

# The Investment Value and the Current Regulation of Cryptocurrencies Market Under the Confusion

Ziqi Ai <sup>1,\*,†</sup>, Zeyu Yao <sup>2,†</sup>

<sup>1</sup> Chengdu Shude High School, 610000, Sichuan

<sup>2</sup> Xi'an Jiaotong-Liverpool University, 215123, Suzhou, China

\*Corresponding author. Email: zeyu.yao18@student.xjtlu.edu.cn

†These authors contributed equally.

## ABSTRACT

With the rapid development of contemporary technology, people are not only satisfied with the economic benefits brought by the traditional financial industry. In 2009, a currency incorporating blockchain Bitcoin was born, thus kicking off the cryptocurrency trend. In this paper, the historical development and status of the cryptocurrency market will be discussed first, including an introduction to the cryptocurrency market as a whole and a detailed description of the major currencies. Secondly, it discusses the various cryptocurrency disruptions in the year 2021, with Musk as the key opinion leading the cryptocurrency price trends. Then, it analyzes the factors that affect the value of cryptocurrencies, including supply and demand, public perception and relationship with other currencies, and the value of cryptocurrency investments and future price trends. The regulation of cryptocurrencies is also reviewed. Policies from different countries is firstly discussed, and following this article talks about the impact of different regulation policies on the cryptocurrency market. The prediction for the future regulation tendency is also included. In addition, this study focuses on the case of the Republic of El Salvador's adoption of bitcoin as legal tender, feasibility, risks, and advantages and disadvantages of bitcoin as legal tender.

**Keywords:** Bitcoin, Investment value, Regulation, Cryptocurrencies, Decriminalization.

## 1. INTRODUCTION

### 1.1. Background

Since the appearance of Bitcoin, the controversies of cryptocurrency have never been stopped, even grown fiercer with the circulation of this new decentralization currency. A part of scholars insist cryptocurrencies lack institution regulation and disturb the currency market stability. However, some economists indicate the birth of Bitcoin, and its imitations represent social progress, bringing challenges and revolution to the traditional currency market. Except for the controversies, the Bitcoin endows the digital world as a medium of exchange and a measure of value for digital property. It is human newly exploration from the traditional information internet to the valuable internet. Beyond the cryptocurrency, its creative function of distributed ledger and blockchain bring developers an introspection of internet future direction. With the popularization of Bitcoin, many irregularly imitational cryptocurrencies have appeared and formed an emerging digital token

market and a financial system as the stock and bonds. One of the popular successors of Bitcoin is Ethereum, which is widely regarded as blockchain 2.0. Compare with Bitcoin, the Ethereum have a more mature financial application system, and a declining cost of token crowdfunding. Basing on the innovation of Ethereum, No-Fungible tokens have been born and create a derive market of the cryptocurrency. From April to May 2021, with Elon Musk's series of packing and instigating, another famous token, Dogecoin, also went through a overstep fluctuation price. Retrospect to 2013, an Australian marketing expert Jackson Palmer came up with the concept of Doggie coin, which Billy Markus, a US programmer, finally created. Different from previous imitations, Dogecoin was initially born for fun and formed a fan community before its operation. The application of Dogecoin is American tips culture and its charity background. For these reasons, Dogecoin has widely considered a type of "Gas coins", which are just speculative subjects. The Bitcoin, Ethereum, which represents the technical innovation coin, combining "Gas coins", heading by Dogecoin, have constituted the

complicated cryptocurrency market and a relatively independent financial system to the government. What follows is the appearance of exchange platforms such as the Binance, Coinbase, eToro, and the online wallet like Metamask, Bitpay. Profound exploring for the cryptocurrency and blockchain technology is synchronous update in diverse fields, such as ethical business practices, digital publishing engagement, Decorruping charities, etc.

In this article, an analysis of determinants of Dogecoin and other currencies bubbles will be discussed. Furthermore, this article will expound on the existing law for regulating Bitcoin and its imitations and provide possible improvements.

## 2. LITERATURE REVIEW

With the increasing popularity and focus on the cryptocurrency market, many people have paid attention to the cryptocurrency market bubble. Nitin indicates that the bubble of cryptocurrencies will burst as the times goes by, providing some evidence and comparing it with the traditional economics bubble. The Bitcoin and its derivative are easy to buy into without institutional supervise. Its market price is not related to its fair value, which is hard to estimate, causing its disorderly and unsystematic. The bubble burst will probably be induced by the extrusion of more cryptocurrencies and the frauds and hacking attacks. More regulation of this new investment will also crowd its profit space [1]. Then Cheah and Fry point out that Bitcoin has a fundamental value of zero since it does not have the real value like traditional currency, for example, gold. Next, they state that Bitcoin as an alternative currency is still up for debate in various countries, but that a dramatic phase bubble exists in the Bitcoin market, and Cheah and Fry get this conclusion by exploring data and building an economic model [2].

What is more, the regulation for the cryptocurrency market is also a popular topic in both the economic and law field. Oleksandr refers to the problem of the inheritance of cryptocurrency assets. By considering some legal regulation of the cryptocurrency, the main-stem opinion more like to treat cryptocurrency as a property but not a currency or money. Establishing the relevant legal regime is necessary with the increasing economic and social value of such assets. In the inheritance process, the most beneficial characteristics of cryptocurrency assets, such as anonymity and decentralization, are challenging to the currently applicable law [3]. Dierksmeier and Seele evaluate the risks and opportunities that the entire cryptocurrency market will bring to the conventional centralized bank system. By analysing relative industry, Dierksmeier and Seele creating tables to analyse the advantages, disadvantages, and future development for Bitcoin market from micro, meso and macro level. Through this

analysis, they dig out the relationship between Bitcoin market and some precocity, anti-society aspect issues. For example, some regulators from government and law aimed to solving the inflation and deflation caused by digital currency [4].

