



Analysis of Risk and Legal Issues of Crypto Assets

——Taking Bitcoin as an Example

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Abstract. This paper deeply analyzes the risks of cryptocurrencies, especially Bitcoin, and the legal issues it faces. Firstly, the article points out that bitcoin has potential value in investment portfolios due to its scarcity and decentralization. Although the price volatility is high, the system risk is relatively low. However, the legal lag has led to challenges in the legal supervision of Bitcoin, especially in defining the nature of tokens and transaction compliance. By analyzing the cases of Coinbase and *Ripple v. SEC*, this paper reveals the complexity of cryptocurrency regulation in the United States, including the divergence of regulatory agencies on legal status and existing legal regulatory issues. Finally, from the perspective of law and economics, this paper puts forward cost-benefit analysis, incentive compatibility analysis, and discussion on the boundary between market and government, which provides an unmanaged model for adapting to the supervision of exchanges.

Keywords: Rryptocurrency value, risk legal regulation, Coinbase.

1 Introduction

The progress and innovation of technology and finance, the demand for international trade, and cross-border payment have promoted the vigorous development of the virtual currency economy. The “Markets in Crypto-Assets Regulation” issued by the EU in 2023 divides virtual currencies into four categories: traditional encrypted assets, asset reference tokens ART, electronic currency tokens EMT, and other encrypted assets. ART refers to encrypted tokens that can be exchanged with various legal tenders, physical assets, or cryptocurrencies. Taking Digix (DGX) as an example, a typical asset reference token is endorsed by the same amount of physical gold stored in the vault. EMT refers to encrypted assets linked to a single legal tender, such as digital currencies such as digital RMB and USDT. Finally, encrypted assets are the most intuitive category of users, which can be transmitted and stored electronically using distributed ledgers or similar technologies, with digital representations of value or rights, such as the well-known BTC and ETH. Some scholars believe that cryptocurrencies lack a complete legal nature and status of money [1], so how to regulate supervision has become a top priority.

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2 Potential Value and Risks of Bitcoin

As a digital currency, the potential value of Bitcoin is increasingly apparent. First, Bitcoin's fixed limited supply characteristics make it like gold-backed currencies, ensuring the scarcity of its value. This feature attracts investors seeking stable value storage and long-term investment. Second, the decentralized nature of Bitcoin puts it beyond the control of any institution or government, facilitating access for those seeking to trade freely and avoid the constraints of the traditional financial system [2]. In specific areas, such as cross-border payments, digital asset transactions, etc., Bitcoin has great potential for application, which can simplify transaction processes, reduce costs, and increase transaction speed.

Secondly, the systematic risk of bitcoin is relatively small. Some scholars consider digital currency from the perspective of traditional asset pricing. By adopting different pricing models and analysis methods, they solve the problem of whether bitcoin has systematic risk and how much bitcoin should be included in the investment portfolio. The results show that although the price volatility of bitcoin is high due to the relatively small market size, vulnerable to speculation, policy changes, hacker attacks, and other factors, the system risk of bitcoin is relatively low, so it can be used as a reasonable choice for investors' portfolio [3].

In addition, with the continuous advancement of technology and the gradual maturity of the market, the technical security risk and credit risk of Bitcoin will be further reduced. For example, by strengthening the development and application of encryption technology, the security of the Bitcoin wallet can be improved, and the risk of theft can be reduced; at the same time, with the intervention of regulators and the self-discipline development of the industry, the credit system of the bitcoin market will also be gradually improved. In addition, Bitcoin may also be affected by other factors, such as the possibility of issuing additional Bitcoin, but considering the difficulty of issuing additional Bitcoin, the stakeholders involved, the risk of community division, and possible conditions for implementation, it has little impact on Bitcoin in the short term. (Although the issuance of Bitcoin is theoretically feasible, the actual operation is extremely difficult, involving multiple interests, including developers, miners, and users, so the possibility of real issuance is small. In addition, the issuance of additional Bitcoin may lead to the division of the Bitcoin community and weaken its hegemony, unless it is forced to implement in specific situations, such as when Bitcoin is mined out and network security is threatened).

