

Assessment of Verbal Intervention Impact on the Dynamics of Financial Markets*

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Abstract

The need to quantify the impact of news on financial markets is increasingly relevant considering growing importance of social networks as an effective channel for distribution information. Considering information noise, it is necessary to choose the most effective methods that enable to determine in pure form the significance of particular news on the configuration of the dynamics of financial market instruments. Researchers who studied the influence of news on financial markets most often considered the analysis of market reaction to the released news using nonparametric tests. However, it is useful to investigate changes deeper to determine the impact of news over the longer term. On a sample of news messages on the social network Twitter, we considered four methods of evaluation, namely, the Barndorff-Nielsen-Shephard model, testing the residuals of the trend model, the method of comparing the beta coefficients of the financial instrument trend before and after the news appearance, and variance analysis.

We have determined that the structure of financial market dynamics has become even more complex under the influence of news messages. At the same time, we can definitely point only to the growth of volatility after news release. The impact on the market dynamics did not appear immediately after the messages release but on average only in 15 minutes, and it can last up to an hour after the publication. As a result, the significance of events published on social networks should be assessed only through the changes in the volatility of a specific market instrument.

Keywords: Social Media, Market Dynamics Analysis, Impulse, Price.

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