

# Analysis of Financial Risks and Regulatory Measures of Network Virtual Currency

LUO FANG, TERGEUSSIZOV ILYAS

(School of Management/ University of Shanghai for Science and Technology  
, China)

(School of Management/ University of Shanghai for Science and Technology, China)

---

**Abstract:** virtual currencies have a strong global development momentum, and the market value of virtual currencies continues to increase under the pursuit of capital, which has led to the attention of central banks of various countries. Virtual currency has a strong investment attribute, so the official institutions in Europe and the United States are open to virtual currency, but the risk of virtual currency investment is also high. The Chinese government has a conservative attitude towards virtual currencies, so the influence of virtual currencies in China is limited. With the development of financial globalization, China will not stay outside of financial globalization in the future. China will gradually open the door to virtual currency in the future. Due to the financial risks of virtual currencies, in the process of economic development, the government needs to establish regulatory measures to improve the control of virtual currencies and better protect the interests of Chinese investors.

**Background:** The development of virtual currency on the Internet is under the background of the continuous development of information technology. Europe and the United States are the birthplaces of electronic technology. At the same time, due to relatively weak financial control, the emergence of virtual currency is inevitable. In addition, China has relatively strict supervision of the financial industry, and the Chinese government has stricter judgments on the risks of virtual currencies. Therefore, Chinese capital is relatively conservative in its investment in virtual currencies. The risk attributes of virtual currencies can be understood from the policies of European and American countries on virtual currencies. China can understand the real role of virtual currencies from the policies of these countries. In the future, it will gradually remain open to virtual currency investment.

**Materials and Methods:** This thesis analyzes the current market value of virtual currency to understand the development status of virtual currency. The overall market value of virtual currency is getting higher and higher. This shows that virtual currency will not disappear in the future, and the environment where the world financial industry and virtual currency coexist will be maintained for a long time. This also has a certain positive effect on China's policy of strengthening the supervision of virtual currencies.

**Results:** Aiming at the financial risks of virtual currencies in China, this article believes that the main reasons are the lack of strict access mechanisms and licensing systems, the unclear distribution of powers leading to a regulatory vacuum, and the lack of feasibility of personal income tax regulations. At the same time, this article puts forward three suggestions: improve the network The market access system and licensing system of virtual currency, clarify the responsibilities of the main body of supervision of virtual currency on the Internet, and formulate a feasible personal income tax system for virtual currency.

**Key Word:** Virtual currency; Financial risk; Chinese legal supervision; Access system.

---

Date of Submission: 20-09-2021

Date of Acceptance: 05-10-2021

---

## I. Introduction

Virtual currency has a greater impact on the global financial market. At the same time, due to its investment properties, virtual currency has a great impact on the global investment industry. However, due to the uncertain risks that virtual currencies bring to the finances of various countries, many countries have implemented stricter controls on virtual currencies, and some countries have an open attitude towards virtual currencies. For China, virtual currency has strong uncertainty, so Chinese investors are relatively indifferent to virtual currency. However, with the possible impact of virtual currency on the economy and the continuous emergence of issues such as "virtual currency impacting the renminbi", relevant agencies and ministries have further regulated the risks brought by virtual currency, which has also formed China's online virtual currency. The peculiar characteristics of legal regulations: (1) From express prohibition to slow acquiescence. But with the development of time, these legal regulations did not play a real role. (2) Supervision has gradually shifted from being led by the central bank to led by the Ministry of Culture. Because scholar Yang Tao published an article in

"Legal System and News", this will severely impact China's financial system. Later, the Ministry of Culture slowly gained a dominant position in order to obtain management rights for online games. (3) The scope of virtual currency is limited to the field of online games, and the redemption property also ranges from unconditional to conditional. China has formulated many regulatory documents to strictly limit the scope of virtual currency to the field of online games, because this will reduce legal risks in the financial market.

With the development of the Internet, virtual currency has emerged along with the development of the Internet. It is still an emerging product for all countries. However, due to the rapid development of the Internet, the influence of virtual currency has become increasingly apparent all over the world. The United States took the lead in regulating it, but the United States is a case law country, and many of them are regulated in the form of case law. At the same time, the United States has also initiated proposals on issues such as taxation and money laundering brought about by the virtual economy. South Korea has also made a lot of legislation on online virtual currency, and finally South Korea has also recognized the ownership of virtual property= by online game players. Japan is also unwilling to show weakness in this regard, and has also filed a case for such online virtual currency. However, due to the lack of substantive content and binding force of its bill, they also explicitly prohibit the private circulation of virtual currency.

