

Impact Of Lok Sabha Elections On Equity Market Using Sentiment Analysis

Sakshi Rammohan¹, Sumeru Jhaveri², Rashmi Patel³

¹Department of Data Science, Mukesh Patel School of Technology Management and Engineering,SVKM's NMIMS,Mumbai,India.sakshirammohan1@gmail.com

²Department of Data Science, Mukesh Patel School of Technology Management and Engineering,SVKM's NMIMS,Mumbai,India. sumeru.jhaveri@gmail.com

³Assistant Professor, Department of Data Science, Mukesh Patel School of Technology Management and Engineering,SVKM's NMIMS,Mumbai,India. Rashmi.patel@nmims.edu

Abstract– This report explores the impact of the Lok Sabha elections on the equity stock market, using sentiment analysis and other technical analysis. The data is based on the Economic Times daily articles and sentiment analysis was done on it. We have tried to recognize the pattern in the 2009, 2014,2019 and 2024 elections and tried to find out which sectors perform best and how the market reacts before and after the elections. It is observed that when the results do not turn out the way the public expects it to, the market volatility increases. This paper also speaks about the economic state of the country during this period of high uncertainty.

Keywords– Sentiment analysis, Sector analysis

I.INTRODUCTION

In a developing country like India, there are several factors that control the market behavior. In a survey conducted in 2023, 90% of Indians chose equity markets as their first choice of investment, so that is the most affected by public sentiment and media. Hence this analysis deals with mainly the equity market. Investors buy or sell based on government expectations because the policies, stability, and economic stance of a government have a direct impact on the financial environment and business conditions. Here, the market is not only controlled by a few high-net-worth investors, but all income classes deal in the equity market. This is how public sentiment; word of mouth and common opinions play a huge role in the market behaviour. This project particularly deals with data taken from The Economic Times of India from 2009 to 2024.

The Lok Sabha general elections were held from 19 April 2024 to 1st of June 2024, with the results being announced on the 4th of June. The NDA (National Democratic Alliance) secured 293 out of 543 seats, out of which BJP (Bharatiya Janata Party) won 240 seats, far less than the public expectation. Although Narendra Modi was elected the prime minister of India for the 3rd consecutive time since 2014 (2014,2019,2024), the idea of a coalition government made the citizens worry, therefore India's stock market volatility experienced a 2 year high during the election period. During the 2024 elections, Nifty 500 rose approximately 11 % from Jan 1st to Jun 3rd (one day before the results were declared). On June 4th, the same dropped by around 7% on the result day. On 1st of June, exit polls predicted a landslide victory for the ruling BJP and it's NDA, predicting over 350 seats in the 543-member Lok Sabha. The initial market rally was driven by investor optimism based on exit polls suggesting political stability and continuity in economic policies. When the actual results fell short of expectations, uncertainty increased, leading to a sharp sell-off as investors reassessed the political landscape and its potential impact on economic reforms. In the 2014 and 2019 elections, BJP had a clear victory, due to which markets and investors reacted very well and volatility was not that high. However, during 2004, the coalition government led by the UPA and the actual votes being much different from the exit polls, saw a sharp decline just a day after the elections. However, as observed in most election years, the market stabilizes after 6 months – 1 years, so long term investing is definitely a way in which any losses made during the result declaration time can be ameliorated. This paper aims to capture patterns in the elections, see which sectors outperform the other, and which sectors have the least volatility despite changing governments and unknown outcomes.

A lot of us had faced our first election as a voter, or our first election as an investor or trader in the equity stock market during the 2024 Lok Sabha elections. The stock market went through heightened volatility

