

REVIEW

Research on the Application of Blockchain Technology in the Financial Field from the Perspective of The Belt and Road Initiative

Nairong Shi*

ID number:320621199402250062

ARTICLE INFO

Article history

Received: 5 June 2020

Accepted: 9 June 2020

Published Online: 31 July 2020

Keywords:

The Belt and Road Initiative

Blockchain technology

Financial sector

Application

ABSTRACT

With the continuous deepening of The Belt and Road Initiative development strategy in China, blockchain technology has been more and more widely applied in the financial field. In recent years, the overall operation situation of China's financial sector is stable. However, with the reform of the economic system and the innovation of the financial sector, there are still many problems in China's financial sector that need to be improved. With its application advantages, blockchain technology has solved many problems in the financial field. This paper analyses and discusses the application of blockchain technology in the financial field from the perspective of "The Belt and Road Initiative".

1. Introduction

In recent years, the role of blockchain technology in the financial field has attracted more and more attention and has become a key topic in the international financial field. Countries have studied the application of blockchain technology in the financial field to better promote the development of the financial industry. Bitcoin is generally regarded as the first practical application of blockchain technology. Nowadays, both domestic and overseas are studying how to better apply various technical solutions of blockchain technology to the financial field, to improve the efficiency of financial transactions, standardize financial business transactions, reduce transaction risks, and ensure the security and reliability of data in the financial industry.

2. Existing Problems in China's Financial Sector and the Advantages of Applying Blockchain Technology

2.1 Current Problems in China's Financial Sector

Although in recent years, with the improvement of science and technology, China's financial industry has made great progress and development. However, compared with the financial service level of western developed countries, the development level of China's financial service industry is still at a relatively backward level in the world. Especially in the financial field of market competition and market development capacity, financial business infrastructure construction, and industry innovation capacity, there are still very big gaps^[1]. On the

*Corresponding Author:

Nairong Shi,

Email: 791274907@qq.com

whole, the problems existing in the current stage of China's financial sector are mainly reflected in the following aspects: first, China's financial service industry lacks market competitiveness and is unable to provide various financial service products that meet the needs of China's economic development. The transaction scale is small, the ratio of non-performing assets in Banks is high, and the debt situation of the securities industry is serious, resulting in serious losses in the securities industry in recent years. Secondly, the business innovation ability of China's financial sector is insufficient. Some foreign financial institutions have an absolute advantage in the business innovation of the financial sector. Compared with the financial instruments provided by China's financial sector, there are a variety of foreign financial instruments, which can meet the requirements of customers in various aspects of financial services. Besides, the ability to develop new financial products in China's financial sector lags far behind that of foreign financial institutions. This is mainly due to the low technical level of the development of new financial business in China, the low degree of electronicalization, and the relative shortage of professional talents, which leads to the low capacity of independent innovation. As a result, the variety of financial instruments in China's financial sector is relatively monotonous and it is unable to provide customers with more comprehensive and high-level financial services. Third, China's financial sector of the relevant infrastructure construction level is relatively low, industry regulatory capacity falls off^[2]. To achieve long-term development of the financial sector, it is necessary to have modern communication technologies, computer network technologies and other infrastructure facilities to support it and to use scientific laws and regulations to provide institutional guarantee for new businesses and new tools of the financial sector. However, China's financial industry infrastructure construction capacity is insufficient, the relevant system construction is not standardized, the legislation lags behind serious problems, unable to carry out orderly supervision of the financial industry. Finally, the ability of Chinese financial institutions to carry out transnational business is relatively low. All but the highest-ranked Chinese Banks are in the early stages of expanding their overseas operations, and many foreign Banks already have branches around the world. China's banking financial business is still dominated by deposit and loan business, while foreign Banks have focused on some new financial derivatives. Therefore, financial innovation means can be better utilized to obtain greater economies of scale, and industry risks can be better avoided. Thus, it can be seen that the overall develop-

ment level of China's financial sector is relatively low. Also, in recent years, the financial industry suffered serious losses, the growth rate of the whole industry was slow, and the development of the internal financial industry structure was very uncoordinated. Compared with some developed countries, the support rate of China's financial industry for China's overall economic growth is relatively low. It is precise because of the imbalance in the development of the internal structure of the financial industry (mainly reflected in China's financial sector dominated by the banking sector, while other securities and insurance financial services occupy a small proportion) that the development strength of China's financial industry is seriously insufficient and its competitiveness in the international financial market is insufficient^[3]. Besides, the regional development of China's financial sector also presents an uncoordinated situation, and it is difficult for China's rural financial services to meet the needs of economic development in rural areas at this stage.

