

# Meeting note

With the help of sponsor, we successfully logged into the database, and with the help of Professor Murphy, we opened up new ideas and shifted the focus of the task to the processing and analysis of the data, extracting company names, industries, and countries that we were more concerned about.

## This week's work

Completed the overall configuration and synchronization of the environment between team members, and established a public github Repository

Further explored the sample data provided by the company, and completed the task of uniting Reference and Sentiment data as assigned in last week's meeting

Initially built the backtesting framework

Further read some related reports and literature, such as Do Social Media Trump News? The Relative Importance of Social Media and News Based Sentiment for Market Timing

And based on the above reading experience, we re-planned the task plan.

Multiple stocks often appear in the same reports. Is there any correlation between the returns of these stocks?

## Talking note

page1

good morning Mr.Cai and Prof.Feng, Prof.Murphy.

page5

We combine the data from two different files and extract it into a single piece of data, so that we can subsequently batch process a large number of data files of the same type

Author Stan compiled a variety of TRMI indices and divided them into three groups by topic: sentiment, stock fundamentals, and political risk, and constructed a time series of monthly sentiment indicators from March 1998 to December 2017 using the end-of-month values of TRMI indicators, and assessed the correlation between the social media and news-based sentiment indicator series based on ADF tests, which was used to determine the interaction of the indicators. Finally author Stan constructed an investment strategy to account for potential correlations: if the monthly percentage change in either sentiment variable exceeds 10%, then invest 130% (or 70%) in the next month's index. If the change is less than  $\pm 10\%$ , then invest only 100% in the index. Using the monthly active

returns generated by this strategy (strategy return - market return), an annualized information ratio is calculated and the best performing news-based equity fundamental strategy is compared to the MSCI World Index with a cumulative excess return of 42%

Both the news-based and social media-based sentiment signals essentially capture similar information: the correlation coefficients for monthly changes in all three categories of indicators based on both sources are high, and the social media-based signal has a slightly higher correlation than the news-based signal, while there is also a positive correlation between the social media-based and news-based signals, indicating that the six signal variables contain roughly similar information.

News-based sentiment signals are more effective: social media-based sentiment and stock fundamental signals are dominated by news-based counterparts: the ratio of news-based information is almost always higher and the combined signals generate lower profits than news-only-based results. However, social media-based political risk signaling strategies generate more reliable returns than news-source-based strategies, but political risk indicators are quite volatile. The importance of social media signals has not increased over time with the proliferation of social media sources. At monthly frequencies, news source-based trumps social media-based as a market timing sentiment signal.