The legal regulation of virtual currencies in the above countries also has great legal enlightenment for China. Because China has very few laws and policies on online virtual currencies, this is not conducive to the long-term and orderly development of China's virtual currencies.

## II. Material And Methods

China's laws and regulations have relatively strict restrictions on virtual currencies. However, the capital of European and American countries is relatively fiercely chasing virtual currencies. A large number of investment institutions regard virtual currencies as investment targets. At the same time, there has been an explosive phenomenon due to capital entering virtual currencies. Growth, it can be understood from the data that the current development of virtual currency has been very rapid, and the market value of the entire virtual currency has been very large. The development of the top ten virtual currencies in the global virtual currency market value in 2021 is shown in table below. (As of September 15, 2021)

**Table no.1** The development of the top ten virtual currencies in the world by market value

Name	Price	Market value	Circulating supply
Bitcoin (BTC)	\$47,489.11	\$893,579,066,697	18,816,506 BTC
Ethereum (ETH)	\$3,428.52	\$402,961,972,235	117,532,347 ETH
Cardano (ADA)	\$2.41	\$77,076,055,297	32,038,100,544 ADA
Binance Coin (BNB)	\$425.76	\$71,556,360,479	168,137,036 BNB
XRP (XRP)	\$1.10	\$51,001,409,346	46,622,239,005 XRP
Solana (SOL)	\$160.08	\$47,581,037,081	296,694,102 SOL
Polkadot (DOT)	\$36.70	\$36,107,085,673	987,579,315 DOT
Dogecoin (DOGE)	\$0.2423	\$31,828,337,214	131,296,859,277 DOGE
Terra (LUNA)	\$36.94	\$14,790,848,733	402,116,901 LUNA
Bitcoin Cash (BCH)	\$644.16	\$12,140,767,787	66,752,615 LTC

Data Sources: *CoinMarketCap*<sup>①</sup>

From the above table, it can be seen that Bitcoin is the virtual currency with the highest market value. The overall market value has reached 900 billion US dollars. Such a huge market value will have a huge appeal for the capital market. At present, Chinese official organizations adopt a relatively resistive attitude towards virtual currencies. The most enthusiasm for virtual currencies in European and American countries. At the same time, China also needs to participate in financial globalization. This also reflects from the side that Chinese officials will also let go of virtual currencies Currency control. The financial risks of online virtual currencies are still relatively high. Protecting Chinese investors is one of the tasks of China's official organizations. Only by continuously improving the understanding and analysis of virtual currencies can we better guard against virtual currencies.

China's digital renminbi is also in the preparatory stage. Compared with the virtual currencies of European and American countries, China's digital renminbi has certain characteristics. Under the supervision of the central bank, China's digital renminbi can continuously reduce the level of currency risk. The comparison

<sup>①</sup>*CoinMarketCap* :<https://coinmarketcap.com/zh/coins/>

between digital renminbi and Libra, Bitcoin and other virtual currencies is shown in the table below.

**Table no.2** Comparison of digital renminbi with Libra, Bitcoin and other virtual currencies

Name	DCEN	Libra	Bitcoin
Category	Digital currency	Virtual currency	
Issuer	Central bank	Libra association	Based on pow protocol
Issuing model	Central bank + commercial bank's secondary issuance	User recharge	Digital mining
Value anchoring	1:1 exchange RMB	1:1 exchange for a basket of currencies	Supply and demand
Exchanger	Commercial bank	Libra member unit	Exchange
Transaction transparency	Controllable anonymity	Long-term transaction recording and tracking	Completely anonymous
Issue number	Unlimited	Unlimited	21 million online
Technology path	"blockchain+" multi-technical route	Alliance chain	Public chain
Settlement path	Digital currency wallet	Wallet (Calibra)	Wallet/exchange
Liquidation	Blockchain	Licensed blockchain, authorized node verification	Permissionless blockchain
Circulation range	Global (mainly domestic in the early stage)	Global (mainly Facebook users in the early stage)	Worldwide
Usage	Payment, transfer, no investment function	Payment, transfer	Invest

Source: Central Bank

From the above table, it can be found that China's digital renminbi was mainly circulated in China in the early stage and will be circulated globally in the later stage. Since China's digital renminbi has a central bank as a background, the reliability of the digital renminbi is relatively high. Other virtual currencies are mainly issued by private individuals or Internet companies, which are relatively risky.

