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Dynamics of Selected Cryptocurrencies vs Stock Index vs Gold during Economic Downturn*

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Abstract

This article analyzes the volatility and returns of cryptocurrencies compared to traditional investment assets such as gold and the S&P 500 index, aiming to provide insights into the risks and benefits of these investment options. The motivation for the study is the growing importance of cryptocurrencies in the global financial system and the need to understand their role during periods of economic crises. The gap in the literature lies in the limited research focused on the behavior of cryptocurrencies during different types of crises and their comparison with traditional safe-haven assets. The methodology involves correlation analysis, examining the relationships between Bitcoin, Ethereum, Litecoin, gold, and the S&P 500 index since 2008, along with volatility analysis during periods of crisis. A secondary objective of the study is to verify the scientific question of whether cryptocurrencies have exhibited different behavior during economic crises since 2013.

The findings reveal a strong positive correlation between Bitcoin, Ethereum, and the S&P 500 index, indicating their sensitivity to macroeconomic factors. Cryptocurrencies also demonstrate significantly higher volatility compared to traditional assets, making them an important tool for investors seeking portfolio diversification. Bitcoin shows a moderate correlation with gold, suggesting it can partly function as a store of value, while Litecoin exhibits weaker ties to traditional assets. The research further confirms that cryptocurrencies, particularly Bitcoin, respond differently to economic crises—both in developed economies and during global downturns. During periods of uncertainty, Bitcoin often behaved more like a speculative investment rather than a stable safe-haven asset.

Keywords: bitcoin; S&P 500 index; correlation analysis; financial crisis; volatility.

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