Also, Bitcoin is used in many fields. Luther discussed what role that Bitcoin and other cryptocurrencies play in improving international trade compared with traditional currency. Combining the pressure from the alternative cryptocurrencies and government regulation, Bitcoin is facing a challenging environment. Except for query, led by Bitcoin, cryptocurrencies exactly cut down the transaction cost. Its function seems more than niche money against some weak currency. Pressing by Bitcoin, digital payment and blockchain technology will widely be adopted and applied, electronic trade will go through long-term growth in the future [5]. By employing a long-memory approach, Duan et al. also indicate the cross-market arbitrage action in the cryptocurrency market and linking the informational efficiency to market segmentation of Bitcoin. The further step is to figure out whether the arbitrage potentials is determined by the efficiency degree of the individual market in the context of Bitcoin. Through Fractionally Cointegrated Vector Autoregressive (FCVAR) model, some market shows the active correlation between Bitcoin efficiency with the cross-market arbitrage while some market shows negative, which indicate the potential of cross-market arbitrage opportunities can be expected [6].

However, the Bitcoin market also has some inefficiencies. Urquhart focuses on measuring the efficiency of the Bitcoin market from an economic perspective. Urquhart summarizes the efficiency of the Bitcoin market based on the efficient market hypothesis (EMH), developed by Fama, analysing a large amount of data and previous literature. Urquhart concludes that the Bitcoin market, as a market in its infancy like an emerging market, suffers from certain inefficiencies, but as more people join and analyse this market, its market efficiency will improve [7]. Chiu et al. discussed the pros and cons of Bitcoin as a means of payment. As a virtual currency, the expensive mining method and delayed payments cost the market's audience a portion of its welfare. Their focus is primarily on understanding how a cryptocurrency's design influences the interactions among participants and their incentives to cheat. These incentives arise from a so-called "double-spending" problem. They indicate that, after eliminating the double "double-spending" problem, the efficiency of Bitcoin as payment will be improved [8].

Now, under COVID-19, Samuel et al. analyses the analysis of the epidemic on the cryptocurrency market in the context of the new crown epidemic. They are empirically and structurally analysing changes in the cryptocurrency market in the case of an outbreak by analysing recent data. The epidemic, as a proxy for global

economic uncertainty and market signalling shocks, has affected the market value of cryptocurrencies. The COVID-19 has brought positive feedback to the cryptocurrency market. Nevertheless, such positive feedback is volatile and the cryptocurrency market is performed a rebound effect [9].

### **3. THE DEVELOPMENT OF CRYPTOCURRENCIES MARKET AND THE PRESENT STATUS**

#### ***3.1. The history of the entire cryptocurrency market***

At the end of the 20th century, the rise of the Internet promoted the development of digital society and cashless society. It provided new technologies and methods for the practice of private competitive currency, forming the soil for the birth of digital currency. In the 1983 paper "Blind Signatures for Untraceable Payments", Chaum proposed Digital currency. In 1998, Dai Wei invented B-Money, which emphasizes peer-to-peer transactions and distributed storage; Nick Szabo invented Bit gold, using a proof-of-work mechanism. Build on these technological explorations. Satoshi Nakamoto invented Bitcoin, a peer-to-peer electronic cash system, in 2008. With the continuous development of digital currency, various types of virtual digital currency continue to appear. Until the end of 2020, over 8,000 cryptocurrencies with a total market capitalization of more than \$860 billion could occupy 18th place in the world's GDP ranking in 2019.

In the transaction market, Bitcoin has an irreplaceable position. According to CoinMarketCap, the aggregate market value of Bitcoin is over 700 billion dollars, which overtakes the value of the second large cryptocurrency, about 500 billion dollars. Bitcoin uses the Pow mechanism to achieve consensus, which lets all miners work together to solve a complex but easily verified SHA-256 mathematical problem based on competing for computational powers and then getting rewarded. With slowly but steadily increasing the money supply by halving its circulation every four years, Bitcoin eventually stabilizes at 21 million.

Alongside Bitcoin, some so-called mainstream cryptocurrencies in the market, such as Ethereum and Litecoin, are usually featured as high market and recognition. Compared to the idea of "mainstream", there are "copycat" or "Altcoins", such as Dogecoin in the earlier year and SHIBA INU, which have a lower price and market value. In other words, Dogecoin needs less energy in the mining process.