Different countries have different policies on virtual currencies. With the development of virtual currencies, central banks in various countries have issued relevant policies on virtual currencies. The specific conditions are shown in the following table.

**Table no.3** Changes in virtual currency policies in some countries in recent years

Nation	Time	Latest policy
Norway	2017	No value-added tax on bitcoin transactions
Iceland	2017	A wide range of exemptions were made for the "ban on bitcoin for foreign exchange transactions"
Denmark	2017	The danish FSA announced that business transactions related to bitcoin are not under its jurisdiction
Germany	2019	Banks can sell or store cryptocurrency from January 1, 2020
Singapore	2019	Monetary authority of Singapore uses bitcoin as a digital payment token
Indonesia	2017	Enacted bill to ban bitcoin as a payment method
India	2021	The government began to explore digital currencies endorsed by the state, and plans to ban private cryptocurrencies, such as bitcoin

Source: Wikipedia, compiled by the author

From the above table, it can be found that most developed countries have an open attitude towards virtual currencies, and most developing countries hold a conservative attitude towards virtual currencies. This shows that the governments of developing countries are more cautious about the risks of virtual currencies. With the development of financial globalization, it is also difficult for developing countries to stay out of the matter. Therefore, improving the risk management and control of virtual currencies through regulatory legislation has a positive effect.

### III. Financial Risk Analysis of Online Virtual Currency

#### Lack of strict access mechanism and licensing system

The problem with China's online virtual currency is that it lacks a strict access mechanism and licensing system. Major Internet service providers have their own issuance decisions. This easily leads to the profit-seeking nature of merchants, which makes them even more profitable. Multiply economic, social, and legal issues. In addition, Chinese law does not have a clear corresponding entry threshold system for virtual currency on the Internet, and lacks a normative basis. This makes China's use of virtual currency online because

there is no unified access and permission mechanism, which leads to the chaos of virtual currency operation and the breeding of insecure factors.

#### **Unclear assignment of powers leads to a regulatory vacuum**

Network virtual currency appeared with the development of the Internet, but due to the short development time of the Internet, people lacked a deep understanding of it, which also created a sense of strangeness for humans to network virtual currency. In China, there has never been a special regulatory agency, and it is managed by multiple departments. This has created a situation where there is no leader in the group, and once a problem occurs, it is difficult to solve the problem and it is difficult to really solve the problem. This hinders the virtual currency of China's network. Rapid development. Without a clear division of labor, the powers of various departments have no clear boundaries, the regulatory authorities cannot accurately implement them, and China's online virtual currency cannot be better and more clearly regulated.

#### **Provisions for levying personal income tax are not feasible**

The sound development of virtual currency will also bring huge profits, and the generation of profits also requires the development of third-party trading platforms. It is necessary to levy personal income tax on the income generated in this circulation process. The Chinese tax authorities have also carried out relevant measures. Approval, but this is not a complete taxation link. Many contents are lacking. Therefore, its implementation is difficult to be guaranteed, and it also lacks effective judicial and administrative supervision, and the punishment mechanism is not perfect, so the implementation is extremely infeasible.

### **IV. Discussion**

Based on the main problems in the above three aspects, the author puts forward three specific and perfect suggestions. Through the establishment of a sound market access mechanism and specific measures to supervise the operation mechanism, it is hoped to build a legal and regulatory system for network virtual currencies with Chinese characteristics.

#### **Improve the market access system and licensing system of virtual currency on the Internet**

In fact, every country sets certain access conditions in the financial sector to ensure the stability of the financial sector. What is the market access system? In fact, it restricts the conditions of market entities. For some relatively weak financial institutions with weak risk resistance Companies are screened to ensure the smooth operation of online virtual currency in the market and form their own core competitiveness. Specific measures can be to set virtual currency business conditions, review their qualifications, identify and operate their operating mechanisms, and raise barriers to entry , Strengthen precise supervision. The author believes that China should formulate a strict market access mechanism and strictly limit the thresholds set by enterprises. When necessary, the state can set minimum standards from a legal perspective. Only enterprise standards that are stricter than national standards can be implemented.

