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Abstract

This paper explores persistence of eight largest cryptocurrency markets using daily data from 25/08/2015 to 13/03/2018, across time and trading scale. Employing ARFIMA-FIGARCH class of models under two different distributions and a modified log-periodogram method, we generally uncovered informational (in)efficiency and volatility persistence to be highly sensitive to time-scale, the measure of returns and volatilities, and regime shift. In particular, evidence of persistence was found to be concealed in full-sample conditional returns and a break regime, where three crypto markets showed characteristics contrary to the Efficient Market Hypothesis. These results suggest that empirical examination of persistence in markets should be mindful of volatility measures, trading horizons, and switching regimes. More so, scale-conscious traders or investors could rely on our findings and the implications thereof in making investment decisions in the market.

Keywords: Crypto markets; Trend trading; Persistence; MODWT; Investment scales.

JEL classification codes: C22; G01; G11; G15.

Highlights

- Long-memory and informational (in)efficiency of major cryptocurrencies are examined.
- Three markets showed informational inefficiency for the aggregate return series.
- Efficiency and volatility persistence are dependent on scale and data variations.
- Manipulative trend trading excessive gains are less likely in the long-run scale.

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