

Discussion on the development prospect of digital currency based on blockchain technology

Zhang Liucheng^a, Mao Yuanqing

School of Accounting Harbin University of Commerce Harbin, China

^aZhangliuchegn@126.com

Keywords: blockchain, digital currency, Chinese currency, Ethereum

Abstract: In recent years, whether the development and application of blockchain technology will lead the "trend" in the future, whether it will affect human society is worthy of further study. At the same time, the emergence of digital currency based on blockchain technology has also led to the development of digital currency. The global application and prospects of digital currency in the future have been studied and discussed. This paper analyzes the current situation of digital currency (taking Ethereum as an example) and then analyzes the problems and influencing factors of digital currency, and proposes suggestions for problem solving and future development. Analyze the feasibility of digital currency issuance and how digital currency should be designed and distributed in China. At the same time, it combines Ethereum's smart contracts to intelligentize social life, from digital currency to smart contracts to smart assets.

1. Introduction

According to the global digital currency official website data, as of April 2018, there are 1600 digital currencies counted. In recent years, there have been many types of digital currencies, such as Bitcoin and Ethereum. The data shows that the development of digital currency is strong. But behind the birth of a large number of digital currencies, there are many crises and risks. How to solve the existing risks and effectively develop digital currency is worth exploring and deepening. This paper analyzes the development of digital currency at home and abroad and the existing problems. Taking Ethereum as an example, it puts forward development suggestions and analyzes the development prospects. And how China should design the operation of digital currency.

2. Analysis of the development status of blockchain digital currency

2.1 Definition and characteristics of blockchain

After the human race has experienced the steam age, the power age, and the Internet era, what era is the next generation? If the release of human productivity is a steam engine, solving the basic needs and needs of human beings is electricity, and changing the traditional means of communication is the Internet, then as a machine for constructing trust - the blockchain, it is likely that the social value will be completely changed. The way of delivery. Although most people don't understand the blockchain now, after 20 years, human discussion of blockchain technology is as common as discussing the Internet today.

2.1.1 Definition of blockchain

The essence of the blockchain is actually a distributed public ledger, the most advantageous of which is decentralization. The existence of a centralized organization can result in high costs, and the advantage of decentralization can save costs. The blockchain technology records information by a database formed by a series of data block arrangement links formed by a string of cryptographic methods, without relying on a third party. Under blockchain technology, the record of data information has a timestamp and cannot be tampered with and transparently disclosed to everyone.

The first block of the blockchain was created in 2009 and it is called the “Creation Block”. The “Creation Block” is a new post published by Nakamoto in November 2008, “I am developing a new type of electronic currency system that uses a peer-to-peer format without relying on third-party intervention.”, announced in January 2009, the "Bitcoin Creation Zone". The operation principle of block chain is shown below.

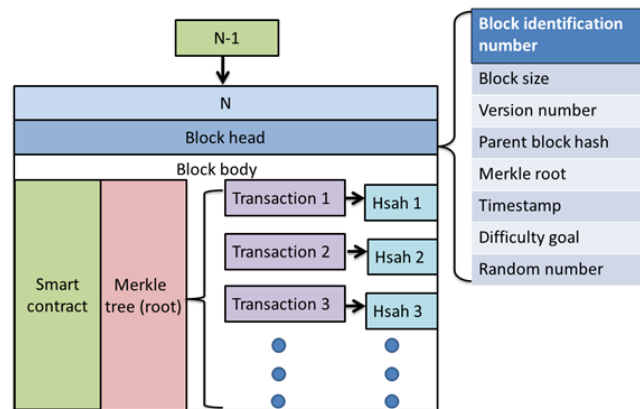


Fig. 1 Working principle of block chain

2.1.2 Blockchain characteristics

Decentralization: Decentralization is the core strength of the blockchain and the most basic feature of the blockchain. Because the blockchain data is verified, billed, maintained, etc. based on the storage, power, and updates of the distributed structure, there is no need for a centralized management organization. Its trust relationship is a purely mathematical computing method rather than relying on third-party intermediaries to establish a trust relationship between distributed nodes and nodes.

Blockchain data transparency and anonymity: The data recorded by the blockchain system is transparently published throughout the network. At the same time, the running rules can also be reviewed by the entire network node. This is the blockchain data system is trusted. Foundation. The transaction of blockchain data can be carried out under anonymity without public identity, because the exchanged data is calculated using mathematical algorithms, so the exchange of data does not need to be based on trust.

2.2 Development status of blockchain digital currency

There are many areas in which blockchain can be applied, but since it was first applied to digital currency, many developers have used encrypted mathematical algorithms to design new digital currency names after the birth of Bitcoin. As of April 4, 2018, there are 1600 digital currencies counted.

3. Analysis on the problems existing in the development of blockchain digital currency

3.1 Risk Analysis of Blockchain Digital Currency Development

3.1.1 The currency of the digital currency fluctuates greatly

At present, the development of digital currency is not yet mature in the initial stage of development. As the number of people participating in digital currency increases, the number of digital currencies also increases, but the number of increases is limited. Therefore, the small liquidity of the digital currency makes its price easy to be controlled by a few people, so that its price has a sharp rise and fall in the short term. For example, in the Christmas of 2018, Bitcoin fell sharply, which also made people ridicule that this is a "discounted Christmas gift" from Santa Claus. Price fluctuations in digital currencies are the biggest risk of digital currency.

