Abstract

This paper examines the potential of Bitcoin, a decentralized digital currency, to pose competition to fiat currencies. To accomplish that, Bitcoin would have to become efficient as a store of value. Thus far, high volatility makes it inferior in that respect. We analyze the dynamics and drivers of Bitcoin volatility using GARCH and HAR models. Moreover, we test for presence of asymmetries displayed by stock, commodity and currency markets. That way we can conclude, whether volatility of Bitcoin behaves similarly to currencies, commodities or stocks. Lastly we reveal interconnections between these markets and market for Bitcoin. We find significant evidence for the leverage effect documented for stock market. Furthermore, the effect of trading volume, documented for currency markets, displays an opposite sign in our research. Results of spillover estimation suggest Bitcoin is the most interconnected with commodity market. Thus, we conclude Bitcoin does not behave similarly to currencies in terms of volatility; hence is not a good candidate to substitute them.

JEL Classification E1, G1, G2, O3

Keywords Bitcoin, volatility, GARCH, leverage effect

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