

## The comparative study of Bitcoin market in the UK and China

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**Abstract:** Bitcoin has achieved some popularity in recent years in a variety of countries, and its development differs per region. In light of this, this paper investigates the Bitcoin markets in China and the United Kingdom. However, there is still a scarcity of Bitcoin research in China and the United Kingdom. The current research looks into the Bitcoin Blockchain Principle, the CNY/GBP/Bitcoin Exchange Rate, and the laws against Bitcoin in China and the United Kingdom. After examining the Bitcoin markets in China and the United Kingdom, this report concludes that while Bitcoin is not a legal tender in either country, it nonetheless has a sizable market. This research examines the state of Bitcoin development and trends in China and the United Kingdom.

### 1. Introduction

Bitcoin is the most well-known cryptocurrency, which operates without a central authority or banks thanks to peer-to-peer technology; the network manages transactions and issues Bitcoins collectively. Bitcoin reached \$67,000 on November 9, 2021, giving it a market capitalization of over \$3 trillion. As a result, Bitcoin-related questions have gotten a lot of attention. A lot of long-term research on Bitcoin have been published, detailing its principles and risks. However, not much is known about Bitcoin's impact and growth in China and the United Kingdom.

This study uses a mixed methodology approach that included investigation, literature research, qualitative analysis. This article takes advantage of access to Bitcoin-related information to analyze whether and how Bitcoin has affected China and the US, as well as the development of Bitcoin in these two nations. By investigating Bitcoin, this study hopes to add to this emerging field of inquiry.

The study is divided into six sections, including this introductory section. Section 3 follows the introduction with a discussion of Bitcoin based on previous material. The study's primary components are section 3 and 4, which deal with Bitcoin's impact on finance and economics, as well as its local policy.

### 2. Literature Review

Bitcoin is a cryptocurrency that has gained a lot of attention as a result of its revolutionary nature, simplicity, transparency, and growing popularity, and it is now the most well-known of all the virtual currencies. The emergence of Bitcoin, on the other hand, has always been contentious.

Studies in the field of cryptocurrency began in the early twenty-first century, and the most popular cryptocurrency at the time was Bitcoin. Several hypotheses about Bitcoin have been offered, some concentrating on its principle and effect, while others focus on its risks and local rules. Money isn't printed on the Bitcoin network; instead, it's 'mined', which makes great use of distributed computing power. Members of the network operate these 'miners' autonomously, using software designed to support the initial algorithm (Bradbury D.,2013). Bitcoin, according to some analyses, is the first widely adopted tool for ensuring absolute money supply scarcity. The total number of Bitcoins is always set at 21 million. Any type of money must have scarcity in order to be valued. Scarcity inhibits counterfeiting at the micro level, while it limits the increase of the monetary base and maintains price stability at the macro level (Bohme R. et al., 2015). Meanwhile, other academics studying Bitcoin have shown that the scarcity of economic products stems from their limited availability, not in general, but in relation to the specific goals that they can achieve (Campan, 1999). However, in order

for Bitcoin to become a legitimate currency on its own, its daily value must stabilize in order for it to be utilized as a store of value and a unit of account in the commercial market (Yermack D., 2015).

Moreover, various research has looked into Bitcoin services. The pioneer scholars who investigated why Bitcoin returns have been affected are Matkovskyy R. et al. Bitcoin returns deviate dramatically from their pre-launch aggregate movements during the launch of Bitcoin futures. Short selling became easier thanks to Bitcoin futures, which resulted in a steep decline in spot demand and, as a result, a drop in Bitcoin prices. This has created new chances for combined hedging and speculating alongside other products in other financial markets, and this dependency has increased the impact of Bitcoin futures following their inception (Matkovskyy R. et. al., 2019). The price of Bitcoin has decreased, and the market is inefficient, as previously stated in the literature. This is due to the fact that Bitcoin is still a relatively young investment asset. Because it is analogous to an emerging market, its efficiency is now low. However, as time passes and more investors examine and trade Bitcoin, it will become more effective (Urquhart, 2016).