For the Bitcoin, since 2008 Global financial crisis, Fed began to print numbers of money, aiming to use the monetary tool to alleviate the harm from the GFC. However, it just solved the problem at that time, not a

permanent solution. The several quantitative easing just transferred the crisis into long-term pain, which increased people's fear of future expectations. The cyber currencies were born at that moment and have flourished in recent years. In 2009, a man named Satoshi Nakamoto had announced a decentralized currency had been created. As known, traditional money is based on national credit and seigniorage and controlled by the central bank. All the rights of final interpretation belong to the government. The high central controlling system indicates an initial problem that it takes the risk of the central bank broken or insolvent, or they would have a probability to do "hair cut" and not pay back the debt. For this reason, the Bitcoin and its derivatives have avoided this kind of risk. Coincide with the 2020 Covid-19 wreaking havoc around the world. Global economics has gone through a piercing winter which is a big challenge for human beings. Under the global disaster, no government can spare this epidemic situation. They only can act or accept a recession. The central banks and the government have no choice but to increase the money liquidity. In another word, they raise money supply and overdraft the future inflation aiming to stimulus economies and keep developing. It makes sense at that time, and although the substantial economy has been going through a hard time, the financial market was still energetic at that time. Nevertheless, this is not a permanent solution, and people know there will be a retrench in the future to cover the previous excessive money supply this period. They should find a new target to avoid the risk bringing by the inflation. So various cryptocurrencies are extremely false prosperity in the 2021 first half year. Now focusing on the chaotic phenomenon this crazy period.

#### ***3.2. Analysis For Different Cryptocurrencies***

##### ***3.2.1. Bitcoin***

Bitcoin is a decentralized digital currency with no central bank or single administrator and can be sent from user to user on a peer-to-peer Bitcoin network, without the need for intermediary transactions to be verified by network nodes through cryptography and recorded in public distributed network ledger called a blockchain. This cryptocurrency was invented by an unknown person or group named Satoshi Nakamoto in 2008 and released as open-source software in 2009, after which the currency began to be used. And since 2010, Laszlo Hanyecz, a programmer, bought two Papa John's pizzas for \$10,000 ₿, the Bitcoin has been owned the value. It was circulated in the black market in the early development period. Early Bitcoin users bought for ideological reasons. In a loose chronological order, the incentive of the investment may be for funny and strange, or Bitcoin lets them shop online without needing to use a bank, even a central bank. It allows them to buy things online, like drugs, that they cannot use a credit card for. If their government finds them objectionable for any reason, they are not

confiscated. More is for the Bitcoin is finitude and cannot be manipulated by printing more. At first, the cryptocurrency was not a normal investment target, there were no “investors” but just “holders”. In 2015, the Grayscale, which is supported by the Digital Currency Group, paved the way for securitizing Bitcoin and other cryptocurrencies. Then traditional financial institutions like Fidelity and CME Group got involved, making it easier for traditional investors, which like the hedgers, the portfolio makers, the day-traders, to participate in this nascent investment [10]. And with the blockchain increasing popular, the Bitcoin price and volume kept increasing, and up to even \$20,000 at the end of 2017. These were the hedgers, the portfolio makers, the day-traders. By June 2019, the price had recovered to \$13,000. The frenzy is even crazy in 2021. On January 19, 2021, Elon Musk added the hashtag # Bitcoin to his Twitter page and tweeted that “in retrospect, it was inevitable,” causing the price of the digital currency to briefly rise by \$5,000 in an hour to \$37,299. On February 8, 2021, Tesla announced the purchase of \$1.5 billion in Bitcoin and planned to begin accepting Bitcoin as payment for vehicles, pushing the price of Bitcoin up to \$44,141. On February 18, 2021, Elon Musk said, “owning Bitcoin was only a little better than holding conventional cash, but that the slight difference made it a better asset to hold.” In June 2021, the Legislative Assembly of El Salvador voted legislation to make Bitcoin legal tender in El Salvador.

### 3.2.2. Tether

USTD is a virtual currency that links cryptocurrencies to the fiat currency, the US dollar. Each USTD coin will be symbolically linked to the government-backed legal tender. USTD is a cryptocurrency that is held in a foreign exchange reserve account and backed by fiat money. This method can effectively prevent cryptocurrency price fluctuations, basically, a USTD value is equal to \$1. Tether, formerly known as “Realcoin”, was founded by co-founders Brock Pierce, Reeve Collins, and Craig Sellars in July 2014. The first batch of tokens was issued on the Bitcoin blockchain on October 6, 2014 [11].

### 3.2.3. Dogecoin

Review to 2013, an Australian marketing expert Jackson Palmer came up with the concept of Doggie coin, which Billy Markus, a US programmer, ultimately created. Varied from previous imitations, Dogecoin was initially born for fun and formed a fans community before its operation. The application of Dogecoin is American tips culture and its charity background. In January 2021, Dogecoin rose 800% in 24 hours to reach a price of \$0.07, encouraged in part by a short sale of Elon Musk and GameStop, followed by Reddit users in February 2021, encouraged by tweets from Musk, Snoop Dogg, and Gene Simmons. In March 2021, Dallas Mavericks owner

Mark Cuban announced that NBA teams would allow Dogecoin to purchase tickets and products; Within two days, Cuban announced that his brand had become the largest Dogecoin merchant, closing 20,000 transactions. Dogecoin and other cryptocurrencies soared in April 2021 because cryptocurrency exchange Coinbase went public directly on April 14. Although the platform does not offer to trade for Dogecoin, its price hit \$0.10 for the first time on April 14, hit a new high of \$0.45 on April 16. At that time, Dogecoin was valued at nearly \$50 billion, making it the fifth-most valuable cryptocurrency. Look back the trend, Dogecoin has increased in value by more than 7,000% so far this year. It caused electronic trading platform Robinhood’s cryptocurrency system to go down on April 15 due to “unprecedented demand”. This situation prompted experts to worry about an imminent speculative bubble in the cryptocurrency market [12].

