Tracking Performance of Bitcoin and Gold Leveraged ETFs

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Abstract

This study investigates the tracking performance of Bitcoin leveraged exchange-traded funds (LETFs) in comparison with Gold LETFs, offering the first systematic analysis of cryptocurrency based LETFs against a more mature asset class. Using daily data on funds with leverage ratios of 1×, 2×, −1×, and −2×, we evaluate performance over 1-, 5-, and 20-day holding periods and decompose the total return deviations into compounding deviation, NAV deviation, and inefficiency deviation components. Our results show that compounding deviation is the dominant source of multiple-trading-day tracking error, with its impact amplified under Bitcoin's extreme volatility. Whereas Gold LETFs exhibit NAV deviations consistent with cost-of-carry predictions, Bitcoin LETFs show no such pattern, reflecting the mixed influence of investor sentiment, liquidity frictions, and unregulated trading. Inefficiency deviations are transitory and economically minor in both markets, though they are somewhat larger and more volatile for Bitcoin LETFs. These findings provide new insights into the risks and tracking performance of cryptocurrency LETFs and carry important implications for investors, portfolio managers, and regulators.

JEL Classification: G11, G12, G14.

Keywords

Leveraged Exchange-Traded Funds, Tracking performance, Cryptocurrency, Compounding Deviation, Bitcoin and Gold Futures.

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