Bitcoin is not without risk: 1. Dual-consumption attacks: Because Bitcoin transactions are irreversible, attackers can use it twice (Bradbury D., 2013). 2. Attacks on client-side code: Bitcoin is a currency mechanism, not a service layered on top of currency to make it useful. In this scenario, the attack takes use of a flaw in the source code (Bradbury D., 2013).

Another study compared the Bitcoin markets in the US and China. To begin with, Kajtazi A. et al.'s show that joining Bitcoin enhances portfolio returns in the majority of circumstances. Second, only when the US and China semi-constrained portfolios were not rebalanced and when the US semi-constrained portfolios were rebalanced did Bitcoin's returns fall. To be clear, while Bitcoin raises portfolio risk, it also enhances returns. According to an analysis of Bitcoin's annual performance under various conditions, there were no substantial disparities between Bitcoin's portfolios of US and Chinese assets (Kajtazi A. et. al., 2019). In conclusion, Bitcoin consistently generates returns related with enhanced portfolio diversification, although it has a minor impact on volatility reduction (Kajtazi A. et. al., 2019).

However, there are no studies comparing the Bitcoin markets in China and the United Kingdom in the primary literature. As a result, the gap will be introduced and studied in this study.

### **3. Methodology**

#### **3.1 Research Principles**

Positivism is a school of western philosophy that stresses sensory experience while rejecting metaphysical tradition. The positivist viewpoint is chosen in this study.

Aiming to understand Bitcoin market in the UK and China, this study principally conducts a research methodology of investigation, observation and secondary data.

#### **3.2 Research Data and Data Analysis**

Bitcoin is valuable because it can be used as a form of payment. Rather of relying on physical qualities (like gold and silver) or confidence from a central authority, Bitcoin has the mathematical properties of money (durability, portability, interchangeability, scarcity, divisibility, and easy identification) (like fiat money). In a nutshell, Bitcoin is backed by mathematics.