### 3.2.4. Shiba

Shiba Token, a decentralized cryptocurrency created by an anonymous person named “Ryoshi” in August 2020, is the ERC-20 Token on the Ethereum blockchain, based on Dogecoin. Shiba bills himself as a “Dogecoin Killer”. The SHIB token does not have any smart contract utility, nor is it backed by any assets or rights, and is simply a transferable token. Shiba is a Japanese term for dog, the Dogecoin symbol, originally a funny cryptocurrency based on Doge Meme. Shiba was born in August 2020, imitating another cryptocurrency, Dogecoin, which was created on May 13 by the anonymous founder known as Ryoshi.

## 3.3. The chaos of the cryptocurrency market in 2021

### 3.3.1. Dogecoin and its key opinion leader Elon Musk

Dogecoin is based on the popular “Doge” Internet meme and features a Shiba Inu on its logo. The open-source digital currency was created by Billy Markus and Jackson Palmer. Dogecoin’s creators envisaged it as a fun, light-hearted cryptocurrency that would have greater appeal beyond the core Bitcoin audience since it was based on a dog meme. The mining process of Dogecoin is like Litecoin: they both use Scrypt technology, which differed from Bitcoin’s Pow protocol. The altcoin also has a block time of 1 minute, and the total supply is uncapped, which means that there is no limit to the number of Dogecoin that can be mined. The cost and capital needed for mining Dogecoin are substantially lower than Bitcoin or other mainstream cryptocurrencies. In other words, the energy needed for mining Dogecoin is much lower.

On April 2nd, 2019, Elon Musk tweeted that “Dogecoin might be my fav cryptocurrency. It’s pretty cool.” on Twitter. In 2020, Elon Musk’s companies Tesla and SpaceX became the hottest topic in the world, with the fame of Musk himself. He became a key opinion leader with great influence. Since then, he started to endorse Dogecoin on different social media. For example, he tweeted “one word: doge” on Dec 20th, 2020, and a series of tweets like “Dogecoin is people’s crypto” on Feb 4th, 2021. After his tweets, the price of Dogecoin did raise. The price change of Dogecoin after Elon Musk endorsed Dogecoin on Twitter. The upper one shows the change after his tweets on Dec 20th, 2020; the lower one shows the change after his tweets on Feb 4th, 2021. Since his tweets take effect, more and more people start to follow his response and buy Dogecoin without a second consideration. With his influence, Dogecoin raises its price from about 0.0023 to 0.71 (May 8th, 2021).

For easily to analyse, the Table 1 has shown this drastic fluctuation. Netizens positively discussed the tweets, and Dogecoin went popular. In early April, Musk posted that he would use SpaceX to take a Dogecoin to the moon. Subsequently, Dogecoin straight line up, the day up 15%. Two weeks later, Coinbase, the largest cryptocurrency exchange in the United States, went public. The day after the launch, Musk posted “Dogecoin barking at the moon” and an accompanying photo, and Dogecoin immediately soared, up 50% on the day. On April 16, Dogecoin continued to soar, with an increase of 250% within 24 hours, reaching a peak of \$0.47 per coin and a total market value exceeding \$60 billion.



Figure 1. The Dogecoin Price (USD) from Jan 1st to May 30<sup>th</sup>

### 3.3.2. Elon Musk’s market influence

From the Table 2, each time Musk has been twitted, the Bitcoin price will go through a fluctuation.

Previously, Musk had been a vocal supporter of cryptocurrencies, but this month, Musk abruptly reversed his attitude. He became negative to the Bitcoin, and Tesla announced stopping trade by Bitcoin anymore. After Tesla announced, it would stop accepting Bitcoin as payment for car purchases, \$365 billion was wiped off the cryptocurrency market. Musk explained that “we are concerned about the rapidly consumption of fossil fuels in Bitcoin mining and trading, especially coal, which has the worst emissions of any fuel”. But Musk also said that “Tesla will not be selling any Bitcoin”. But just after four days, someone called “Cryptowhale” has indicated that the Tesla has the risk of underselling their huge volume of Bitcoins, and Musk reply “indeed”. This incident hit the Bitcoin’s price again. He also said the positive comments on Bitcoin in the March and April of 2021. He posted that Tesla would allow Bitcoin as a way of payment and the company making 100 million profits from buying Bitcoin. On May 13th, 2021, Musk announced that Tesla would stop use Bitcoin as a payment method because it is not environmental-friendly. The second day he tweeted that Dogecoin will replace the place of Bitcoin. The above action makes Bitcoin steep fall from 56,704.57 (May 11th, 2021) to 37,002.44 (May 17th, 2021) and Dogecoin rise sharply from 0.3854 (May 12th, 2021) to 0.5596 (May 14th, 2021).

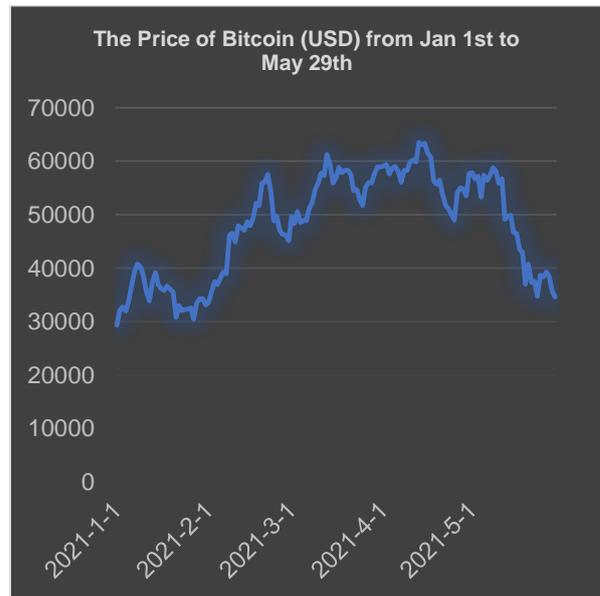


Figure 2. The Price of Bitcoin (USD) from Jan 1st to May 29<sup>th</sup>

For this situation, it can conclude that Musk is an opinion leader, a banker. First, it owned a lot of Bitcoins by selling Tesla previously. And he also takes part in the development of the Dogecoins and Shiba, which means he has a cheaper cost to get these coins. Social media are always like crazy and talkative persons, which can easily bring them topics and views quantity. Once they found a good target like Trump, they will be behaved like ravening wolves and pay close attention to their statement. However, since Trump has lost his rights, they

