

Can the Sentiment in Print Media during National Elections Influence Stock Market Dynamics? - A Case-Study on 2019 Indian Elections

Manvitha Kola, Master of Science in Computer Science
University of Dublin, Trinity College, 2021

Supervisor: Prof. Khurshid Ahmad

This research work is an attempt to statistically study the variance in the stock market returns based on sentiment expressed in print media. Stock markets are very complex interrelated systems that are influenced by various factors including investor sentiment and information sources. This thesis employs a statistical approach to take a closer look at that relationship, if exists. The content in the print media articles is analyzed to extract the sentiment as a time series variable. This is used as an explanatory variable to develop various statistical models to determine the impact of media sentiment on the changes in stock market returns. This is a case study of a political event, i.e. the 2019 Indian General Elections. The print media coverage during a political event may involve various biases to distort political sentiments and opinions of public. Therefore, the Indian news articles containing election news have been explored to investigate if there is any statistically significant impact of the news articles on the stock prices based on the repeated political or affect terms during the general elections. These repeated political and affect features signify positive/negative sentiment thereby endorsing or criticizing certain categories. Rocksteady, an in-house affect analysis system developed at Trinity College Dublin was used for this analysis. The news articles published in the major newspaper publications of the Indian media between 1st Jan 2018 and 31st Dec 2020 - during the event of National general elections in 2019 and 2020 are analyzed and the statistically significant results are published. It has been observed that the media coverage for the winning party was higher when compared to that of the opposition and there is a statistical evidence that various political variables have a small but significant effect on the stock market dynamics.