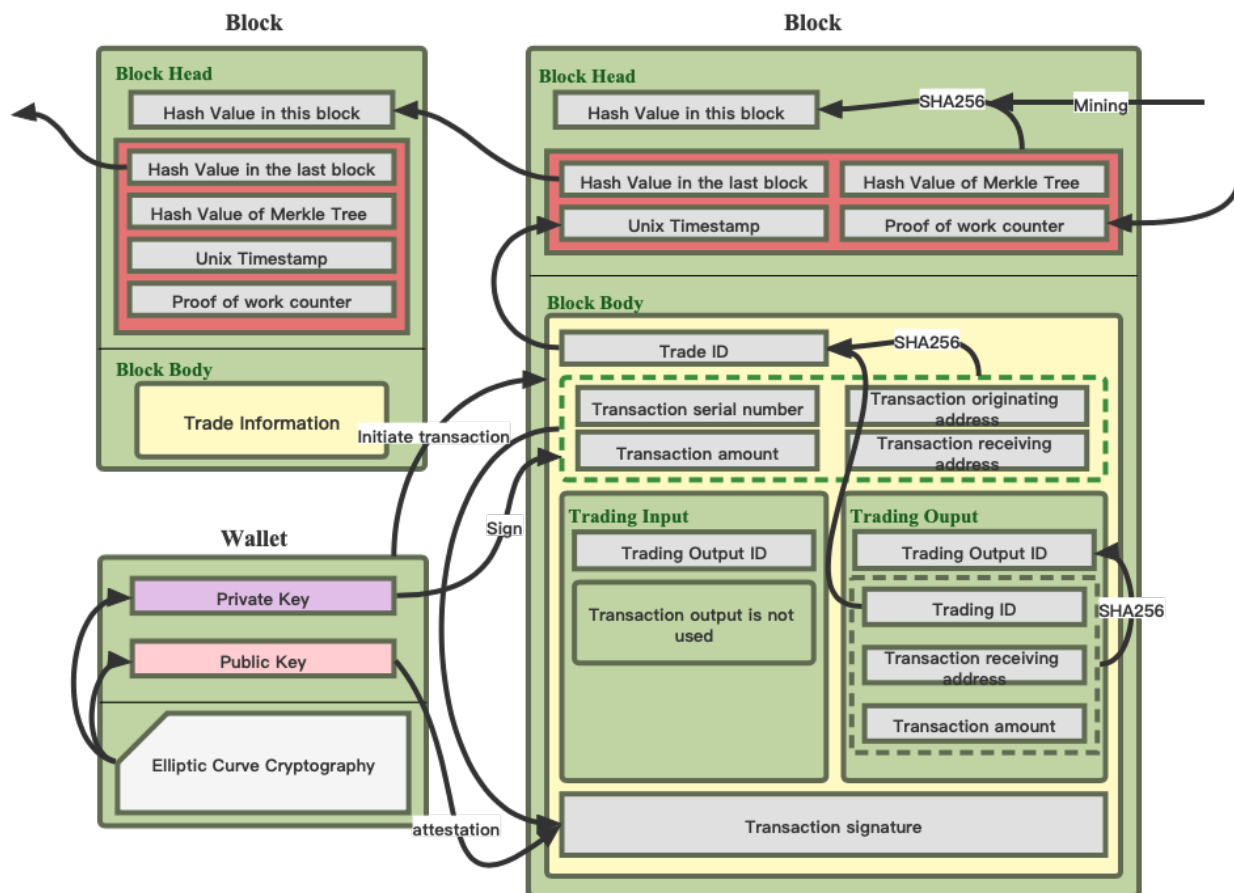


Figure 1. Bitcoin blockchain principle

(<https://wenku.baidu.com/view/5bd5c01974eeaeaad1f34693daef5ef7ba0d12a3.html>)

Figure 1 shows the Bitcoin blockchain principle: The Bitcoin blockchain is a public shared record that underpins the entire Bitcoin network. The blockchain contains all confirmed transactions. This allows the wallet to calculate the available balance and confirm that the consumer is spending his or her own Bitcoin in a new transaction. The blockchain's integrity and chronological sequence are guaranteed by cryptography. A transaction is a value transfer between two Bitcoin wallets on the blockchain. A Bitcoin wallet stores a private key, also known as a seed, which is used to sign transactions and provide mathematical proof that they originated with the wallet's owner. This signature also assures that no one may change the transaction once it has occurred. All transactions are broadcast amongst users, and the Bitcoin network usually confirms them within the next 10-20 minutes through a process known as mining. Mining is a distributed consensus system that adds transaction data into the blockchain in order to complete transaction confirmation. The data on the blockchain may be forcibly kept in chronological order by mining, ensuring the bitcoin network's neutrality and allowing the many computers on the network to agree on the system's status. Transactions must be bundled into a block that follows very tight cryptographic criteria and checked over the Bitcoin network in order to be confirmed.