turn their fire to the Musk. And Musk is glad to use it to expand his influence, and easier to control the price of cryptocurrencies.

## **4 THE VALUE AND THE PRICE OF THE CRYPTOCURRENCY**

### ***4.1.determinants of cryptocurrencies' value***

#### ***4.1.1. Supply and demand***

Like all other businesses, the balance between supply and demand determines the price in the cryptocurrency market. The algorithm of a cryptocurrency determines its supply. Most mainstream currencies are created accompanied by a fixed total cap on issuance, which determines the currency's fundamental value and makes the price of cryptocurrencies rise as more and more demand is generated. The algorithm determines the difficulty of mining cryptocurrencies, and the difficulty of mining determines the scarcity of the supply of the currency. Bitcoin, for example, is often criticized for its mining difficulty and the level of power consumption it consumes when mining. These two characteristics determine the relatively scarce supply of Bitcoin, providing the premise for its subsequent significant price increase.

If supply determines the bottom line of cryptocurrency value, demand determines the cryptocurrency value's upper limit. As more and more governments and companies recognize cryptocurrencies and use them as a means of payment, the application of cryptocurrencies has gradually expanded, and demand has further increased. This has caused the price of recognized cryptocurrencies, such as Bitcoin, to rise dramatically. The regulatory policies of countries are also closely related to the demand for cryptocurrencies. For those countries that ban cryptocurrencies from domestic circulation, the demand for cryptocurrencies in the whole country is greatly reduced compared to other countries.

#### ***4.1.2. Public Perception***

As with the traditional financial industry, the cryptocurrency market has technical limitations, but public perception, i.e., fundamentals, is also an important factor in the value of the currency. As mentioned above regarding Elon Musk's influence on Dogecoin and Bitcoin, when a leader who is perceived to be unique and trustworthy comes forward with a particular view on a currency, public sentiment will be easily swayed when the public's sentiment and perception of cryptocurrencies changes, the price of cryptocurrencies will be driven to change as well.

### ***4.1.3. Correlation between currencies***

There is no denying that Bitcoin is still the dominant cryptocurrency among many. When the value of Bitcoin changes significantly, other currencies are affected to a greater or lesser extent, mainly depending on the volume of the currency. Second, the appreciation or depreciation of fiat currencies will also affect cryptocurrencies. For example, when the U.S. dollar appreciates or depreciates, the price of cryptocurrencies paid in U.S. dollars will also increase or decrease [13].

**Table 1.** the correlation between Bitcoin and other cryptocurrencies' price from May 30th 2020 to May 29th 2021

	Bth	Tether	Shiba	Eth	Doge
Bth	1.0000				
Tether	0.8954	1.0000			
Shiba	0.2842	0.2969	1.0000		
Eth	0.8857	0.8144	0.6221	1.0000	
Doge	0.5749	0.5255	0.7261	0.8598	1.0000

From the Table 1, cryptocurrencies' price has a high correlation between each other. Except Bitcoin related to the dollars, its price also fluctuates with other cryptocurrencies'. The Bitcoin is highly related to the Tether coin and the Ethereum coin. Highly related to Tether coin may be causing by Tether coin peg to USD. For the relationship between Ethereum and Bitcoin, it possibly connected to blockchain technology. From the table, except for the Shiba coin, all the coin correlation indexes in terms of Bitcoin are above 0.5, which can conclude that the connection between them.

### ***4.2. The investment value and the future***

The value of cryptocurrencies has been discussed several times. From the graph, it is obviously that the Bitcoin price is significant influenced by the other cryptocurrencies. Hence, Bitcoin and its derivatives and its imitations can be combined as a hole entity. And the value is varied for each investor. For coin miners, their main way to gain profit is keep digging. They are the upstream of this cryptocurrency industrial chain. No matter how the price fluctuates in the market, they can always get profit only if their cryptocurrency income can cover the digging cost. In other words, if the cryptocurrency market remains popular, the profit will be permanent. The consortiums and the riches, such as Musk and his Tesla, are holding large amounts of cash. The situation was caused by the large amount of money released by the central bank in the past. But facing the risk of devaluation and inflation pressure in the future, they must find investment targets to diversify the risk of their large amounts of cash. Huge corporation, leading by Tesla, are hoarding Bitcoin, Dogecoin and other cryptocurrencies. For the Bitcoin is finite, they have incentive to heat the market. Their hoarding currency can be arbitraged and even the price will be manipulated to make excess returns. There is no doubt that these

currencies are also profitable to the media because they can easily bring up public attention and countless topics. Once the topic is related to Bitcoin, the reading will be guaranteed. But for the normal investors, the cryptocurrency may not a suitable investment target. The ordinary investors are always at the downstream in this chain. In the short run, it may get a certain amount of profit. Nevertheless, in the long term, it is not a stable target and may draw a blank. With the increasing development of virtual currency, some sovereign states even recognize the legal value of Bitcoin. Although this situation indicated the change of social attitude towards cryptocurrency, it cannot conclude that Bitcoin and its imitation is valuable and worth to invest.

