

# New algorithm uses Twitter to predict the stock market

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Researchers develop a way for traders to use Twitter to make better investment decisions

New research from RSM Rotterdam School of Management, Erasmus University has found that information taken from Twitter posts could be used to predict the stock market – and help traders to make better investment decisions.

Ting Li, Professor of Digital Business and Dr Jan van Dalen analysed over a million twitter messages that mentioned stocks listed on the S&P 100 share index.

The researchers then developed an algorithm that looked at the sentiment of the tweets and extracted distinct 'buy', 'hold' and 'sell' signals embedded in them - before comparing them to actual price fluctuations on the stocks over the following days.

They found that stocks that are tweeted bullish sentiments such as 'buy!' experience, on average, higher abnormal returns. The results also showed that the relationship between bullish language and increased stock performance was even stronger for influential Twitter users who are frequently retweeted and often mentioned - and that the number of tweets about a particular stock could predict trading volumes, volatility and follow-up return on a stock.

The results often showed that the more that Twitter users disagreed about a particular stock, the higher the trading volumes.

To test if these findings could be the basis for a profitable trading strategy, the researchers ran a 21 week simulation using the information from the study and found that, even taking transaction costs into account, the simulated returns beat the market.

Li says this could be useful for investors:

"This study shows the potential value of information on twitter for making informed trading decisions. In the simulation we showed that if you invested money in the S&P 100 and used the information gleaned from twitter using our algorithm, you would beat the market. You could invest in one company or a number, you could sell at the end of each day and reinvest the next or you could trade every other day or every 3, 4 or 5 days – and even when you take transaction costs into consideration, you'd still come out ahead."

Li adds, "This could be used by institutional investors or home-based day traders and proves that twitter isn't just noise – useful information can be extracted and could help investors make better decisions."

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For more information on the study, or to speak to Professor Ting Li, please contact Ian Hawkings at BlueSky PR – [ian@bluesky-pr.com](mailto:ian@bluesky-pr.com) or call +44 (0)1582 790 704