due to the expectations of investors with the government. The scope of this report is comprehensive: it extends to analyzing sentiment data derived from Economic Times articles and examining key market sectors to uncover trends and performance metrics before and after elections. The report aims further to deliver actionable insights, which illustrate how economic conditions can influence investor sentiment and overall market stability. This will make investors know exactly what to do during the next elections, especially when the expected result is not a complete whitewash by one political party. An elected government, in large part, would affect the set of policies developed by a country that would determine its direction towards the economy. All these would touch on the most critical areas-taxation, government spending, infrastructure, trade, and regulatory frameworks-and thus the investor sentiment and stock market performance. This project attempts to study the issue of forecasting the behavior of the stock market during those highly uncertain and volatile periods before and after the Lok Sabha elections. Investors have exhibited reaction behaviors based on the prospective interest during the process of voting in the past. The sentiment analysis has now become a big tool for this particular problem statement, especially because of the growing text data from financial news-providing channels like the Economic Times and social networking sites. This can be found by analyzing the tone of and the content presented within news articles in the examination of changes in market sentiment due to political events. The current research project applies sentiment analysis to assess the impact of media coverage of Lok Sabha elections on investor attitude and subsequent performance of the stock market. This is because the attitude measurement, especially one that is polarized or speculative, is hard to measure reasonably in terms of influence on the market trend.

Election outcome volatility is the main issue. The higher the discrepancy in the election results and what people expected, the more volatile the outcome will be.

The very nature of election results is inherently uncertain. In addition, although useful for providing information, exit polls don't always have a very accurate description of the final outcome. Markets therefore swing dramatically sometime within minutes of an announcement, and this unpredictability forms the basis of the present project. It uses sentiment analysis on how stock market responses have been historically triggered by these sudden changes to determine whether there is a pattern that tends to recur in the weeks leading up and following the results of elections. The sectoral performance exacerbates the complexity: each sector reacts differently to the outcome of the election. Infrastructures, banking, defense might all benefit as a part of an economic reform-oriented government and increasing national security investment. Other sectors, such as healthcare and agricultural, could be affected in a totally different way based on how they would likely be impacted by policies. This sector-specific analysis gives another dimension to the problem, requiring rather subtle identification of the industries that are most sensitive to political shifts. Implications of solving this problem are quite significant.

For the investors, getting to know better their market behaviors during elections would translate into good strategies of investment in order to avoid more risks and maximize on the opportunities created by an election season. This information may be valuable for policymakers in terms of the communication and timing of policy announcements since these events can impact markets. For financial analysts and researchers, this project offers an analytical framework to assess politically induced fluctuations in financial markets, adding a new dimension to the theory of behavioral finance. This project will aim to be targeted towards finding patterns and correlation in previous years to understand whether markets are influenced by the elections over the short or medium or long term, and which sectors are the most affected.

The crucial contribution of this report lies in its focused analysis of the behavior of the Indian stock market vis-a-vis political changes, mainly during Lok Sabha elections. Applying leverage and sentiment analysis of the news data on Economic Times articles, this project throws light on trends in the movement of market related to election results. Key contributions include:

Sentiment Analysis-Based Insights The report tracks the shift in investor sentiment ahead of elections based on calculated sentiment scores from coverage in the media. The above analysis, therefore, provides insight into how positive or conservative the market might become depending on the in-jest political stability, economic reforms, and implications of a coalition.

Sectoral Analysis of Volatility: It analyzes the variously expressed reactions of market sectors-including finance, infrastructure, and energy-to election results and illustrates how those sensitive to policy behave differently than the others in light of uncertainty about political change. At sector level, it identifies which

sectors are relatively more resilient and which are volatility-prone, so investors can at least narrow choices down based on probable policy impacts.

Historical Pattern Recognition: By analyzing multiple election cycles (2009, 2014, 2019, and 2024), the project discovers recurring patterns, such as the "pre-election rally" driven by investor optimism and the "post-election adjustment" when actual outcomes deviate from exit polls. The identification of these patterns helps investors anticipate and better manage market reactions during future elections.

II. LITERATURE REVIEW

Balaji, Kusuma and Kumar (2018) [7] used T-test and F-test on Nifty to understand whether election has any impact on the market. The F test concluded that although short term and medium term was impacted by elections, and the volatility increased, the long term remained unaffected by this event. The T test concluded that election did not affect the small term either. They recommend investors to be cautious about the pre- and post-election result day volatility and suggest that this is a good time to maximize profits because of the heightened variance of the prices.

