

## ABSTRACT

*Bitcoin is one of the cryptocurrencies that had a high rate of return since its appearance in 2009. Over time, Bitcoin transactions are carried out almost all over the world which makes Bitcoin must have an exchange rate against any foreign currency in order to facilitate the transaction process. However, the exchange rate of Bitcoin against any foreign currency is considered to have high volatility making it difficult to determine the real value of Bitcoin.*

*The main purpose of this research is to find the value of Bitcoin, especially US Dollar and Rupiah currencies. The data used in this research is bitcoin exchange rate against USD and IDR obtained from website Investing.com. The sample of this research is all spot, future, and forward exchange rates (1 month, 3 months, 6 months, and 12 months) of Bitcoin and USD/IDR from 2017 to 2019.*

*The test is carried out using the weak market efficiency hypothesis and the semi-form market coefficient hypothesis. The data processing methods are used the stationary test (ADF, KPSS, and ERS) to test the efficiency of the weak form market and the cointegration test (Johansen Cointegration) with the VECM model to check the efficiency of the semi-strong market.*

*The results show that the Bitcoin exchange rate does not have a unit root so it is inefficient in a weak form and has a negative effect on the USD / IDR exchange rate so that it is not efficient in semi-strong form as well as on the US Dollar and Rupiah exchange rates. This happens because Bitcoin is not a legal currency in Indonesia. So that the Bitcoin exchange rate against the US Dollar and Rupiah exchange rates is biased because it does not reflect the available information, both historical information and public information.*

*The results of this study are expected that further researchers can develop the results of research that has been conducted by researchers and use other variables that cannot be involved in this study. In addition, it is hoped that further research on Bitcoin transactions is legal as a medium of exchange in Indonesia.*

**Keyword:** *bitcoin exchange rate, market efficiency, unit root, cointegration*