## **5. REGULATIONS**

### ***5.1. National regulatory policies***

The world's mainstream countries have different regulatory policies for virtual currencies.

The United States is a worthy promoter. In the U.S., The Securities and Exchange Commission (SEC) monitors crypto assets that meet the definition of security. When such an asset is sold or offered, it must comply with the federal legislation on securities. The Commodity Futures Trading Commission (CFTC) oversees commodities transactions.

Another regulating body, the Treasury Department's Financial Crimes Enforcement Network, (FinCEN) is responsible for FinCEN is famous for associating cryptocurrencies with illegal activities as its new chief, Janet Yellen, Internal Revenue Service or IRS has declared in March 2014 that it will be tax virtual currency like Bitcoin or any other cryptocurrency as "property" not as currency.

In June 2015, the first U.S. state to regulate cryptocurrencies through a state agency, New York, passed a New York State has introduced BitLicense to regulate cryptocurrency practitioners, and as of New York State has introduced BitLicense to regulate cryptocurrency practitioners, and as of June 2019 the New York State Department of Financial Services has issued 19 BitLicense licenses. As of 2019, 32 states have embraced legislation on Bitcoin and the use of Bitcoin and blockchain for regulation, and several have even made it part of state law.

But not all states are tolerant of cryptocurrencies. Hawaii, for instance, banned all crypto operations in 2014 but relented in Hawaii, for instance, banned all crypto operations in 2014 but relented in 2018, and now requires anyone involved in operations related to Bitcoin and cryptocurrencies to apply for a money transmitter license. But most states have a welcoming attitude toward cryptocurrencies.

Bitcoin and other currencies are acceptable to most EU members. Bitcoin is legal in almost all EU member states. Virtual currencies can be used for payments, and some taxes (including VAT/GST) also apply to the conversion of virtual currencies as a means of payment. At the same time, the European Central Bank has indicated that the regulatory mechanisms for the traditional financial sector are also applicable to virtual currencies. However, the EU has not issued any statement confirming the status of virtual currencies as currencies. The European Parliament is also working to improve and tighten the regulation of virtual currencies to eliminate money laundering and other illegal operations.

But there are still countries around the world that have banned Bitcoin. China issued a statement on May 21, 2021, banning Bitcoin as a means of transaction or payment in China. Previously, on April 17, Turkey's central bank issued a statement saying it explicitly banned Bitcoin and other virtual currencies as a form of payment for goods and services. The Turkish central bank also banned e-money institutions from acting as intermediaries for transfers to virtual currency platforms. On April 18, the Indian government's regulatory policy on virtual currencies was also reported. Several media reports stating that the Indian government will ban virtual currencies and imposing fines on those who trade or even hold such assets in the country. Any behaviour regarding crypto assets is defined as a crime. Virtual currency prices have risen sharply in recent years. In the case of Turkey, which has a relatively weak economic and financial base, after generating a lot of inflation, virtual currencies of a speculative nature accumulate a lot of systemic risk, which will further erode the central bank-led global financial and settlement system, and the relevant financial regulators are bound to adopt a more prudent approach to virtual currencies.

### ***5.2. Impact of Regulatory Policies on Bitcoin***

The regulatory regime that will have the greatest impact on Bitcoin is the ban. In the most recent case of China, for example, on May 18, 2021, the People's Bank of China issued an "Announcement of the China Internet Finance Association, China Banking Association and China Payment Clearing Association on Preventing the Risk of Speculation in Virtual Currency Transactions" through its official WeChat public number. The announcement stated that financial and payment institutions shall not accept cryptocurrencies as payment and settlement instruments or provide services and products related to cryptocurrencies. Consumers are required to bear any losses they suffer in cryptocurrency investment transactions. The announcement added that the recent dramatic fluctuations in cryptocurrency prices "seriously infringed on the safety of people's property" and disturbed the "normal economic and financial order".

Shortly after the announcement, some cryptocurrency institutions tightened their OTC trading operations. MXC Matcha Exchange suspended OTC trading and announced that the service upgrade maintenance was temporarily postponed. Asset platform Bitpac, on the other hand, issued a news release announcing the closure of several operations, including OTC trading and coin exchange services. As the price of Bitcoin accelerated its decline on the evening of May 19, Beijing 2021, other cryptocurrencies such as Ethereum and Litecoin also retreated sharply, with some niche coins known as cottage coins nearly falling by half. According to CoinCoin, the market blew up by about \$5.92 billion (about RMB 38 billion) in 24 hours and nearly 480,000 people.

On May 21, 2021, China's State Council Financial Stability Development Commission announced a crackdown on Bitcoin mining and trading in China. On this date, Bitcoin was quoted at \$37,068.2, falling below \$38,000, a far cry from its all-time high of \$64,838 set on April 14. Meanwhile, the U.S. blockchain sector expanded its losses, with Bit Mining down nearly 20%, Ninth City down 9%, Jia Nan Technology down 5.5%, and Bit Digital, Xunlei, Yibang International and Marathon Patent all down more than 4%.

Outside of China, 2021, Bitcoin fell a wild 15% on April 18, the biggest drop since February, having hit a record \$64,800 a few days earlier.

