

# Interest Rate Sensitivity of Traditional, “Green” And “Stable” Cryptocurrencies

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## Abstract

The aim of this research is to analyse the sensitivity of traditional, “green” and “stable” cryptocurrency returns to changes in nominal interest rates during the period between April 2019 to April 2023. Specifically, this study proposes a model to examine the relation between these three types of cryptocurrency returns and variations in the SP500 index and in the nominal interest rates. The regression technique used to estimate this model is the quantile regression approach to check whether the sensitivity of the returns of these three types of cryptocurrencies is affected by the state of the economy. The main results of this study highlight that stablecoins such as Tether are more sensitive to changes in nominal interest rates at economic peaks and also there is a positive and significant relation between the SP500 index and all the cryptocurrencies in bearish periods. Furthermore, this model shows greater explanatory power in the lower and higher quantiles, showing a U-shaped pattern over the different quantiles and reaching its maximum values in bearish periods of the crypto market (at quantile 0.04), followed by bullish periods (at quantile 0.96). Therefore, the suitability of the quantile regression approach for the estimation of the model is demonstrated, as its explanatory power is more relevant in the extreme quantiles, related to extreme phases of the economy. In conclusion, the sensitivity of the three types of cryptocurrencies’ returns to changes in the SP500 index and in the nominal interest rates is higher in extreme market conditions.

**Keywords:** cryptocurrency returns; market conditions; nominal interest rates; quantile regression; SP500 index