However, due to the lag of the law, Bitcoin faces many challenges in legal supervision, not only the legal status is vague, but also the legitimacy of the transaction is controversial.

3 Legal Supervision Issues and Countermeasures of Bitcoin

3.1 Disagreement Among Regulators on Legal Status

Examining the development of cryptocurrencies within the legal framework, countries have shown different legislative attitudes and regulatory strategies. China's regulatory attitude towards virtual currency is more resolute. In 2021, multiple departments jointly issued a document to completely prohibit cryptocurrency transactions and mining activities, strictly prohibit new projects and promote the withdrawal of stock projects, and regard virtual currency business as illegal financial activities through several policies and documents and crack down on related crimes according to law. Germany seeks a balance in the regulation of virtual currencies: while Bitcoin is not recognized as a fiat currency, it is given equal status in taxation and transactions. The Bundesbank has proposed using 'encryption tokens' to describe Bitcoin and legislating to allow banks to sell stored cryptocurrencies. Landsbanki Baden-Württemberg (LBBW), Germany's largest state-owned bank, will provide encryption hosting services through a partnership with Bit panda, an Austrian trading platform, and plans to launch the market in the second half of 2024. In addition, due to high inflation in Argentina, exchanges have emerged to convert Bitcoin into fiat currency, reflecting the potential of Bitcoin in terms of preservation and appreciation (Cryptocambios and other exchanges convert Bitcoin into fiat currency, an experiment on the positioning of the value of Bitcoin circulation, which preserves and appropriately increases the value of assets by using currency affected by inflation). In contrast, since the adoption of the "Uniform Regulation of Virtual Currency Commerce Act" in 2017, virtual currency has established the status of digital value in the US legal system. Although it is not a legal currency, commercial activities have a legal basis. States have also followed up with legislation. For example, New York State regards digital currency as a financial asset and implements license management. In 2023, the US Congress passed the Blockchain Regulatory Certainty Act (BRCA) to further classify virtual currencies as digital assets, and the legal status is more stable.

3.2 Existing Legal Regulatory Issues

In the context of the rapid development of digital currency and blockchain technology, US legal regulation is facing unprecedented challenges, such as Coinbase [4] and Ripple [5] and SEC litigation cases. Coinbase believes that its business operations are in line with industry practices and has taken sufficient measures to protect the rights and interests of investors. The services it provides are like brokers and exchanges in traditional financial markets, but they do not involve the issuance and trading of securities. Ripple insists that the issuance and circulation of XRP tokens it uses are decentralized and are not used as any form of investment tool, so they do not meet the definition of securities. On the contrary, the SEC believes that securities are based on behavior rather than definition. (Judge Failla pointed out that the definition of securities was based on the actual circumstances of the transaction and not on the label attached to it.) The core

is whether some transactions facilitated by Coinbase are eligible for 'investment contracts' and must be regulated by securities law.) The SEC alleges that Coinbase operates as an unregistered stock exchange, broker, and liquidator. Coinbase also charges fees for unregistered securities issuance and sales related to its pledge as a service plan. Whether XRP is a security, the judge believes that the focus is not on the nature of XRP but should be based on the actual sale and sales of the overall situation to judge. This is also the focus of the Howey Test (a criterion for judging whether an investment contract is an investment contract) in many practical cases. Even if XRP has some characteristics of commodities or currencies, it may still be provided or sold as an investment contract. Therefore, the behavior of both platforms involves the issuance of securities transactions, and they should be subject to regulatory inspections, record-keeping requirements, and safeguards to prevent conflicts of interest to protect investors.

