

Brain Sentiment Indicator

Product Summary

Brain Sentiment Indicator monitors public financial news for 10000+ global stocks, major commodities, forex and crypto from many thousands of financial media sources in 33 languages. An aggregation by sector is also available.

The sentiment scoring technology is based on a combination of various natural language processing techniques.

The sentiment score assigned to each stock is a value ranging from -1 (most negative) to +1 (most positive) that is updated with a daily frequency.

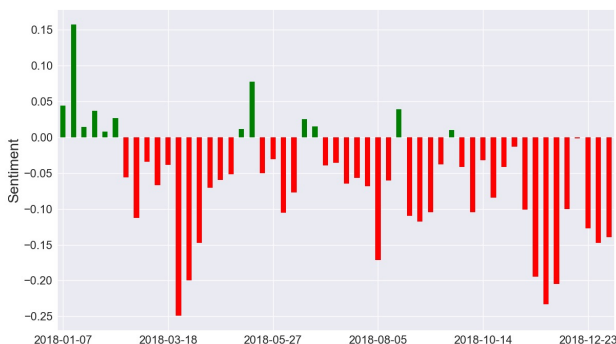
The sentiment score corresponds to the average of sentiment for each piece of news and it is available on three time scales; the previous day, the previous 7 days and the previous 30 days.

Methodology

1. Financial news are collected every few minutes from various financial media
2. Brain engine assigns a specific category to each piece of news (e.g. "patent win" or "contract lose") using semantic rules. Each category has a predefined value of sentiment.
3. If the categorization fails a bag of words approach is used based on dictionaries customized for Financial news. The approach includes a strategy for negation handling.
4. Repetition of similar news is kept into account in the sentiment aggregation.

Example for One Stock

The following graph shows the sentiment score for *Facebook Inc.* stock for 2018. To be noted the negative peak in March 2018 corresponding to a large flow of negative news regarding the "Cambridge Analytica scandal".



Delivery Settings

The sentiment data for each piece of news is averaged on three time scales: the previous day, the previous 7 days and of the previous 30 days. The data are exported daily and are available by 9:00 AM UTC on a dedicated S3 bucket. Historical data is available from 2016 onwards.

Example for Sectors

The sentiment of each sector is calculated as an average of the sentiment based on financial news of all stocks belonging to the sector. In the following plot we compared the strategy selecting the top three sector ETFs by sentiment (green line, label TOP_SENTIMENT) with the following three benchmarks:

- Each sector ETF with uniform weights (blue line, label UNIFORM)
- A standard momentum strategy with the top three sector ETFs that had the best return in the previous month (orange line, label MOMENTUM)
- strategy with the bottom three sector ETFs by sentiment (red line, label BOTTOM_SENTIMENT)

The top sentiment portfolio has a better performance in terms of Sharpe ratio (1.03) compared to the benchmark UNIFORM (Sharpe ratio 0.67), the benchmark MOMENTUM (Sharpe ratio 0.54) and the bottom sentiment strategy BOTTOM_SENTIMENT (Sharpe ratio 0.41) in the interval January 2017 - March 2024.



Contacts

BRAIN is a Research Company that develops proprietary signals based on alternative data and algorithms for investment strategies on financial markets.

- EMAIL: contact@braincompany.co
- WEB: <https://www.braincompany.co>

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