Abstract

In this thesis, analyses are conducted to determine whether various measurements of social media activity, including the sentiment value of posts, can be drivers or even predictors of a change in a selected metrices of cryptocurrencies. The analyses are performed on data collected in one-hour and fifteen-minute time intervals from the February of 2021 until the November 2022. The results of the analysis show that variability of the closing price of Bitcoin can be to some extent explained by sentiment derivatives only. Furthermore, it was proven that sentiment derived from social media is significant when used as a predictor of a direction of a price change, under specific circumstances. These results oppose the previous studies, where sentiment was not recognized significant. Moreover, it was determined that considering one-hour intervals returns marginally better outcomes than in the case of shorter time intervals. The thesis outlines the challenges researchers can face when using this technique in their work.

Keywords

Cryptocurrencies, Bitcoin, Social sentiment, Sentiment analysis, Twitter, Social media, Cryptocurrency exchange

Title

Examining the Interaction between the Cryptocurrency Market Development and Activity on Leading Social Networks