# **)** B R A I N

## Brain Combined Sentiment (BCS) from News, Calls and Filings

#### **Product Summary**

The Brain Combined Sentiment dataset provides aggregated sentiment metrics for U.S. stocks, derived from multiple textual financial sources, including news articles, earnings calls, and filings. These metrics are calculated using different Brain datasets and combined into a single file for the convenience of investors interested in stock sentiment analysis.

The provided sentiments metrics are the following:

- Sentiment and volume from news calculated over the past 30 days
- Sentiment from the most recent earnings call of the
  Management Presentation section
- Sentiment from the most recent 10-K filing calculated on the whole document
- Combined sentiment score calculated as the average sentiment across all sources

Each input source and its associated sentiment operates on a distinct time scale: sentiment from news is aggregated over the past month, sentiment from earnings calls is updated quarterly, and sentiment from 10-K filings reflects an annual time scale. The sentiment of each source is normalized in a point-in-time, walk-forward manner to enable the comparison and combination of the various sentiment scores from various sources.

For each source, **the dataset also includes the temporal context of the associated sentiment data**, specifically: the number of days used to aggregate sentiment from news, the number of days since the most recent earnings call, and the number of days since the most recent filing report.

The temporal information can be used by the user for further weighting each sentiment source according to their specific requirements.

### **Technical Information**

- New input data, including news, earnings calls, and filings for each stock, are monitored daily. Financial news is collected from financial media through various news aggregators.
- The financial sentiment for each input source is calculated using Brain's proprietary Natural Language Processing (NLP) and Large Language Model (LLM) approach. The sentiment data from the sources is then aggregated at the stock level.
- The dataset files are delivered via FTP or an AWS S3 bucket. Daily historical updates, starting from 2017, are available for testing purposes.

#### Some Examples

Sentiment of AAPL from Multiple Sources and Combined Result



Sentiment of MSFT from Multiple Sources and Combined Result



#### **Reference Brain Datasets**

For more details, please refer to the following Brain dataset:

- Brain Sentiment Indicator
- Brain Language Metrics on Earnings Calls
- Brain Language Metrics on Company Filings

### Contacts

BRAIN is a research focused company that develops proprietary signals based on alternative data and algorithms for investment strategies on financial markets.

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