Bagad, Sahoo [11] analysis argues that India's economic indicators, such as the Sensex, deficit, inflation rate, exchange rate, and Index of Industrial Production (IIP), do not follow a Political Business Cycle (PBC) during Lok Sabha elections. This lack of correlation may be due to India's frequent electoral cycle, with state and general elections held almost every year, which prompts the central government to maintain a continuous influence over regional developments. This dynamic creates a need for the central government to regularly engage with different regions, diluting the impact of election cycles on economic performance. Additionally, regional parties and opposition groups often link state-level progress to central government funding, further influencing this trend. Their review highlights a unique feature of India's federal structure: the central government's ongoing influence in state matters due to frequent state elections. This contrasts with Western developed countries, where election cycles are less frequent, allowing PBC effects to be more prominent. The analysis suggests that India's federal and electoral structure reduces the likelihood of noticeable economic fluctuations tied to election periods, thus limiting the existence of a traditional PBC in India.

Amundi Asset management[4] concluded that market response to the election results was initially volatile, as expectations of a strong BJP majority were unmet, leading to an immediate dip in the stock market and an increase in bond yields. However, Indian equities quickly rebounded, reflecting investor optimism in the country's long-term growth prospects. India's economic fundamentals remain strong, with projected GDP growth driven by domestic demand, digital transformation initiatives, and structural reforms. Foreign investor interest in Indian equities and fixed income is likely to remain high, especially with the forthcoming inclusion of Indian bonds in global indices, which could channel an estimated \$25 billion of passive inflows into the Indian market over the next 15 months. This interest is also buoyed by the recent stabilization of the rupee and a favorable long-term earnings outlook, particularly for sectors like banking and manufacturing, which are expected to benefit from government spending on infrastructure and capital projects.

Khemani [9] hypothesized that an incumbent politician may alter fiscal and economic policies to improve his chances of re-election. This literature has been extended to analyze analogous cycles in developing countries, where political institutions are more fragile and electoral processes even younger. Evidence from developed countries suggests that indeed policy changes triggered by elections take place, although mostly subtle and infrequent, partly because strong democratic institutions restrain the discretion of manipulation by policymakers. However, research conducted in developing countries find sizeable pre-election fiscal expansions that can be attributed to relatively softer institutional frameworks permitting a greater degree of latitude on the part of politicians to employ fiscal instruments in drawing electoral benefits.

III. METHODOLOGY

Data Collection: The dataset consists of Economic Times articles spanning multiple election years (2009–2024). Articles were sourced and stored, with metadata including dates, article length, and sentiment scores.

Data Pre-processing:

Text Cleaning: Standard preprocessing steps like lowercasing, punctuation removal, and stopword elimination were applied to prepare the text for analysis.

Sentiment Analysis: TextBlob was employed to quantify sentiment for each article. This involved tokenizing sentences, assigning sentiment scores, and aggregating scores at daily or weekly intervals to capture sentiment trends.

Technical Indicator Integration: Standard financial indicators, such as moving averages, volume, and volatility indexes, were used to validate sentiment analysis findings. This step involved calculating market indices like Nifty 500 to correlate with sentiment shifts.

Modeling and Analysis: Sentiment data was combined with market indicators to observe correlations. Statistical tests, including correlation analysis and regression modeling, were used to verify if sentiment had a significant impact on market trends.