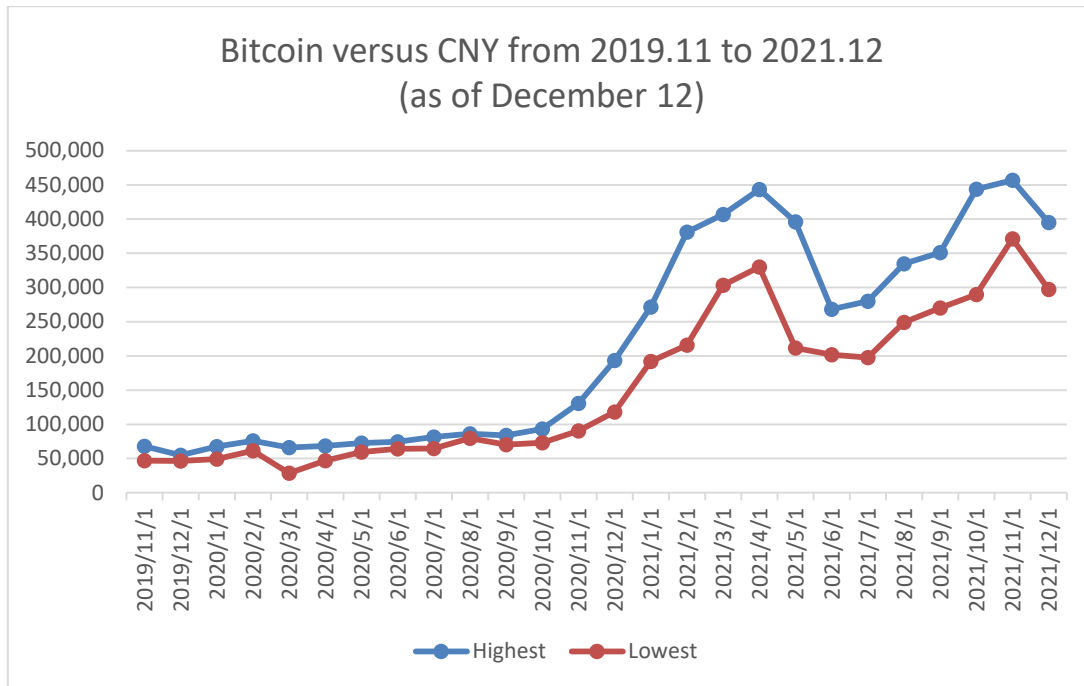


Figure 2. the exchange rate of Bitcoin versus CNY from 2020 to 2021 (as of December 12)

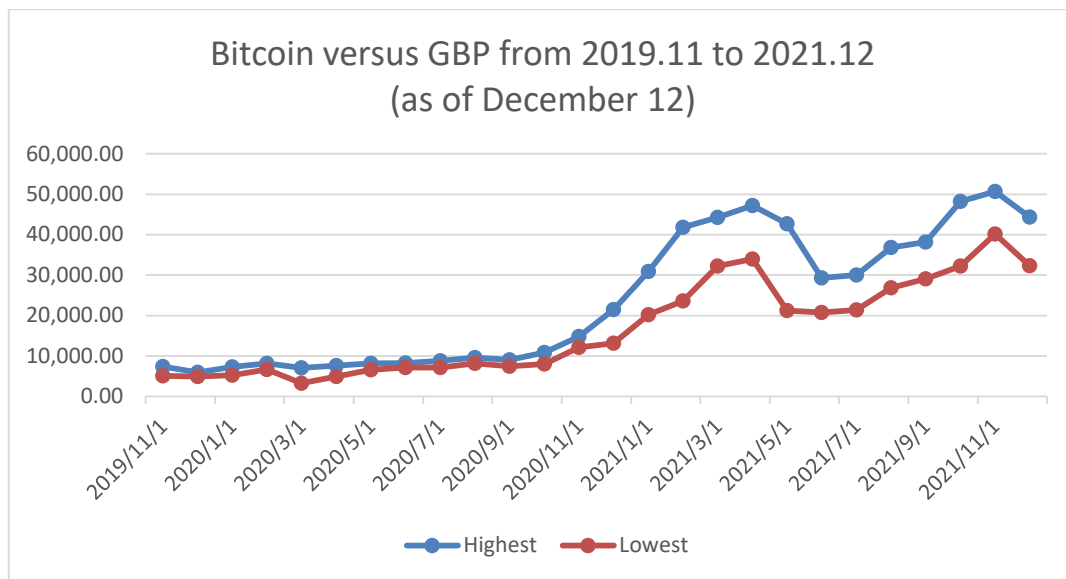


Figure 3. the exchange rate of Bitcoin versus GBP from 2013 to 2021 (as of December 10)

According to Figure 2, the CNY/BITCOIN exchange rate peaked in November 2021, at over 457,062, between November 2019 and December 2021. During the same time period, GBP peaked at 50,693.70 against Bitcoin, as seen in Figure 3. In November 2021, the value of Bitcoin soared as institutional money rushed into the market. The difference between this year's Bitcoin surge and the 2017 crypto bubble is the entry of institutional money. Individual investors were mostly responsible for the crypto bubble at the time. Second, macroeconomic circumstances favored Bitcoin, since the market was uneven between supply and demand, and while news of the COVID-19 vaccination boosted prospects of a speedy economic recovery, extra monetary stimulus may be required to keep the economy afloat. National currencies will devalue as a result of this. Bitcoin prices will rise to new highs as a result of these reasons, as well as low interest rates.