#### **Clarify the responsibility of the main body of supervision of virtual currency on the Internet**

Why is it necessary to clarify the responsibilities of the supervisory body of virtual currency? First of all, China currently does not have an institution dedicated to the management of virtual currencies. Multi-departmental management is prone to problems. The management model of militarization. Then divide the management organization into multiple departments, which can be divided into regions or functions to clarify their respective regions. Second, the regulatory content is clarified, and the government can manage it more easily and control various risks. When problems arise, specific departments must also supervise each other. Finally, the state will be managed in a unified manner, and the power will ultimately be vested in the state. This is conducive to fulfilling supervision responsibilities and safeguarding the legitimate rights and interests of the people. Finally, build a complete online virtual currency supervision chain to promote the smooth operation of the virtual currency market. Through these divisions, horizontal and vertical chain mechanisms are formed, which cooperate with each other.

#### **Develop a feasible virtual currency personal income tax system**

Taxation is the main means by which the country obtains fiscal revenue. Therefore, we must formulate a practical and feasible online virtual currency taxation system to make the taxation level of taxpayers relatively balanced. The personal income tax is a type of tax for individuals to obtain various taxable income. Then here is the party that buys currency. The party that purchases currency is used as a consumer to purchase virtual currency on the Internet by using real cash or banks and other payment methods, and then use the purchased virtual currency to pass the high price. Sell at the price you bought, so as to obtain the intermediate price difference and make a profit. At this time, we should formulate a strict system to levy taxes on this part of the

profit. Through state intervention and control, not only can China's fiscal revenue be increased, but it can also supervise and control the profitability of middlemen. At the same time, while paying personal income tax, the real-name system should also be implemented to avoid double taxation and avoid tax evasion and tax evasion. By providing real information to prevent crime and reduce the risk of online virtual currency operation, if the network virtual currency is not authenticated by real-name, it is difficult to monitor the whereabouts of funds, and it may also lead to various criminal crimes. This will not only destroy the socialist financial management system, but also endanger the socialist financial order. Therefore, through the implementation of the real-name system, users who falsely register and falsely provide information materials should be severely cracked down, actively curb such behavior, standardize market order, civilized transactions, and standardize the operating environment of online virtual currencies.

## V. Conclusion

The development of the Internet economy has created a huge space for the development of China's online virtual currency. We must follow the steps of the internationalization of online virtual currencies. As the scope of online virtual currencies is gradually extended to the world, the author believes that only the development of online virtual currencies in China should be analyzed and combined with the development of online virtual currencies in China and Western countries. Contrast, summarize the experience brought to China, and further analyze the shortcomings of China's online virtual currency, so as to build a development system of online virtual currency with Chinese characteristics suitable for my country to promote the rapid development of China's economy.