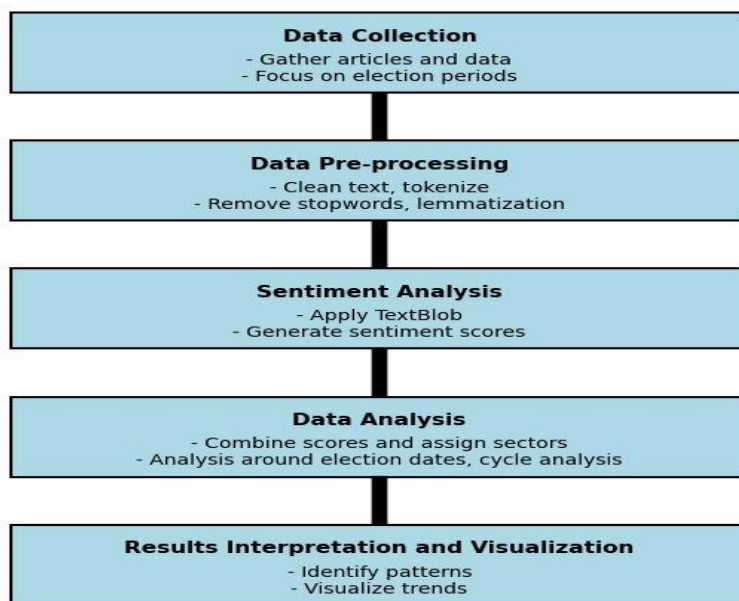


Figure 1: Implementation methods

Stock markets usually are more volatile before a general election, considering the uncertainties surrounding the outcomes and the subsequent policy changes as well. From the historical data provided, average returns for a year preceding elections average at 29.1%. Average one-month prior to an election return averaged at 6%. Individually, these numbers exhibit tremendous trends regarding positive market performance before an election. However, that is not particularly common, for example, the electoral year 2009 had seen a critical 24.9% fall during the election year itself, however, there was a sharp 26.8% hike during the month post-elections. This trend suggests that while the investor may wait and watch because of the uncertainty, the market has typically functioned well in the pre-election period itself.

One of the other main reasons of the stock market falling before elections is the decreasing amounts of Foreign Direct Investment. Foreign investors remove a lot of their investments before elections when they see increased volatility. Below shows the volatility of sentiment changes before and after elections.

Changes in investor sentiment in medium term (6 months after election result date vs 6 months before)