	Law in China	Link	Law in the UK	Link
Attitude towards Bitcoin	Virtual currencies do not have legal tender status. Ordinary people are free to participate at their own risk.	<a href="http://www.gov.cn/zhengce/2021-09/25/content_5639206.htm">http://www.gov.cn/zhengce/2021-09/25/content_5639206.htm</a>	There is no specific law strictly prohibiting bitcoin.	
Provisions for Bitcoin exchanges	<p>Financial institutions and payment institutions:</p> <ul style="list-style-type: none"> <li>● Bitcoin may not be used to price products or services</li> <li>● You may not buy or sell Bitcoin or act as a central counterparty</li> <li>● No insurance business related to Bitcoin shall be written or covered by insurance covering Bitcoin</li> </ul> <p>Do not directly or indirectly provide customers with other Bitcoin-related services</p>	<a href="http://www.gov.cn/zhengce/2021-09/25/content_5639206.htm">http://www.gov.cn/zhengce/2021-09/25/content_5639206.htm</a>	The Financial Conduct Authority has banned cryptocurrency derivatives from being offered to retail users in the UK.	<a href="https://www.coinfirm.com/blog/uk-cryptocurrency-regulations/">https://www.coinfirm.com/blog/uk-cryptocurrency-regulations/</a>
	Bitcoin Internet sites, as the main trading platforms of Bitcoin, shall be put on record with the telecommunication's regulatory authorities in accordance with the law.		To operate in the UK, crypto exchanges need to register with the Financial Conduct Authority -- unless they have applied for an e-money license.	

Figure 4. Comparison of Chinese and British laws against Bitcoin

Figure 4 classifies and compares laws against Bitcoin in China and the UK. It shows How China classifies Bitcoin as a unique Internet commodity that people are free to buy and sell at their own risk. However, despite its monetary nature, Bitcoin cannot and should not currently be used as a currency. Exchange tokens, on the other hand, are currently unregulated in the UK. This means that the FCA does not yet control the transfer, purchase or sale of these tokens, as well as the operation of the crypto asset exchange used for the token exchange.

The FCA banned the sale of cryptocurrency derivatives to retail customers in the UK due to: (1) the inherent nature of the underlying asset, which means there is no reliable reference to compute the value of digital assets, (2) secondary market abuse or crime, such as web of market penetration, (3) digital extreme price fluctuations, (4) retail customers' understanding of encryption monetary insufficiency, and (5) The lack of a legal purpose for retail consumers to invest in virtual assets.

