

MISQ Archivist

The Interaction Between Microblog Sentiment and Stock Return: An Empirical Examination

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Abstract

Opinion mining of microblog messages has become a popular application of business analytics in recent times. Opinions reflected in microblogs have provided businesses with great opportunities to acquire insights into their operating environments in real time. In particular, the relationship between microblog sentiment and stock return is of great interest to investment professionals and academic researchers across multiple disciplines. We empirically test this complex relationship in a comprehensive study. We perform vector autoregression on a data set containing close to 18 million microblog messages spanning four years at the market and the individual stock levels, and at the daily and the hourly frequencies. The results show that the influence of microblog sentiment on stock return is both statistically and economically significant at the hour level. Microblog sentiment is also largely driven by movement in the market. Moreover, stock return has a stronger influence on negative sentiment than on positive sentiment. These findings have important implications for both research and practice.

Keywords: Social media, microblog, stock return, vector autoregression, big data, sentiment analysis