

## BITCOIN AND SYSTEMIC RISK

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### ABSTRACT

*This study examines the potential risk reducing benefits of Bitcoin against systemic risk in 28 countries from 2011-2020. The results indicate that Bitcoin provides a safe haven in times of extreme financial market volatility and during periods of financial crisis.*

**Keywords:** Bitcoin, Covid-19, Dynamic conditional correlation, Pandemic, Systemic risk, Safe haven

### 1. INTRODUCTION

This paper investigates Bitcoin as a hedge and safe haven against systemic risk. We are motivated by the recent literature that documents the hedge and safe haven properties of the cryptocurrency. Studies show that Bitcoin behaves like gold and can be used to hedge against stocks and currencies (Dyhrberg [2016]).

Bitcoin shares some properties similar to gold; It is a stateless currency, it is scarce, it is costly to extract, it is recognized internationally as a store of value, and can be held anonymously (Baur et al. [2018]).

However, there are also dissimilarities between the two: Unlike holding and trading physical gold, Bitcoins are maintained virtually in digital wallets and transactions are recorded on blockchain (Böhme et al. [2015]). Furthermore, it has been suggested that gold offers more store-of-value (Dyhrberg [2016]) and flight-to-quality (Klein et al. [2018]) benefits than Bitcoin.

Since gold offers protection against systemic risk (Chiu and Ratner [2014]), the linkage between Bitcoin and gold implies that Bitcoin could provide potential insurance benefits to investors against financial market turmoil.

Bouri et al. [2017a] and Demir et al. [2018] have suggested that Bitcoin can be used as a hedging tool in extreme times of uncertainty. However, it has more recently been argued that, while Bitcoin's volatility dynamics are similar to those of gold, "from a portfolio perspective, Bitcoin does not serve as a safe-haven which is a prominent feature of Gold" (p. 106, Klein et al. [2018]). In light of this conflict, our goal is to investigate the potential of Bitcoin as an alternative hedging tool to gold without suggesting that Bitcoin and gold are interchangeable.

We study a broad sample of 28 developed and emerging market countries and present three main findings.

First, Bitcoin is generally not a hedge against systemic risk. Second, in times of extreme financial market volatility, Bitcoin is a safe haven in most countries. Third, Bitcoin is generally a safe haven in some countries during the European sovereign debt crisis, Brexit and COVID-19 pandemic.

### 2. LITERATURE REVIEW

Researchers have investigated the use of blockchain in many different fields, including healthcare (Kuo et al. [2017]), supply chain (Kshetri [2018]) and economics (Eskandari et al. [2019], Huckle et al. [2016] and Saraswat et al. [2017]).