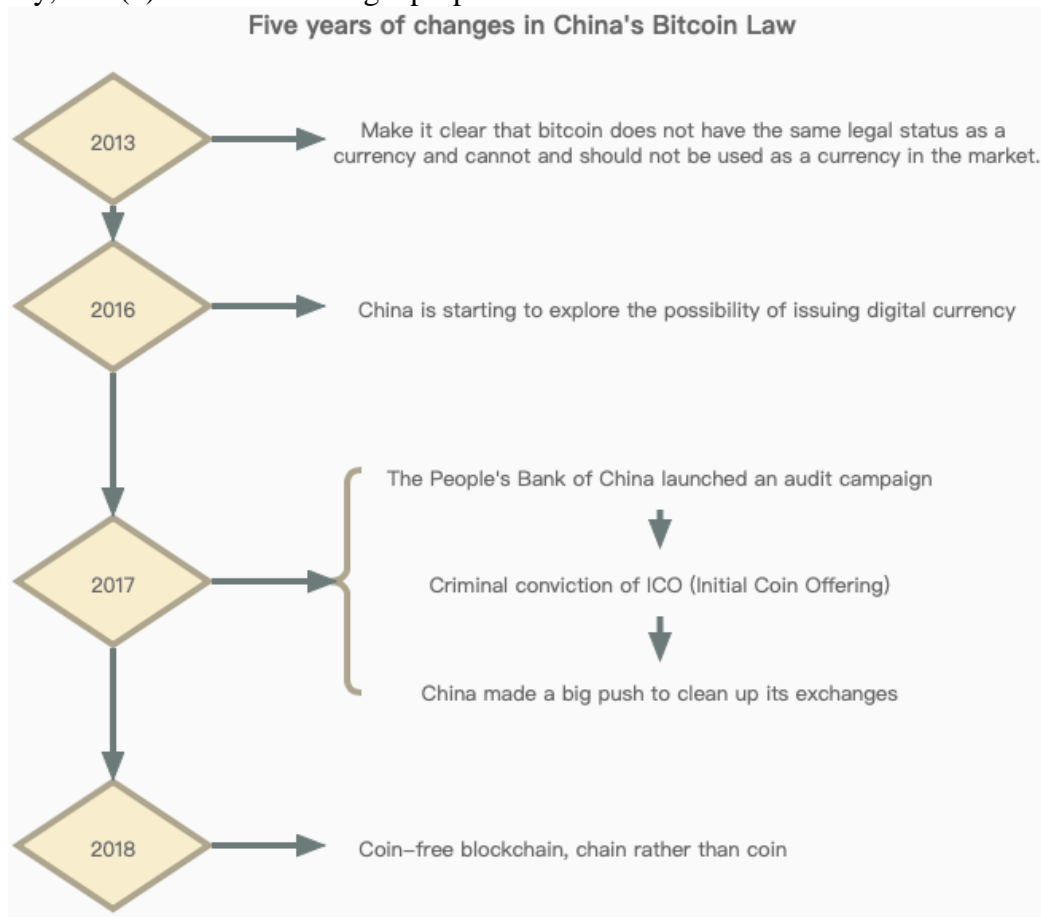


Figure 5. Five years of changes in China's Bitcoin Law

As shown in Figure 5, the opposition to Bitcoin is growing increasingly vocal in China. Chinese authorities have become increasingly concerned about the financial threats posed by Bitcoin, and the government's stance has become increasingly severe, prompting a series of actions.



Figure 6. Three years of changes in UK's Bitcoin Law

Figure 6 shows, however, that the United Kingdom still maintains a favorable opinion about Bitcoin. "Digital currencies and digital currency exchanges are presently not regulated by the UK," according to UK Treasury officials in November 2014. The Ministry of Finance released a report on digital currency in March 2015, indicating that anti-money laundering legislation will be applied to digital currency exchanges in the United Kingdom. During the discussion, the Treasury will address the regulatory model for digital currency, and the government will collaborate with the British Standards Institute (BIS) and the digital currency industry to develop an "optimal" regulatory framework. Furthermore, the British government has expanded financing for digital currency research by ten million pounds.

## **4. Limitation**

### **4.1 Longitudinal effects**

This research has several limitations in the time range of the study and does not cover the entire development process of Bitcoin because it primarily investigates the development and changes of Bitcoin throughout the eight years from 2013 to now. Furthermore, this paper's research review only includes the years 2013, 2015, 2016, and 2019.

### **4.2 Subjective factors**

Due to the limitation of my cultural background, I may have a different understanding of Bitcoin in the UK, which could alter the research's logic. Although this study uses an objective analysis method, there is still some subjective analysis based on individuals.

## **5. Conclusion**

This research performs a comparative assessment of the Bitcoin market in China and the United Kingdom using investigation, observation, and secondary data. Bitcoin's core feature is the usage of blockchain technology; it has a sizable market since it can be used as a payment mechanism and has the benefits of digital currency. Second, the exchange rates of Chinese and British currencies, as well as Bitcoin, will fluctuate in response to the macroeconomic environment. Furthermore, both China and the United Kingdom have established a series of rules to control Bitcoin, which are becoming increasingly rigorous over time. As a result of this research, I'd like to offer the following areas for future research: a longer time period, more comparative analysis in other nations, and more relevant research methodologies for demonstration.

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