

A Study on News Sentiment and Share Price Movement

Introduction

This is the first in a series of research that study the use of alternative data in financial market investment. In part one, we will explore the use of news sentiment (sentiment analysis on news articles). The objective is to examine how a company's share price moves with its news sentiment. Does share price movement tracks news sentiment?

Methodology

My EG Services Bhd (MYEG) (Stock code: 0138) is chosen as the subject company. After the surprised victory of Pakatan Harapan in the last election in May 2018, MYEG has suffered a sharp selldown in its share price which resulted in nearly RM2.8 billion wiped out from its market capitalization as the company was perceived to be linked to the previous government, Barisan Nasional. As a result, there are plenty of news articles related to it that could make up for an interesting study. The Edge Malaysia, a financial news publisher, is chosen as the source of news articles. As a preliminary research, the time frame of this study is one year (from Feb 2018 to Feb 2019).

Total of 68 news articles were mined from The Edge Malaysia's website via web scraping as the publisher does not provide API to retrieve the news articles. The news articles were analysed using NLTK's Sentiment Intensity Analyzer. Each point in the first chart represents the polarity score for one news article where the score ranges from -1 (Extremely Negative) to 1 (Extremely Positive). Then the overall sentiment for each day was calculated by aggregating and averaging the polarity scores to produce the second chart to show the movement of news sentiment. Lastly, the share price chart was plotted using daily closing price for a visual comparison with the news sentiment.

Findings

- After the election in May 2018, MYEG has suffered a sharp selldown in its share price from a historical high of RM3.03 to a low of RM0.685. The negative reaction in share price was in tandem with the negative polarity scores as shown in the first and second chart.
- However, the negative sentiment was short-lived and has since recovered to positive zone for most of 2018. The positive sentiment has helped somewhat in the recovery of the share price but the recovery was weak to say the least.
- The recent bad news in the form of a warning by The Malaysia Competition Commission (MyCC) over MYEG's non-compliance of an order to pay a penalty — accumulated to RM9.46 million to date — for abusing its dominant position, has once again driven the sentiment to negative region and suppressed the recovery of the company's share price.
- It is interesting to note while the recent bad news and its associated polarity scores were extremely negative (close to -1), the negative reaction in share price was somewhat milder. Perhaps the negative sentiment has reached a saturation point? That further negative sentiment could not drive the share price to a level lower than May 2018's low? Only time will tell.
- Word cloud visualization on the frequently-used words in the news articles include words related to the plunging share price and drop in market capitalization (reflected in the words like "share", "price", "sen", "million") but also include words like "government" and "malaysia" which showed the company's reliance and close-link with the (previous) government, so much so that the mentioning of the "government" is unavoidable in the news reporting on MYEG.

Disclaimer: This research is for education and information purposes only. It is not a recommendation to buy or sell any security. Always seek the advice of a qualified securities professional before making any investment in any security.

The figure consists of three vertically stacked time-series plots sharing a common x-axis representing time from March 2018 to March 2019.

- Top Plot:** Displays the 'Polarity Score' as blue dots. The y-axis ranges from -1.00 to 1.00. Most data points are positive, indicating positive sentiment, with a notable cluster of negative scores (down to -0.9) around May 2018.
- Middle Plot:** Displays the 'Daily Polarity Score' as a continuous grey line. The y-axis ranges from -1.00 to 1.00. The line shows high volatility, with significant drops to -0.9 in May 2018 and -0.95 in January 2019.
- Bottom Plot:** Displays the 'Share Price' as a continuous blue line. The y-axis ranges from 1.0 to 3.0. The price starts at approximately \$2.7, drops sharply to a low of about \$0.8 in May 2018, and then fluctuates between \$1.0 and \$1.8 for the remainder of the period.