The legal problems faced by digital currency companies such as Coinbase and Ripple in their business models have become increasingly prominent. These problems include the economic definition of tokens and the compliance of trading activities. In the context of the increasingly stringent regulatory environment, the original business model may face major challenges, especially those involving insider trading and public opinion speculation in the gray area. Once regulated, the original unregulated business model of the currency circle will not be established. For example, through insider trading, public opinion hype, and extreme information asymmetry to manipulate currency prices, basically all encryption projects achieve early profitability and rapid growth in this way. However, if the strict standards of security are followed, a lot of business of encryption institutions cannot be carried out. Hu Jie, a practice professor at Shanghai Jiao Tong University and a former senior economist at the Federal Reserve, explained [6].

The United States lacks systematic legislation on encrypted assets, so the supervision of encrypted assets depends on the traditional financial supervision system and law enforcement activities, showing the characteristics of "law enforcement legislation." However, due to the complexity of the traditional financial supervision system and the uncertainty of the legal nature of encrypted assets, the compliance of the encryption industry needs to consider the regulatory requirements at the federal and state levels. In addition, some financial innovations in the field of encryption conflict with traditional regulatory systems, resulting in significant compliance problems under the existing framework.

3.3 Analysis of the Problem

Therefore, from the perspective of law and economics, it is particularly important to conduct an in-depth analysis of these legal issues. The analysis of law and economics can reveal the internal relationship between legal rules and market behavior and provide a scientific basis for policymakers to balance market innovation and risk prevention and control.

3.3.1 Cost-Benefit Analysis. SEC's supervision of Coinbase involves law enforcement, law-abiding, and social cost considerations. Enforcement costs cover investigation, prosecution, and enforcement costs; the cost of compliance means that Coinbase needs to invest resources to meet regulatory requirements, such as compliance and monitoring. The social cost is reflected in the impact of regulation on market efficiency, innovation atmosphere, and investor confidence. Supervision should balance market order and investors' rights and interests and strive to reduce costs.

3.3.2 Incentive Compatibility Analysis. Effective legal rules should be able to motivate market players to act in line with the interests of society. The supervision of the SEC should be aimed at guiding trading platforms such as Coinbase to pursue commercial interests while considering investor protection and market stability. At the same time, Coinbase should improve market efficiency and service quality through compliance management and technological innovation.

3.3.3 Discussion on the Boundary Between Market and Government. In the supervision of the cryptocurrency market, it is necessary to clarify the boundary between the market and the government. The market should give full play to its decisive role in resource allocation and promote the healthy development of the market through competition and price mechanisms. The government should play an active role in maintaining market order, protecting investors' rights and interests, and preventing systemic risks.

3.4 Countermeasures

Regarding the definition of the economic essence of cryptocurrency, there are conflicts of interest and related compliance regulatory issues. Cryptocurrency transactions are based on blockchain technology, based on anonymity rather than real names, and are not approved by government agencies. On the other hand, securities regulation needs to follow the principles of transparency and government authorization and conduct supervision and management under legal restrictions. In this regard, an unmanaged model can be adopted, so that the transaction target is limited to non-securities encrypted assets, the transaction method is limited to spot transactions, the business is limited to transactions, and the internal market making is eliminated. The exchange does not directly handle customers' encrypted assets but entrusts third-party banks and professional custodian service providers to manage customer funds to ensure capital security. Secondly, the exchange can be mainly for institutional users, through the API for transaction access, and retail brokers for order routing services, effectively reducing regulatory risks. In addition, focusing on pure trading business can reduce conflicts of interest and prevent asset abuse [7].

4 Conclusion

With the advancement of technology and the maturity of the market, the potential risks of Bitcoin are expected to be reduced, but the landing of legal supervision is still the key. Regulators need to strengthen the supervision of cryptocurrency exchanges, wallet providers, and ICO projects to prevent illegal acts such as market manipulation and money laundering. At the same time, with the continuous development of blockchain technology and the expansion of application scenarios, the cryptocurrency market may usher in more innovations and changes. Countries can alleviate conflicts of interest and unknown risks in different ways according to their national conditions and make regulatory regulations on exchanges and related institutions in advance. Investors themselves should also keep abreast of the latest legal changes and make cautious decisions.

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