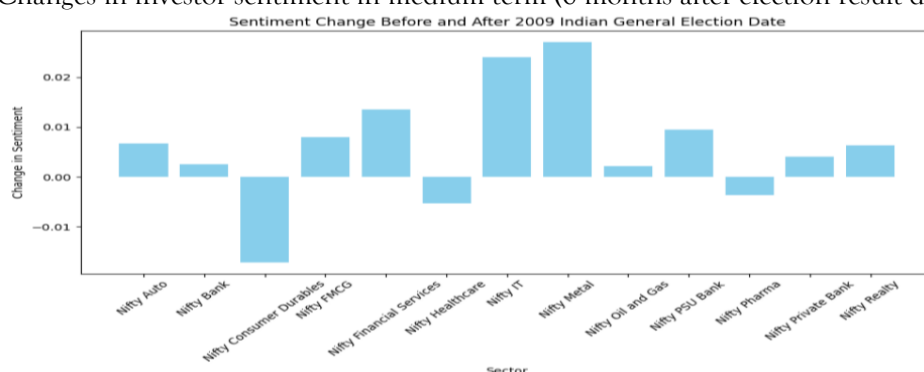


Fig 1- Change in sentiment score per sector in 2009

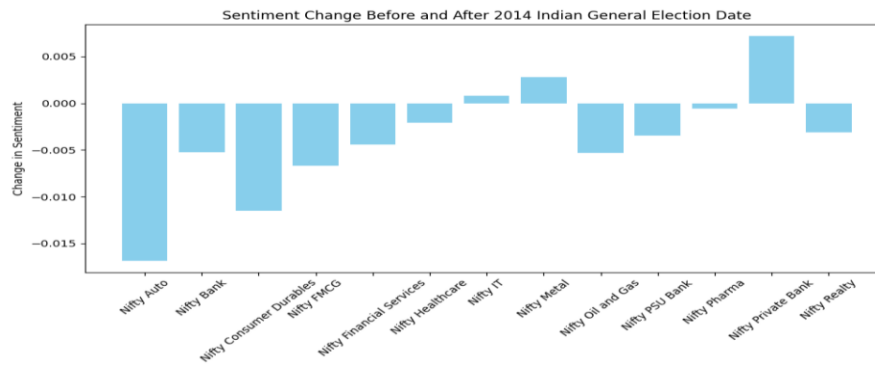


Fig 2- Change in sentiment score in 2014 per sector

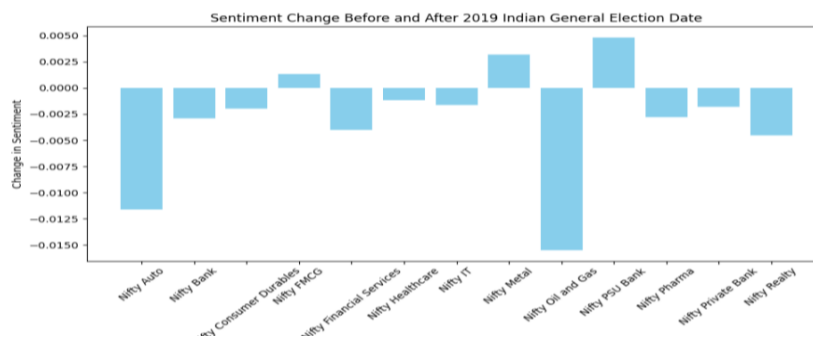


Fig 3- Change in sentiment score in 2019 per sector

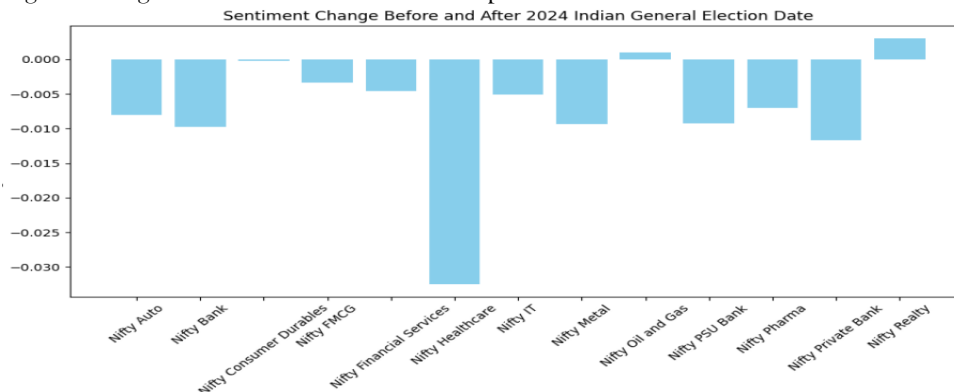


Fig 4- Change in sentiment score in 2024 per sector

This shows the change in the sentiments based on the sentiment score. It shows how the sentiment score changed from 6 months before the election to after (volatility of 6 months before the election to 6 months after). The sectors with the highest scores after show the most positive changes in the sentiment scores. In the year where there was a fear of coalition government and the overall sentiment before the elections were low, there was quite a positive change in most sectors with a reduced volatility after the elections (in 2009). The time between the exit polls and the actual results is when the volatility increases the most since the exit polls create a sense of idea about the outcomes, and in the years that the exit polls were way off from the actual results the changes in sentiment score will be more, based on the winner expectation. In 2009, these changes were not that much since 2004 already had a coalition government, and 2008 had the US housing crisis which had created low expectations before the elections. However, the stability increases over the medium and long term so most of the sectors had a relatively positive sentiment score. The changes in sentiment scores have had a difference of maximum 0.5. This shows that election results do not affect investors in the medium term much. Few sectors can help us maximize profits.

We can see that the automobile industry has consistent negative changes in sentiment scores across the years, showing that there builds a hype amongst investors before the election, which would also probably increase the price before election, and then keep a stable price after the election. A reliable strategy would be to short auto shares before the results, so that profits are made.

Nifty Bank and Nifty Financial services are 2 sectors that are heavily correlated, and who have similar reactions before and after the election results. However, Nifty Bank is not as affected by the election

results due to a smaller change in prices, and is therefore relatively more stable. Nifty Financial services has always performed very well after the elections, having a positive change from before to after. Nifty financial services shares can be bought before the election results since in the medium term, there has been a consistent increase in the sentiment of investors.

