

Commodities and cryptocurrencies in the time of COVID-19

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What relationships might we extract from an examination of the changes in values of cryptocurrencies and commodities before and during the COVID-19 pandemic. New work published in the International Journal

of Business Performance Management, looks at the relationship and causality between cryptocurrencies, commodities, currencies, indexes and web search results over this period. The team demonstrated that they could model the effects with up to 95% accuracy for the price of the cryptocurrencies they examined—Bitcoin and Ethereum. Moreover, they obtained strong evidence that web search traffic correlates with the prices of those two cryptocurrencies while the price of gold affects Bitcoin and the value of the Euro affects Ethereum. The web is perhaps the main source of information with respect to cryptocurrency investments so this is perhaps not surprising.

Deni Memic, Mohamed Noor, and Saif Almehairi of the Higher Colleges of Technology at Academic City, in Dubai, United Arab Emirates, and Selma Skaljic-Memic of the Central Bank of Bosnia and Herzegovina, in Sarajevo, used high-frequency data for [prices](#) of the cryptocurrencies Bitcoin and Ehtereum and two "traditional" commodities Crude Oil WTI futures and Gold futures. In addition, they examined the Euro versus US Dollar and the Euro versus Swiss Franc exchange rates, and an equity index represented by the Dow Jones Industrial Average. Google Trends data gave them a measure of search results on the worldwide web pertinent to the cryptocurrencies of interest.

"Our goal was to observe the relationship and causality between cryptocurrencies on one, and commodities, currencies, equity indexes and web search results on the other side," the team writes. It was quickly apparent that the average prices of the Dow Jones Industrial Average and gold during the COVID-19 [period](#) of 2020 were all above their historical averages, suggesting that investors turned to those "safe havens" or defensive assets in the pandemic crisis. However, somewhat surprising is that Bitcoin too was at an above average price during this period despite its reputation as a riskier investment option than stocks and gold. The team found that all assets with the exception of crude oil offered positive

returns in the period before COVID-19 but most assets gave significant negative returns during the COVID-19 period studied. Volatility was very high during this period.

Conventional assets have been the subject of much research for many years. The advent of cryptocurrencies adds another branch to what academics and practitioners alike need to focus on to understand the broader financial markets and the shifting world of investment. The emergence of a pandemic offered opportunities for some and retrospective analysis could be used to guide predictions and responses in finance to subsequent crises.

More information: Deni Memic et al, Relationship and causality between cryptocurrencies, commodities, currencies, indexes and web search results during and prior to the COVID-19 pandemic, *International Journal of Business Performance Management* (2021). [DOI: 10.1504/IJBPM.2022.119569](https://doi.org/10.1504/IJBPM.2022.119569)

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