormal returns between the pre-andpost-announcement period of the Gujarat Election Result. The result shows that the T value is lesser than the critical value. Therefore, the hypothesis that there is no significant difference in average abnormal returns between the pre-andpost-announcement of the Gujarat Election Result is to be accepted.

Table 3 presents the result of One-Way ANOVA, conducted to test the significance of abnormal returns around the announcement of 'Gujarat election results. The F statistic (0.199324) is lesser than the F critical (4.098172) and the p-value is higher than the level of significance. Therefore, it is concluded that the announcement of the Gujarat Election result had no significant impact on the behaviour of the stock market.

Table 3: Results of One Way ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	0.007037458	1	0.007037	0.199324	0.657801	4.098172
Within Groups	1.341652602	38	0.035307			

Source: Authors' Compilation

FINDINGS AND CONCLUSION

Stock prices fluctuate for plenty of reasons. One among them is election results. Every investor had an eye on the results of the Gujarat Election and hence it should have an impact on the behaviour of stock prices too. The current research attempted to study the reaction of the capital market to the announcement of the result of the Gujarat Election. As per the study, it was proved that even though the stock prices reacted positively (according to cumulative abnormal returns) during the post-announcement period of the election result, the impact was not significant. It was proved with the t values calculated for each day's abnormal return.

Later the same was tested by using paired comparison t-test and One Way ANOVA to know the impact of the event on the behavior of the stock market. The result of these tests shows no significant impact on the behavior of the stock prices. Hence, we conclude that the impact of the Gujarat Election Result announcement on the behavior of the stock market is insignificant.

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