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The Impact of External Factor on Cryptocurrency: Explicit and Implicit Policy

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Abstract: In recent years, the view of economists and issuers of cryptocurrencies has changed a lot, from the original price of cryptocurrencies is unpredictable, to the view that cryptocurrencies are affected by several key factors. Confidence is one of the key factors, and it is thought to be controllable. However, many economists and cryptocurrency issuers have acknowledged that the support for confidence in the cryptocurrency market is complex and volatile. The goal of this paper is to propose ways to stabilize confidence in cryptocurrencies based on these studies. Explicit and implicit policies are one of the important factors affecting cryptocurrencies. The purpose of this article is to illustrate the close connection between cryptocurrencies and information, and to analyze how explicit and implicit policies affect cryptocurrency information and markets. The impact of explicit and implicit policies on the price of cryptocurrencies is unpredictable, but it still has regularity in the impact on the price of cryptocurrencies. This article analyzes several notable cryptocurrency explicit and implicit policy events to illustrate the differences and characteristics between the two types of policies. The influence of explicit policy is not positively correlated with its propaganda intensity in the short term but will be maintained and stable in the long term. Stealth policies tend to show dramatic changes in a short period of time and are highly correlated with popularity. While hidden policies can cause sudden fluctuations, issuers of cryptocurrencies should pay more attention to the effects of explicit policies because they are more durable.

Keywords: confidence, cryptocurrency, explicit policy and implicit policy

1. Introduction

On May 9, 2022, the entire cryptocurrency market was rocked by a massive earthquake: the world's third largest cryptocurrency stablecoin, luna, lost 99% of its value in 48 hours and collapsed within 2 weeks.

This cryptocurrency crash has not only hit the cryptocurrency market, but also the world economy. In the wake of this incident, many cryptocurrency issuers and research economists have questioned the stability of cryptocurrencies. In the 2010s, from economists to governments were groping about how to develop cryptocurrencies, from digital fiat currencies of central banks to decentralized cryptocurrencies like bitcoin, companies, organizations, and governments all wanted to use cryptocurrencies to grow the economy. However, despite the countless efforts and resources invested in the cryptocurrency market, the high volatility of the cryptocurrency market has not been fundamentally resolved. This paper aims to provide a new way of thinking for cryptocurrency analysis

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by analyzing one of the most important factors affecting cryptocurrency prices - confidence - the impact of explicit and implicit policies on the cryptocurrency market.

The rest of this paper is organized as follows: The first part is about the relationship between confidence and cryptocurrencies and why confidence is easy to control. The second part is the impact of explicit and implicit policies in cryptocurrencies on confidence and the cryptocurrency market. The last part is the advice for the cryptocurrency market and issuers and the outlook of this article.

2. Literary Review

2.1. Confidence Factor

Even though the cryptocurrency market is considered highly unpredictable, many cryptocurrency issuers and economists agree that short-term fluctuations in the cryptocurrency market are closely related to confidence. Users' confidence in cryptocurrencies will affect their decisions about cryptocurrencies in the short term, thus affecting the entire cryptocurrency market. However, because the decentralization of most cryptocurrencies means that many lack adequate monitoring and preventive measures, confidence in cryptocurrencies can easily receive a large-scale boost, resulting in a sharper than expected market reaction.

2.2. Confidence Affects Prices

The premise and core of the analysis in this paper is that the most important and fundamental influencing factor in the cryptocurrency market is the user's confidence in cryptocurrency. Taking Bitcoin as an example, most users who buy Bitcoin do not buy it as a currency, but as a financial product with a higher return on investment, as part of their assets. Therefore, similar to financial products, the price of cryptocurrencies is very easily controlled and influenced by confidence [1]. Because they are financial products rather than currencies, users are sensitive to anything that might affect their price, resulting in an unusually high weight of confidence. What is more serious and complicated is that due to the decentralized policy of most cryptocurrencies, the issuers and regulators of cryptocurrencies cannot timely know the trading scale and transaction price of cryptocurrencies, resulting in weak control. Because of the above factors, people's confidence in cryptocurrencies will double and be reflected in the cryptocurrency market.

To understand the logic of cryptocurrency users' behavior, it is necessary to understand their core philosophy. For cryptocurrency users, the factor that essentially affects the purchase of cryptocurrencies is the confidence gap between cryptocurrencies and authoritative currencies. To some extent, the development of cryptocurrencies is a reflection of people's belief that authoritative money is not human. Furthermore, the increasing market share of cryptocurrencies in the overall economy and money supply can be used as a measure of declining national confidence [2]. Users will choose to hold cryptocurrencies or fiat currencies as their confidence in cryptocurrencies and fiat currencies changes.

