Abstract

The topic of our thesis is the examination of the relationships among cryptocurrencies using Google Trends. In our thesis, we concentrated on four cryptocurrencies, namely: Bitcoin, Litecoin, Ethereum Classic and Ethereum.

We obtained the data of daily opening prices, daily trading volumes and daily Google Trends queries in order to examine the relationships among the four cryptocurrencies. Applying the Vector autoregression model and Vector error correction model, we constructed four models. The first model contains only four time series of daily prices of cryptocurrencies. The second model is the first model enriched by the respective four time series of Google Trends queries. The third model contains the four time series of daily trading volumes of the four cryptocurrencies. The fourth model is the third model enriched by the four time series of Google Trends queries of respective cryptocurrencies. Then we applied the Impulse response analysis and the Forecast error variance decomposition in order to find some relationships among the variables. We found that there is some correlation among prices, volumes and Google Trends queries containing the names of the four cryptocurrencies. According to our results acquired by the Forecast error variance decomposition, in all our models, Bitcoin has the strongest explaining power of the variation of the variables.