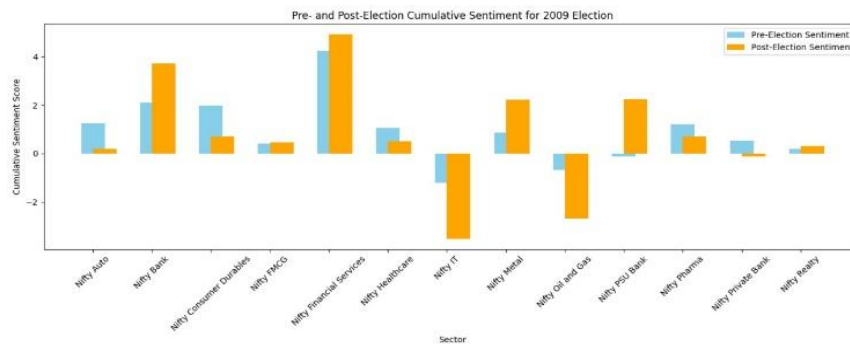


Fig 5- 2009

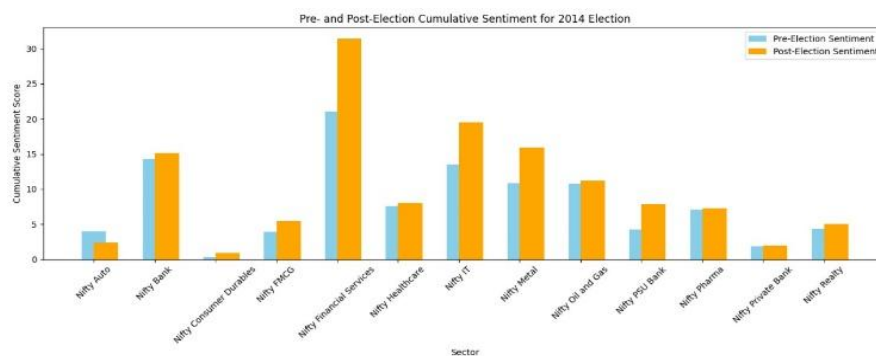


Fig 6- 2014

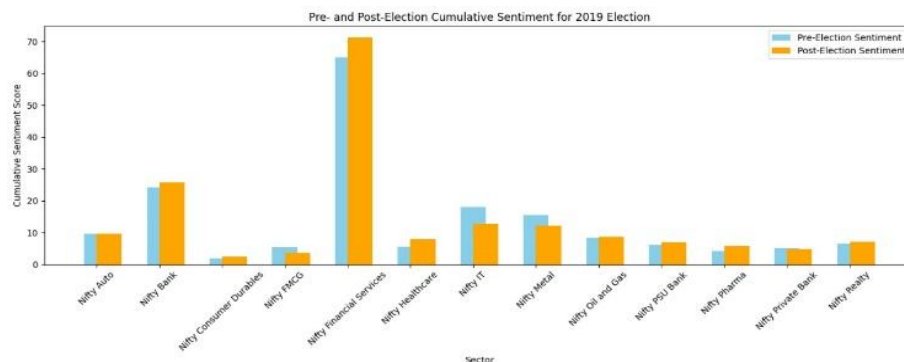


Fig 7- 2019

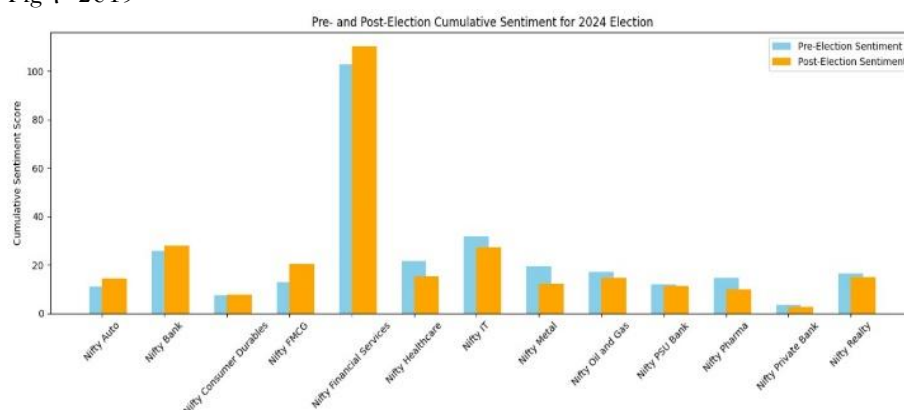


Fig 8 - 2024

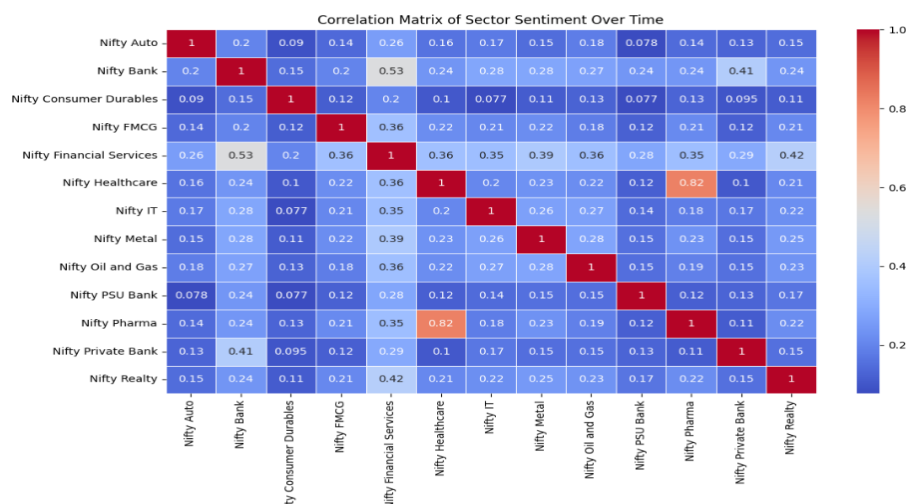


Fig 9- Overall correlation amongst sectors

The short term analysis shows us a much bigger change in the investor sentiment. The sectors that are most affected by the election results are FMCG, Financial Services and IT. The most consistent sector has been the financial services sector seeing a higher growth rate. Short term is much more affected than the long and medium term so the instability is temporary. The election may be a good time to maximize profits using instruments like derivatives.

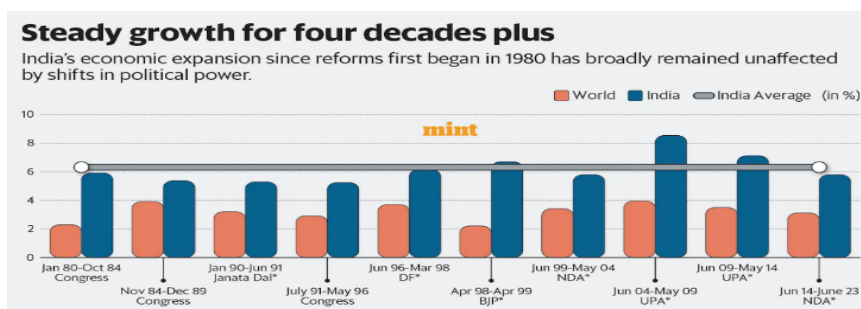


Fig 10- Long term growth

Source- www.wrightresearch.in/blog/impact-of-elections-on-indian-stock-markets/

India has pursued essentially market-driven policies since 1980 marked by deregulation, liberalization and privatization. Successive governments have focussed on particular strands of economic reform from infrastructure and FDI to populist measures - but the over-riding trend has always been pro-growth. Investor confidence requires predictability, which in turn is found in political stability. In India, since 1999 all governments have served out a full term which ensures an economic and a political climate that is steady. Caution yourself (not hate) uncertainty associated with unforeseen events as investors. Known uncertainty is controlled; unknown uncertainty is the core problem.