Some online media outlets attributed the drop to speculation that the U.S. Treasury Department may act against money laundering through digital assets, according to data from Bloomberg and Coinbase. The price of Bitcoin reached a record \$64,869.78 last Wednesday before cryptocurrency exchange Coinbase Global Inc. listed on the Nasdaq. Bitcoin is facing more regulatory scrutiny. Turkey's central bank said it will stop using cryptocurrencies as a valid form of payment as of April 30. The move caused the price of Bitcoin to fall by 5%. However, positive, and loose regulatory policies can also have a boosting effect on the value of cryptocurrencies. Immediately after the Japanese government declared the currency as legal tender, the price of Bitcoin shot up by 2.8%.

Therefore, it can be concluded that official policies issued by the government are effective for the cryptocurrency market.

### **5.3. Trends in future regulation**

For larger and stronger economies, such as the US and the EU, cryptocurrencies are becoming more important in their economies as a means of payment and liquidity. In the future, these developed economies will further affirm the status of cryptocurrency as a currency and use it as another way to strengthen their economies. But for another group of countries, cryptocurrencies have

until now been very risky. For smaller and weaker economies, the emergence of cryptocurrencies is likely to cause or has caused some degree of hyperinflation. For such countries, prematurely deregulating cryptocurrencies will have potentially irreversible consequences. For such countries, there is a high probability that the regulation of cryptocurrencies will not be relaxed in recent years, and this restraint may be relaxed when the country's economic growth fully covers the economic losses caused by the epidemic and the overall economy is growing steadily.

The industrialization of cryptocurrencies will become a popular trend for countries that accept them. The U.S. has already implemented some actions in this regard and has gotten good results, giving it a near-Judahira position in this aspect of cryptocurrencies.

However, if there are still many bubbles in cryptocurrencies, then opening the regulation of cryptocurrencies may be too risky for the country, in which case it is likely that the country will re-tighten the regulation of cryptocurrencies to reduce the unknown dangers as much as possible. However, apart from the economic aspects, the legal aspects of cryptocurrencies should not be underestimated. Money laundering and other illegal activities are still a serious problem in the cryptocurrency market. With such problems, the financial security of countries and the rights of their citizens will always be at risk. In the future, countries will find ways to eliminate such practices, thus making the cryptocurrency market more legal and secure. Nevertheless, Bitcoin will never replace government-issued currency. In an article for Project Syndicate, noted economist Kenneth Rogoff makes this observation publicly. "Would the price of Bitcoin drop to zero if governments could perfectly observe transactions? Perhaps not. Even though Bitcoin transactions require an exorbitant amount of electricity, with some improvements, Bitcoin might still beat the 2% fees The big banks charge on credit and debit cards," he writes.

It is foreseeable that the regulation of cryptocurrencies will be more comprehensive and effective in the future, regardless of the country.

## **5.4. Special case study about Republic of El Salvador and Suggestion**

### **5.4.1. Republic of El Salvador**

The Republic of El Salvador is a coastal country located in the northern part of Central America and is the most densely populated country in Central America. Bordering the Pacific Ocean, El Salvador has a land area of 21,040 square kilometres and is divided into 14 departments. The country has a total population of 6,705,000 (2019). As a cash-dollar-based economy, El Salvador has a weak industrial and agricultural economic

base, and about 70% of the population does not have bank accounts or credit cards. On June 9, 2021, El Salvador became the first country in the world to recognize Bitcoin as legal tender when the Salvadoran Congress voted to approve a proposal submitted by the President to make Bitcoin legal tender. The proposal includes goods can be denominated in Bitcoin; the exchange rate (and the U.S. dollar) is freely determined by the market; national taxes can be paid in Bitcoin; transactions in Bitcoin will not be subject to capital gains taxes; and when an economy is faced with a consumer paying for goods or services in Bitcoin, that economy may not refuse. These regulations highly affirm Bitcoin's status as legal tender and clearly affirm its nature as a currency and not an asset. So why is El Salvador making such a high-risk move? What exactly would be the benefits of making Bitcoin a legal tender?

As previously reported in the media, more than 2 million Salvadorans live abroad, and like most backward Central American countries, El Salvador's economy relies heavily on migrant remittances. Remittances, or money sent home by migrants, account for more than 20 percent of El Salvador's gross domestic product. However, expensive fees and lengthy processing times for migrant remittances have been a significant impediment to accessing migrant remittances in El Salvador. Therefore, the emergence of Bitcoin as a currency that transfers money quickly and without fees could make it possible to significantly increase the speed of the approximately \$6 billion in international remittances that El Salvador sends annually. Secondly, El Salvador's domestic banking system is also underdeveloped, and domestic transfers are costly, while the advent of Bitcoin has completely and significantly reduced the cost of transferring money. Lastly, and most importantly, until Bitcoin became the new legal tender in El Salvador, the U.S. dollar was the primary instrument used by the people of El Salvador to circulate. As the Federal Reserve begins to implement unlimited quantitative easing in 2020, hyperinflation is inevitable in El Salvador as a country where the U.S. dollar is the primary means of circulation, and making Bitcoin, a decentralized digital currency, legal tender will effectively curb this inflation. However, Bitcoin may also bring about deflationary problems, but since the percentage of Bitcoin in circulation, while increased, is unlikely to fully exceed the percentage of the US dollar in circulation, such a policy may instead bring economic stability to El Salvador. As for the other risks associated with Bitcoin as a legal tender, they remain to be considered. It is also worth mentioning that the Salvadoran government has asked the country's geothermal companies to provide completely clean energy for Bitcoin mining, which is a very significant step in the development of Bitcoin.