A deeper and more complex point is that compared to other currencies and financial products, changes in the cryptocurrency market can lead to widespread changes in confidence, resulting in an avalanche of reactions. The result of such a large-scale chain reaction will also cause the price of the cryptocurrency to change far beyond the expectations of the issuer and users. In fact, luna did not produce a large-scale crash on the first day, and its total value and market price were only reduced by 50%. However, the sharp drop in the price on the first day led to a crisis of confidence among luna users. A large number of luna coins were sold, resulting in a run on the market. This run directly led to the market price of luna coins falling to 1% of its original value the next day, and all users lost $40 billion in attacks. To sum up from the above examples, the issue of cryptocurrency confidence is both the cause and the result of cryptocurrency price fluctuations, and this positive feedback mechanism

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has led to the amplification of the weight of confidence factors in the cryptocurrency market. A crisis of confidence leads to a collapse in prices, and a collapse in prices leads to an even greater crisis of confidence. In a market where the confidence factor is infinitely amplified, many issuers of cryptocurrencies are studying ways to make the confidence of cryptocurrencies more stable. For example, more attractive economic returns, more financial support, and a more flexible financial system. To sum up, the weight of confidence in the cryptocurrency market has been magnified several times, and the factors affecting confidence have become very complex and changeable because of their unique mechanisms, and it is difficult to give reasonable and detailed predictions.

There are many factors that affect confidence in cryptocurrencies, such as the currency's circulation rate. According to Paul Gatabazi et al. 's analysis of the life cycle of cryptocurrencies and tokens from 2009 to 2021, they found that the risk of collapse of cryptocurrencies under independent blockchain is relatively high [3]. Centralized policies have made transactions easier and faster for many cryptocurrency users, but the absence of such policies can also lead to misjudgments about cryptocurrency transactions and retention periods. Reduced liquidity allows users to hold money for longer. The longer a user holds it, the lower their confidence in the cryptocurrency will be. After holding for a long time without trading, users may choose to sell their cryptocurrency at a much lower price than the market price, affecting the overall price of the cryptocurrency market.

2.3. Easy to Affect Confidence

According to the previous discussion, for cryptocurrency issuers, user confidence in cryptocurrencies is a major factor that cannot be ignored. In the case of external intervention, the instability of confidence can lead to the instability of cryptocurrency prices. Both human and non-human factors can affect the price of a cryptocurrency.

In terms of non-human factors, a wide variety of events in various fields and explicit or implicit policies can affect the cryptocurrency market. According to Copestake, although hidden laws dominate the majority of crypto laws, their impact on the cryptocurrency market is still significant [4]. In 2021, Musk, the world's richest man, simply added a bitcoin hashtag to his Twitter profile, and the trading price of Bitcoin rose by $5,000 on the same day. The individual personalities of users also influence the volatility of the cryptocurrency market. According to the survey, compared to the general population, cryptocurrency users have more negative characteristics such as conspiracy theories [5]. Therefore, compared to others, cryptocurrency users are extremely sensitive to any stimulus regarding cryptocurrencies, thus rendering traditional methods of analysis ineffective.

Similarly, think factors can also affect the cryptocurrency market. Due to the invention and use of various financial instruments, cryptocurrency users are more than sure to gain profits through the appreciation of cryptocurrencies. The variety of ways to be dynamic has led many users to prefer price volatility to appreciation or stability. Large-scale long or short positions will affect the judgment of cryptocurrency users and lead to instability in the cryptocurrency market. According to Choi, the herding phenomenon applies to the cryptocurrency space as well. Similar to stocks, cryptocurrency users follow and mimic the behavior of other users [6]. Take luna as an example, one of the reasons for its collapse in May was that its benchmark currency had been below $1, which caused panic among some users and eventually led to a crisis of confidence [7]. In cryptocurrency investing, the emotional factor is much greater than the rational factor, and users are easily controlled by the bellwether.

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3. Analyzing

3.1. Explicit Policy

Events are not only the cause of confidence change, but also the final result of confidence change. For example, in the crash of the cryptocurrency luna, the massive price drop on the first day led to a crisis of confidence in the luna coin for many users, and this collapse of confidence was directly reflected in the luna coin market on the second day, and ultimately led to a 99% reduction in the market value of the cryptocurrency luna within 48 hours. According to the US Congress's own assessment, even if the legal problems of cryptocurrencies are now clearly observable, the protection of consumers and investors may be perceived as unnecessarily burdensome and cause excessive reactions from issuers and cryptocurrency users [8].

