

Review of: "Unpacking the Complexities of Bitcoin Volatility: A Time Series Data with Long-term Memory or Long-range Dependence"

Allbens Atman¹

¹ Centro Federal de Educação Tecnológica de Minas Gerais

Potential competing interests: No potential competing interests to declare.

The article presents a numerical analysis of the volatility of cryptocurrency prices during the crisis periods, the COVID-19 pandemics and Russia-Ukraine war. The author shown that the fractionally integrated models, in particular the FIEGARCH class, are good estimators for the daily conditional volatility of the Bitcoin price, displaying strong correlations during crisis periods. The authors presents analysis for the crisis period as well for inter-crisis periods. As general conclusion, the author advise caution when investing in Bitcoin as negative returns, since these periods are subjected to greater volatility, potentially leading to significant losses.

Despite the relative success of the analysis using fractionally integrated models, I suggest the authors to include other methods to evaluate the volatility based in entropic measures. Entropy is a key concept to analyze markets since it can be associated to crisis periods (please see Gonçalves et al [<https://doi.org/10.1016/j.physa.2019.03.029>] for further details). Maybe integrating the entropy concept in the analysis would be possible to quantify the influence of armed conflicts or pandemics in the Bicoín market.

Minor Points:

1. Please verify typos in the document:

1. "stocks markzt" → "stocks market" –2nd paragraph;
2. "bitcoin" → "Bitcoin" – 2nd paragraph;
3. Table 1: "Events date" seems more appropriated than "Events type";
4. 1st paragraph of conclusion: "In our case, the variable is the Bitcoin." → "In our case, the variable is the Bitcoin price."