The reforms are taken differently by various governments. The BJP-led NDA focuses its reforms on infrastructure, FDI, and digital economy but still committed blunders like demonetization. The Congress-led UPA has a focus on private investment in infrastructure and rights-based reforms but possesses drawbacks related to corruption and macroeconomic stability management. There is no evidence of long-term market trends being influenced by governmental change. Not even the shock electoral outcomes that led to severe market corrections during 2004 were able to alter the trend. Constant reform of the economy, coupled with a strong private sector, has assisted the market in recovering and plotting a generally upward curve. The Indian growth story remains on the correct trajectory.

5 Clever Investment Strategies During the Election Month

Here are five thoughtful investment strategies to help navigate this period while keeping stability as well as growth potential in mind:

1. Phased Investment Approach: Since there is no clear outcome of election results, a balanced approach is appropriate. Seek to invest 50% of available capital now and reserve the other 50% for adjustments

post-election based on announced results. This phased approach allows investors to control risk while positioning themselves strategically on actual outcome.

2. Carry on SIPs: In this phase, such plans should be kept rolling on without glitches. As they create a natural benefit of averaging market volatility, it can particularly be useful when there is an election-induced volatility. This would further bolster the portfolio and one would still experience the benefits of buying at cheaper prices during market downcycles.

3. Stock Selection in the Market: Overvalued small-cap stocks are enough to make one extra cautious in the market under these conditions. A balanced risk-reward profile is offered by mid-cap stocks which carry moderate valuations. Large-cap stocks are stable and fairly valued—the bedrock of any portfolio under such conditions. A diversified allocation focused on large-cap and selected mid-cap stocks can offer excellent risk management.