Explicit policies for cryptocurrencies are those that contain mandatory policies or decrees issued by national or regional governments. It also includes some cryptocurrency policies and regulations that are not directly related to cryptocurrencies, but ultimately affect the market. It is obvious that explicit policies have stronger execution and impact than implicit policies, and their effects will be longer lasting. It is worth noting that explicit policies also contain some policies in other areas but ultimately affect the cryptocurrency market. This paper will use three explicit policies, from the positive and negative two aspects of analysis.

The events of overt policy are diverse across the globe. Most of the negative explicit policies are outright prohibitions on cryptocurrency acquisition. The explicit policies supporting cryptocurrencies mainly include establishing cryptocurrencies as legal tender in the country, or allowing cryptocurrencies to be used as a medium of exchange. The impact of explicit policies to relax and tighten cryptocurrencies on cryptocurrencies is not as simple as that of implicit policies, because any specific measures involving cryptocurrencies or virtual economies or even just about the real economy. At the same time, the impact of explicit policies on cryptocurrency prices is not as proportional to the level of publicity as that of implicit policies. An unheralded cryptocurrency bill could also lead to big changes in the cryptocurrency market.

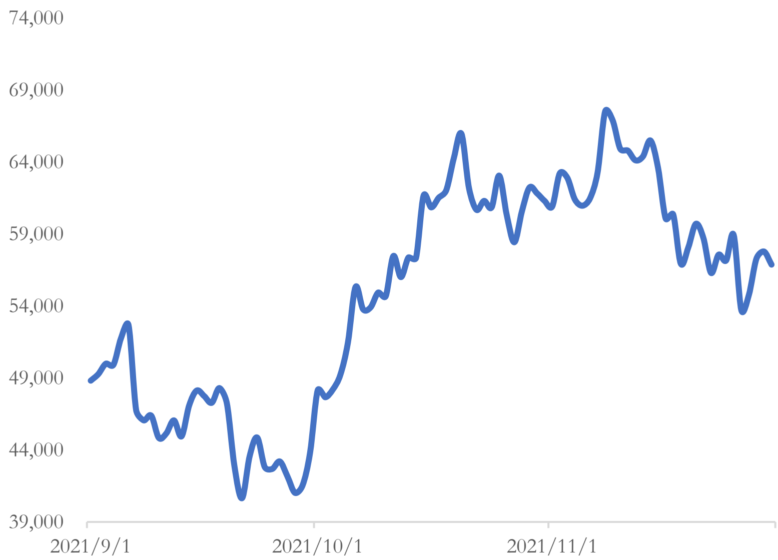

Fig. 1. Bitcoin price change

Data source: Investing.com
Photo credit: Original

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The first case study is the government of the People's Republic of China's crackdown on cryptocurrency trading. On September 24, 2021, the People's Bank of China issued a notice banning all cryptocurrency transactions [9]. This means that in the world's largest cryptocurrency producing country, all transactions regarding cryptocurrencies will no longer be protected and supported by the law. However, although the price of the cryptocurrency fell in a short period of time, it was reduced by 6 percent in the transaction price of the day. However, the drop did not last and instead had the opposite effect less than a week later. After holding the price steady for a week, the price of Bitcoin suddenly began to rise. It eventually rose to a bitcoin price peak of $68,000 on November 11[10]. It is clear that even the mandatory decree of the government of one of the most important trading locations and mining locations can only affect the price of cryptocurrencies in the short term, but not in the medium and long term.

Figure 1 shows the price changes of cryptocurrencies before and after the promulgation of the decree, although there is a certain impact on the cryptocurrency market price in the week before and after the promulgation of the decree, there is no correlation at all after one week.

The second explicit cryptocurrency policy that this article chooses to analyze is El Salvador's choice of Bitcoin as legal tender. On June 9, 2021, El Salvador officially announced Bitcoin as the country's legal tender. The law emphasizes that Bitcoin can be traded as a means of everyday payment [11]. At the same time, El Salvador has installed more than 200 ATMs with bitcoin exchange functions, which can convert bitcoins in personal digital wallets into dollars and withdraw them without paying fees. It is clear that El Salvador wants to build its own cryptocurrency market system in this way, and at the same time build its own unique financial market. Despite the suspicion of over publicity, the BBC alone had close to 300 stories about this kind of news as the beginning of building a modern financial system. However, so much positive publicity for its policies does not seem to provide much long-term confidence in the Bitcoin market. Despite a $5,000 increase that day on June 10, there were two increases of around $5,000 within a week. However, in just two weeks, the price of Bitcoin fell back to $31,000 [10]. Although the introduction of Bitcoin as legal tender is groundbreaking, it still does not bring long-term predictability to the cryptocurrency market.

