

Predicting Short Term Equity Price Change Using Internet Search Trends Valence Data

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Stock price change in the short term is highly unpredictable and often does not relate to underlying economic or company performance. Stock technical analysis indicators are commonly used to predict the direction of short-term stock moves. Implied volatility can be used to predict the range of future stock price changes. Internet search term valence (ISTV) reveals the intentions of person conducting the search. Data about search behavior can be grouped into positive and negatively valent sentiment on a particular stock. A non-technical long/short indicator was developed based on ISTV. This project will answer the question of whether the valence of search engine queries is a better predictor of short-term stock changes than technical analysis and/or applied volatility. By ranking the S&P 500 by size and then by searchability on an internet search trends data base, our sample consists of the top 5 stocks. Perform an analysis of all 5 companies performance over a 12 month period to determine the success of the three most popular technical analysis trading studies, the ISTV signal, and the implied volatility formula. ISTV results in more accurate short-term price prediction than popular indicators, a result that was significant to the 0.05 level. It was also found that combining ISTV and historic volatility yields a similar price change prediction as the commonly used implied volatility formula. Other events where sentiment data could be used to predict outcomes include elections, education, housing, and consumption.

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