#### 5.4.2. Suggestion

To use Bitcoin is an effective way to against the dollar's global hegemony. During Covid-19 wreak havoc, American central bank has use dollars dominant position to transfer economy recession by adding dollars supply. For small and weak economies, give up the dollars standard and accept Bitcoin is possible way to against this situation. Even more, with more and more small economies take Bitcoin as a legal tender, they can constitute a Bitcoin association or community just like the ASEAN Community and European Union. The first advantage is they can against the dollar's inflation and devaluation. Secondly, this action can also attract many Bitcoins or other cryptocurrencies speculation and investment. This union can provide a platform to build a Bitcoin industry chain. Nevertheless, there are many uncertain factors such as the price of Bitcoin prices and its own seignories.

## 6. CONCLUSIONS

This article has discussed three main problems about cryptocurrencies chaos and its regulation. Firstly, focusing on the cryptocurrencies market confusion and conclude that some KOL like Musk controls the coin's price. Secondly, its investment value and price determinants have been indicated. The value is varied from different agents. There are still many uncertain factors in this emerging market. The investors should be more cautious when they make a decision. Thirdly, the attitude and current regulations have been analyzed. Some countries insist on taking tough regulations on the cryptocurrency trading, while some countries have some losing regulations on such coins circulating. In the future, there is a trend that developed economies will further boost the process of cryptocurrencies industrialization to strengthen their economies.

In conclusion, the Bitcoin and its imitation have already developed for several years and will last for a long time. Just like the Internet appearance, nobody forecasted its huge power at that time. How blockchain and cryptocurrencies influencing daily life in the future is also hard to be forecasted. Although cryptocurrency still has many controversies about its value or its circulation, its appearance makes a real shock to the traditional market even spread to many fields. Up to now, nobody can make a brief final verdict that cryptocurrencies worth nothing. There is even some positive voice to support its value and try to decriminalize Bitcoin-like El Salvador. This situation indicated a trend that the gold standard regime is challenging, and that global hegemony is not stable anymore. In the future, the derivatives of Bitcoin, such as the Non-Fungible Token, which is based on blockchain, can be a researching direction. The feasibility of building a Bitcoin community can give more details. No matter how the

market is developing, the blockchain is widely accepted and applicable. And more and more countries are using this technology to build its digital currencies.

## REFERENCES

- [1] Balwani, N. (2017) 'Waiting to Explode: The Bubble of Crypto-Currencies', *IFIMs Focus: The International Journal of Management*, 13(1), pp. 50-54
- [2] Cheah, E.-T., & Fry, J. (2015). Speculative bubbles in Bitcoin markets? An empirical investigation into the fundamental value of Bitcoin. *Economics Letters*, 130, 32-36.
- [3] Omelchuk, O., Iliopol, I. and Alina, S. (2021) 'Features of Inheritance of Cryptocurrency Assets', *Ius Humani*, 10(1), pp. 103-122. [1] Duan, K., Li, Z., Urquhart, A., & Ye, J. (2021). Dynamic efficiency and arbitrage potential in Bitcoin: A long-memory approach. *International Review of Financial Analysis*, 75, 101725.
- [4] Dierksmeier, C., & Seele, P. (2018). Cryptocurrencies and Business Ethics. *Journal of Business Ethics*, 152(1), 1-14.
- [5] LUTHER, W. J. (2016) 'Bitcoin and the Future of Digital Payments', *Independent Review*, 20(3), pp. 397-404.
- [6] Duan, K. et al. (2021) 'Dynamic efficiency and arbitrage potential in Bitcoin: A long-memory approach', *International Review of Financial Analysis*, 75
- [7] Urquhart, A. (2016). The Inefficiency of Bitcoin. *Social Science Research Network*.
- [8] Chiu, J., & Koepl, T. V. (2017). The Economics of Cryptocurrencies-Bitcoin and Beyond. *Research Papers in Economics*.
- [9] Sarkodie, S. A., Ahmed, M. Y., & Owusu, P. A. (2021). COVID-19 Pandemic Improves Market Signals of Cryptocurrencies-Evidence from Bitcoin, Bitcoin Cash, Ethereum, and Litecoin. *Finance Research Letters*, 102049.
- [10] Del Castillo, M. (2020). Bitcoin's Magic Is Fading, And That's A Good Thing. *Forbes.Com*, N.PAG. <https://www.forbes.com/sites/michaeldelcastillo/2020/03/19/bitcoins-magic-is-fading-and-thats-a-good-thing/?sh=1fe5ac4e7fb2>
- [11] Ft.com. 2021. Crypto tethers as the new eurodollars. [online] Available at: <<https://www.ft.com/content/b3c31dc4-336d-3167-84d7-fb5a15827b1e>> [Accessed 20 June 2021].
- [12] Dogecoin spikes 400% in a week, stoking fears of a cryptocurrency bubble. (2021). Retrieved 20 June 2021, from <https://www.msn.com/en-us/money/markets/dogecoin-spikes-300-in-a-week-stoking-fears-of-a-cryptocurrency-bubble/ar-BB1fluLD>
- [13] Hayes, A. S. (2017). Cryptocurrency value formation: An empirical study leading to a cost of production model for valuing bitcoin. *Telematics and Informatics*, 34(7), 1308-1321.