However, this does not mean that the explicit policies of cryptocurrencies do not have a long-term and lasting impact on the cryptocurrency market. The US dollar rate hike in 2022 is a good case study of how explicit policy affects the crypto market in the medium to long term. According to the official statement of the Fedreal Reserve Board, as of December 13, 2022, it has raised interest rates a total of seven times during the year, with a cumulative increase of 425 basis points [12]. The US dollar rate hike in 2022 is without a doubt the economic event with the deepest impact on the global economy. This behavior has also affected the cryptocurrency space. In 20221, the dollar has raised rates in March, May, June, July, September, November and December. In addition to the first interest rate hike after the price of bitcoin after the decline, after the subsequent rounds of interest rate hikes, the price of Bitcoin will fall by 20% to 40%. This has continued for a year, and the Bitcoin market has lost 66% of its value. This case proves that explicit policies in cryptocurrencies can still have an impact on the cryptocurrency market over the long term.

In summary, most of the explicit policies of cryptocurrencies are not as influential as expected, and the impact on the medium- and long-term cryptocurrency market is difficult to predict. Of course, one of the reasons for the vagueness of the medium to long term forecast is the high degree of uncertainty and volatility of cryptocurrency prices, and there are other explicit or implicit policies and events occurring in the long timeline that affect the price. However, because most will directly affect the structure of the financial market, most of the explicit policies of cryptocurrencies still have a long and profound impact on the price of cryptocurrencies.

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3.2. Implicit Policy

Implicit policy refers to actions about cryptocurrencies initiated by non-governmental organizations, platforms, or individuals, such as comments by public figures about cryptocurrencies. One of the characteristics of the invisible policy is that it is widely spread among cryptocurrency users, and it is easy to increase their confidence in cryptocurrency. Confidence, to a large extent, will directly affect the price of cryptocurrencies in the short term.

Fig. 2. Bitcoin price change 2

Data source: Investing.com
Photo credit: Original

The first case analyzed was the Musk label modification incident. On January 29, 2021, Musk suddenly added the word "bitcoin" to his profile. Although no explanation has been given, this incident has become the concern of many cryptocurrency users and non-users, as well as a very important hidden policy. In just one day, Bitcoin increased in value by 15%, and because of Musk's subsequent affirmation and interpretation of the word bitcoin, its price stability was guaranteed for 1 month. Obviously, without any scientific discourse and policy support, blind investment in cryptocurrencies is very dangerous. However, Musk's case illustrates that with sufficient traffic support, confidence will grow steadily, sustaining inflated cryptocurrency prices.

By comparing the explicit and implicit policies of cryptocurrencies, this paper finds that in terms of short-term impact on the cryptocurrency market, the implicit policies are closely related to their degree of dissemination, while for the explicit policies, most of the dominant policies with great influence do not have a high degree of dissemination. And the impact of highly disseminated explicit policies on the cryptocurrency market is also very limited.

Figure 2 shows how the curve of cryptocurrencies changes in 2022. Because of the impact of the US dollar interest rate hike, the price of bitcoin has always maintained a trend of ladder decline throughout the long cycle of a year. The price of bitcoin will drop immediately after the rate hike is announced.

3.3. Further Outlook

As a future outlook, this project hopes to illustrate the influence of sufficiently significant explicit and implicit policies on the price of Bitcoin through analysis, as well as how much explicit and implicit policies will lead to how much price change, so as to anticipate the price change of cryptocurrency in the next long-time span under the circumstances of sufficient known quantity.

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4. Conclusion

Although the price changes of cryptocurrencies are difficult to predict, paper can still find the correlation between major events and the price of cryptocurrencies through simulation, demonstrating the influence of explicit and implicit policies on the price of cryptocurrencies. Therefore, we will have another reference variable when analyzing the price of cryptocurrency in the future, which will help us to study and predict the cryptocurrency market.

The price of the cryptocurrency market is affected by confidence, and explicit and implicit policies are undoubtedly one of the important reasons for affecting confidence in cryptocurrencies. The breadth of publicity makes more users and non-users aware of these policies, which affects confidence, which in turn changes the price of cryptocurrencies. Comparing the impact of explicit and implicit policies on the market with their publicity breadth, this paper finds that, compared with implicit policies, explicit policies and publicity breadth are not strongly linked, but may have a long-term impact on the cryptocurrency market. The influence of stealth policies depends on the breadth of propaganda and the impact is short.

These conclusions provide new ways of thinking for cryptocurrency issuers and their users. Analyzing explicit and implicit policies in different ways makes predictions of changes in the cryptocurrency market more accurate.

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