## References

- [1]. Alghamdi, Saleh, Beloff, Natalia. Virtual Currency Concept: Its Implementation, Impacts And Legislation[C]. //Proceedings Of 2015 Science And Information Conference: 2015 Science And Information Conference (Sai), July 28-30 2015, London, United Kingdom.:Institute Of Electrical And Electronics Engineers, 2015:175-183.
- [2]. Yingqing, Fang, Hong, Wu. Research On The Multiple Attributes Of Virtual Currency And Its Regulation[C]. //2014 Sixth International Conference On Measuring Technology And Mechatronics Automation: 2014 Sixth International Conference On Measuring Technology And Mechatronics Automation (Icmtma 2014), 10-11 January 2014, Zhangjiajie, China.:Institute Of Electrical And Electronics Engineers, 2014:549-551.
- [3]. Buchinger, Uschi, Ranaivoson, Heritiana, Ballon, Pieter. Virtual Currency For Online Platforms: Business Model Implications[C]. //Proceedings Of The 10th International Conference On E-Business: 10th International Joint Conference On E-Business And Telecommunications (Icete 2013), International Conference On Data Communication Networking (Dcnet 2013), International Conference On E-Business (Ice-B 2013), International Conference On Optical Communication Systems (Optics 2013), 29-31 July, 2013, Reykjavik, Iceland.:Scitepress – Science And Technology Publications, 2013:1-11.
- [4]. UschiBuchinger, HeritianaRanaivoson, Pieter Ballon. Virtual Currency For Online Platforms Business Model Implications[C]. //Proceedings Of The 4th International Conference On Data Communication Networking, 10th International Conference On E-Business And 4th International Conference On Optical Communication Systems: Dcnet 2013, Ice-B 2013, Optics 2013, Reykjavik, Iceland, 29-31 July, 2013.:Scitepress, 2013:196-206.
- [5]. A. Bogliolo, P. Polidori, A. Aldini, Et Al. Virtual Currency And Reputation-Based Cooperation Incentives In User-Centric Networks[C]. //2012 8th International Wireless Communications And Mobile Computing Conference. [V.2].:Ieee, 2012:895-900.
- [6]. Yechen Zhu. Analysis On The Risk Of Virtual Currency Transactions[C]. //2012 International Conference On Financial, Management And Education Science(2012 年金融、管理与教育科学国际会议 icfmes 2012)论文集. 2012:79-83.
- [7]. Yechen Zhu. Analysis On The Risk Of Virtual Currency Transactions[C]. //2012 International Conference On Financial, Management And Education Science.:Science Technology Press, 2012:79-83.
- [8]. Huang, Echo, Yeh, Nai Ching, Hung, I-Chun. Using Decomposed Theory Of Planned Behavior To Explain Virtual Currency Use Intention[C]. //2011 International Conference On E-Business And E-Government. [V.1.A].:Ieee, 2011:1-4.
- [9]. Lee, Chun-Chih, Lai, Ah-Fur. Modeling The Virtual Currency Mechanism Of Web-Based Learning Activities System[C]. //2011 International Conference On Electrical And Control Engineering. [V.1].:Ieee, 2011:6661-6665.
- [10]. Chun-Chih Lee, Ah-Fur Lai. Modeling The Virtual Currency Mechanism Of Webbased Learning Activities System[C]. //2011 International Conference On Electrical And Control Engineering. [V.9].:Ieee, 2011:6661-6665.
- [11]. Frank Kappe, Michael Steurer. The Open Metaverse Currency (Omc) A Micropayment Framework For Open 3d Virtual Worlds[C]. //E-Commerce And Web Technologies.:Springer-Verlag, 2010:97-106.
- [12]. Lianfang Chen, Xiujun Tian. Analyses On The Consumer Risk Under Virtual Currency In China[C]. //The Ninth Wuhan International Conference On E-Business(第九届武汉电子商务国际会议)论文集. 2010:720-726.
- [13]. Lianfang Chen, Xiujun Tian. Analyses On The Consumer Risk Under Virtual Currency In China[C]. //The Ninth Wuhan International Conference On E-Business. Vol. 1.:[S.N.], 2010:720-726.
- [14]. Cui Jun. The Issue Of Internet Virtual Currency Should Be Uniformly Issued By The Monetary Authorities The Topic Raised And Finished By Levying Tax On Internet Virtual Transaction[C]. //2010 International Conference On Management And Service Science. [V.2].:Ieee, 2010:884-887.
- [15]. Study Influence Factors Of The Virtual Currency Based On Gray Correlation Analysis[C]. //2009 International Forum On Information Technology And Applications (Ifita 2009). V.3.:Ieee Computer Society, 2009:302-305.
- [16]. Hong Wu, Hui Peng, Youwei Zhu. Exploration On Operation Of Online Virtual Currency[C]. //2009 International Conference On E-Business And Information System Security (Ebiss). [V.2].:Ieee, 2009:1035-1038.
- [17]. Study Influence Factors Of The Virtual Currency Based On Gray Correlation Analysis[C]. //2009 International Forum On Information Technology And Applications (Ifita 2009). V.1.:Ieee Computer Society, 2009:302-305.
- [18]. Zhen Ouyang, Bin Zhang. The Economic Analysis Of Regulating Virtual Currency In China[C]. //2009 International Symposium On Information Engineering And Electronic Commerce (Ieec 2009). [V.1].:Ieee, 2009:308-312.

- [19]. Study Influence Factors Of The Virtual Currency Based On Gray Correlation Analysis[C]. //2009 International Forum On Information Technology And Applications (Ifita 2009). V.2.:Ieee Computer Society, 2009:302-305.
- [20]. Two-Way Exchange Of Virtual Currency: Future Tendency And Inherent Risks[C]. //2009 International Conference On Future Networks (Icfn 2009).:Ieee, 2009:220-224.

LUO FANG, et. al. "Analysis of Financial Risks and Regulatory Measures of Network Virtual Currency." *IOSR Journal of Business and Management (IOSR-JBM)*, 23(10), 2021, pp. 32-40.