4. Sectoral growth opportunities post elections: Depending on the elections, certain sectors will bounce back while others will continue posting growth. Manufacturing with the China +1 strategy and infrastructure are going to contribute a lot to growth. Key segments within these sectors include:

Manufacturing sectors: Opportunities are high in defence, chemical, and semiconductor areas due to existing policies and also because of supply chain shifts globally.

Infrastructure: Construction companies, road-building companies, urban development companies, are most likely to continue being awarded contracts as the government implements continued investment and public infrastructure works independent of the election outcome.

5. Balancing Risk and Reward: Acknowledge in the alternative scenario your exposure to various degrees of risk connected with potential electoral outputs. While being re-elected by the status quo government is likely to work as a positive outcome, inducing market rallies, a shift can still trigger corrections. Equipped with such information, investors would be best placed to balance risks well and hence exploit the chance to buy at more attractively valued price points.

According to the analysis conducted, these sectors are predicted to do well under the current government which has been ruling for 3 years:

Infrastructure: This is the hallmark of the Modi 3.0 economic vision, which is robust investment in infrastructure—roads, bridges, digital networks, and public utilities. It increases connectivity, reduces operational bottlenecks, and directly enhances the efficiency of operations in businesses, thereby cutting down transaction costs and creating employment opportunities in the thousands while stimulating economic activity across multiple levels of the economy.

Increased spending on defence and security would obviously strengthen national security but would also give impetus to the development of domestic industries involved in the production of equipment for defence. This sector will most probably bring about new technological innovations and create high-skilled employment opportunities that would bring economic boom within the country.

It also offers a transformation in the automobile industry, with an evolution towards more sustainable modes of transportation; it would be electric, more so due to the efforts on this front from the Government of India.

Technology and IT: The expectations are that this sector will lead innovations, efficiency, and service delivery in different domains of the economy with digital India initiatives, investment in technology infrastructure, and support to IT and software companies. Growth in IT will be important for India's aspirations as a leader in a digital economy.

Financial Services: Continuation of higher flows into government bonds and streamlining the regulatory framework for the financial sector present an excellent opportunity for building stronger financial markets in India—better still, robust and investor-friendly ones. The growing ambitions for growth in India require a strong financial sector to not only fund such aspirations but also improve the global competitiveness of Indian businesses.

These strategies may be used in the management of uncertainty from an election season while preparing one's assets for potential long-term gains.

Historical patterns indicate that markets tend to respond positively to decisive election results that offer political stability and continuity in policy. Unexpected election outcomes, however, can lead to initial market disruptions—as observed in 2004—but these shocks are often temporary, with the market gradually adjusting to the new political environment.

IV. CONCLUSION

Political changes brought about by elections have huge repercussions in the government's policies, priorities, and regulations. Different industries and businesses are affected by these changes but do not essentially feel the bumps of such changes over the short term. The long-term consequences are highly seen to be depending on the nature of economic reforms and policies that the ruling party appears to understand and implement. Examination of data for past years shows the relationship between the stock market, economy, and elections and pulls out the importance of policy stability, economic reforms, and continuity for growth over a long period.

The analysis can conclude that only the short term is highly impacted by the uncertainty of the election period. The medium term is not much affected and in the long term, prices are mostly stable. The election week can help us make quick profits, but one should not be scared by the impulsively changing prices during this week since most sectors, regain their stability. Sectors that have known to benefit from the elections directly are the financial services, banking and private banking sector, and the IT sector has also remained relatively stable.

Long-term investors should allocate portfolios based on risk appetite and financial objectives rather than expectations of political event-based or election-related returns. For after all, election forms part and parcel of India's democratic exercise-a periodic event every five years that often ends in either a simple or coalition government. Markets will eventually and sooner rather than later rise again and bounce back on a pro-growth trajectory as the political cycle unwinds overtime.

Future research can benefit from incorporating data from social media, investor forums, and international news sources to capture a more holistic view of sentiment. Machine learning models like Random Forests or Neural Networks could be employed to enhance predictive capabilities and account for non-linear relationships between sentiment and market movement.

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