

Analyzing the Impact of Monetary Policy on Cryptocurrency Markets: A Case Study of Bitcoin and Ethereum

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Abstract. This study examines the interactions between monetary policy changes and cryptocurrency market dynamics, focusing specifically on Bitcoin and Ethereum as case studies. The research utilizes econometric models to analyze historical data from the past decade, aiming to uncover how shifts in interest rates and inflation expectations impact these two prominent digital currencies. Through a comprehensive empirical analysis, we find that monetary policy significantly influences cryptocurrencies, with variances observed between Bitcoin and Ethereum. Our findings contribute to the burgeoning body of literature on digital assets and have practical implications for investors and policymakers in navigating the evolving financial landscape.

Keywords: Monetary Policy, Cryptocurrency, Bitcoin, Ethereum, Econometric Analysis, Digital Assets, Market Dynamics, Financial Stability, Economic Impact

Introduction

The rapid emergence of cryptocurrencies, particularly Bitcoin and Ethereum, has transformed the landscape of financial markets, posing significant challenges and opportunities for economic stability. As of 2024, the global economy continues to grapple with the repercussions of fluctuating monetary policy, which has evolved in response to unprecedented fiscal stimuli and inflationary pressures. Understanding the relationship between traditional monetary policy and the nascent cryptocurrency markets is crucial for economists, investors, and regulatory bodies alike. The dynamic interplay between interest rates, inflation expectations, and cryptocurrency valuations raises pertinent inquiries regarding the efficacy of conventional economic models in predicting the behavior of these digital assets. Cryptocurrencies operate in a decentralized environment that often contrasts

with the regulatory frameworks governing fiat currencies. This dichotomy necessitates a nuanced approach to analyzing how macroeconomic shifts influence digital currencies. Given the increasing institutional adoption of Bitcoin and Ethereum, it is imperative to dissect how monetary policy measures, such as interest rate adjustments and quantitative easing, propagate through cryptocurrency markets. This paper seeks to bridge the gap in the existing literature by providing empirical evidence and a case study that elucidates these complex interactions. To achieve this, we conducted an extensive econometric analysis employing time-series data from the past ten years. We deploy a variety of econometric models to capture the nuances of market reactions to monetary policy announcements, ultimately contributing to a more comprehensive understanding of cryptocurrency market behavior. Our findings not only enhance theoretical discourse but also offer practical guidance for both investors and policymakers navigating these turbulent waters. The structure of this paper is as follows: we begin with a literature review that contextualizes our research within the broader debates on monetary policy and digital assets. Next, we outline our methodology and data sources, followed by a presentation of results and discussion of their implications. Finally, we conclude with recommendations for future research in this burgeoning field.

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