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# Bitcoin for energy commodities before and after the December 2013 crash: diversifier, hedge or safe haven?

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## ABSTRACT

We study the relationship between Bitcoin and commodities by assessing the ability of Bitcoin to act as a diversifier, hedge, or safe haven against daily movements in commodities in general, and energy commodities in particular. We focus on energy commodities because energy, in the form of electricity, is an essential input in the Bitcoin production. For the entire period, results show that Bitcoin is a strong hedge and a safe-haven against movements in both commodity indices. We further examine whether that ability is also present for non-energy commodities and our analysis show insignificant results when energy commodities are excluded from the general commodity index. We also account for the December 2013 Bitcoin price crash and our results reveal that Bitcoin hedge and safe-haven properties against commodities and energy commodities are only present in the pre-crash period, whereas in the post-crash

period Bitcoin is no more than a diversifier. In addition to uncovering the time-varying role of Bitcoin, we highlight the dissimilarity in the dynamic correlations between the extreme downward and extreme upward movements.

KEYWORDS:

Cryptocurrency Bitcoin crash commodities energy commodities diversifier hedge safe haven

JEL CLASSIFICATION:

C1 G1 Q4

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## Highlights

- We uncover the time-varying diversification ability of Bitcoin
- Bitcoin is a strong hedge and safe haven for energy commodities, but not for non-energy commodities.
- The price crash of 2013 affects the relation between Bitcoin and energy commodities
- Dynamic correlations between the extreme downward and upward movements are dissimilar

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## Disclosure statement

No potential conflict of interest was reported by the authors.

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## Notes

<sup>1</sup> For detailed information on the principles of Bitcoin, the reader can refer to Segendorf ([2014](#)) and Dwyer ([2015](#)).



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