3.1.2 Technical risk

In the case of digital currency transactions, if the data of the wallet is forgotten or stolen by the holder, it will be lost, and the loss will not be recovered. The data in the digital currency trading system will cause the wallet data. Unsafe and easy to lose, trading loopholes and unwashed money provide a favorable platform, so digital currency has a lot of technical risks.

3.1.3 The supervision system and system are not perfect

Whether it is traditional paper currency or electronic money, it is necessary to have a set of effective supervision system for supervision and management, supervision by regulatory agencies, and protection and restraint of the legal system. However, digital currency does not yet have an effective regulatory mechanism and a sound management approach and system that matches it. If the electronic currency management system is used to regulate digital currency, it is very limited and inconsistent.

3.1.4 Long-term use of digital currency is easy to cause inflation

Compared to traditional currencies, digital currencies are not costly and efficient. But the source of digital currency comes from “mining”, and efficient “mining” will cause the digital currency to be over-represented, causing inflation.

3.1.5 Humans have insufficient understanding of digital currency

Most people know about paper money and electronic money, while others think that digital currency payments are electronic money payments, such as "Alipay" and "WeChat payment." This shows that people do not have enough knowledge of digital currency. Not enough understanding can easily lead to digital currency security issues and usage issues. The shortcomings of people's understanding of digital currency hinder the development of digital currency.

3.2 Analysis of the Factors Affecting the Development of Blockchain Digital Currency

3.2.1 Influencing factors of supply

Today, there are as many as 1,600 digital currency flows. A wide variety of digital currencies are not used at all, and the structure of different digital currencies is not the same, making it impossible to choose digital currency. The anonymity of digital currency rather than the real name system will affect the user's refusal to accept the use of digital currency to prevent data from being stolen by criminals. The security of digital currency and the lack of rigorous systems have hindered the sustainability of the supply and distribution of digital currencies.

3.2.2 Factors affecting demand

Although the cost of digital currency is very low, it is built on top of the blockchain, so other costs will be higher, such as the large amount of electricity that computers consume to process data. The price of digital currency is highly volatile and risky. When it is held, it will be subject to the risk of price fluctuations, resulting in loss of assets. Once a digital currency is traded, it cannot be revoked, and its loss cannot be recovered. Its non-real name system has caused traders' demand for digital currency, and has affected the development of digital currency.

3.2.3 Influencing factors of supervision

Digital currency is different from traditional currency. Traditional currency has its own legal currency. Digital currency is a global currency. If it is supervised, it will require a lot of manpower and material resources. Supervision is not easy. If digital currency currency or other financial crisis occurs, it will lead to a large global economic turmoil. Who should “issue” digital currency, how to supervise it, and how to set up a regulatory mechanism are all factors that affect its future development.

4. Digital currency development problem solving and prospects

Digital currency development faces problem solving measures

For regulatory analysis. The regulation of digital currency needs to be started globally, and it cannot be done by one country. This is undoubtedly a huge challenge to global finance. Since it is a currency, security must be ranked first. How to make digital currency safe? First, digital currency is based on the currency generated by the blockchain algorithm. Therefore, to make the algorithm safe, for this reason, when the technology is developing, the algorithm needs to be improved to prevent the criminals from cracking the algorithm password and ensure the security of the digital currency. Secondly, the criminals who cracked the password to steal digital currency or laundered money were severely punished for enacting corresponding laws. Regulators should formulate relevant laws and regulations for the development of digital currency and redefine a set of regulatory systems.

Analysis of the fluctuation of the currency value of digital currency. Whether it is Bitcoin or Ethereum, the price of digital currency tends to be ups and downs, making people unpredictable. One problem that needs to be solved in issuing digital currency is how to stabilize its currency. In fact, we can combine digital currency with physical assets. Bitcoin and Ethereum have soared because they are not combined with physical assets. When the two are combined, the assets are digitized and the value of the digital currency is stabilized.

5. Conclusion

At present, the status of digital currency in the world has risen day by day, and all countries have tried to make it the most beneficial to their own development. Research and discussion on digital currency at home and abroad promote the development of blockchain digital currency. This paper takes blockchain digital currency as the research object, analyzes its development status at present and the technical problems and regulatory issues it faces, and proposes solutions. At the same time, take the Ethereum as the digital currency 2.0 era as an example to explore the future development and application of digital currency and smart contracts. Finally, we designed a digital currency "Chinese currency" suitable for China's digital currency development, and combined "Chinese currency" with smart contracts to achieve asset intelligence, which is also the general trend of future social development.

Acknowledgments

This work is supported by National Social Science Fund Project 15BJY017; This work is supported by Heilongjiang Provincial Social Science Fund Project "Research on the Construction of Heilongjiang Province Financial Sharing Platform Based on the Perspective of Blockchain Technology" (18JYE672).

References

- [1] NealHannon. XBRL Fundamentals [J]. Strategic Finance.2005,86(10)L356-371
- [2] Miklos A. Vasarhelyi David, David Y.Chan and J.P.Krahel. Consequences of XBRL Standardization on Financial Statement Data [J]. American Accounting Association, Spring 2012: 155-167
- [3] Zhang Liucheng. Research of Innovation and Entrepreneurship Education in Harbin University of Commerce [J]. Social Science and Humanity, 2015(76) , pp. 130-133
- [4] Zhang Liucheng. Application and Analysis of Witkey Mode in Network Economy [J]. Advances in Social Science, Education and Humanities Research, 2015(31), pp. 178-181
- [5] Zhang Liucheng.The Research and Innovation of Witkey Mode under the New Era [J]. Advances in Education Research, 2015(11), pp. 102-105.