2.2 Advantages of Applying Blockchain Technology in the Financial Field

At present, blockchain technology is widely used in many industries, including the financial application of digital currency and other industries, and the application of blockchain in the financial field can be said to have its inherent advantages. Blockchain technology has many advantages such as decentralization, a high degree of security, strong traceability, and openness and transparency. Therefore, it can solve a variety of related problems in the financial field, such as credit investigation service, supervision level, and efficiency, as well as trade transactions^[4]. The practice has proved that blockchain technology is an effective technology to solve many problems in the financial industry. Thus, the application of license technology in the financial field is conducive to the industry's innovation of service concepts and awareness, and makes the financial service industry closer to people's production and life, increasing the contribution of the financial industry to China's real economy. Under the general trend of China's economic restructuring, the application of blockchain technology can optimize the internal structure of China's financial sector, to establish a more perfect modern financial service system. Given the lack of legislation in the field of financial services in China, it is also conducive to the establishment of sound laws and regulations in the field of financial services and the continuous improvement of the regulatory system, to better cope with and prevent various financial risks and improve the security of China's financial industry.

Finally, the application of blockchain technology in the financial industry can well solve the problem of unbalanced regional development of China's financial services industry and improve the level of China's rural financial services. Besides, it provides more new tools for China's financial industry to meet the requirements for further allocation of resources of the financial service industry under the requirements of the financial system reform, promotes the rational flow of China's financial resources, and improves the quality and efficiency of China's financial service industry. In the future, the financial sector will undergo further changes due to blockchain technology. This means that blockchain technology can well help the real financial economy to solve many coordination problems. For example, as far as the insurance industry is concerned, blockchain technology can well prevent insurance fraud, guarantee enterprise benefits, and improve customer experience^[5]. The current situation is the application of blockchain technology in the financial field is still in the experimental stage, and the development heat of blockchain technology is obvious to all. However, it has not been applied in the financial field on a large scale. In order to make blockchain technology more widely used in the financial field in the future, it is necessary to further develop blockchain technology in terms of technology application and security performance. China must establish a strong regulatory means, improve relevant laws and regulations, and strengthen technical exchanges to avoid many risks in the financial industry, to provide a better application environment for blockchain technology.

3. Key Points of Blockchain Technology Application in the Financial Field from the Perspective of "The Belt and Road Initiative"

3.1 Scientifically Understand the Defects of Blockchain Technology

At present, the application of blockchain technology in the financial field is still in the experimental stage. Although it has provided new ideas and good technical support for financial reform and innovation, and it has improved the innovation and development capacity of China's financial industry and solved many existing problems in China's financial sector. However, due to the technical defects of blockchain technology itself and its application advantages as a new emerging thing, there are still many deficiencies. Therefore, the application of blockchain technology in the financial field from the perspective of The Belt and Road Initiative must first scientifically recognize the defects of blockchain technology

and optimize and improve the deficiencies of blockchain technology through continuous exploration and practical application^[6]. As for the defects in blockchain technology, financial institutions need to continuously optimize their application performance and improve the security of their application environment. Current status, the data processing capacity of blockchain cannot meet the scale requirements and growth speed of many financial transactions. Therefore, to improve the efficiency of resource allocation and transaction speed in the financial sector, we must constantly explore innovative technological means. Financial institutions also need to constantly improve the security of transactions to prevent the emergence of security holes. The reason is that the application advantages of blockchain technology include the performance of open sharing. If financial institutions do not strengthen security measures, it may lead to the risk of some data leakage, resulting in the loss of customer privacy security is not guaranteed, which will bring unpredictable losses. At present, China's research on blockchain technology is still in its infancy, so there are still many problems in its application in the financial industry. However, the integrated development of blockchain technology and financial innovation is the general trend. China needs to make continuous innovations in the technology and system of the financial industry, and expand the application of blockchain technology in more areas of the financial industry. Nowadays, blockchain technology has already had successful practice cases in the application of virtual currency (bitcoin), while it is still in the exploratory stage of experimental research in the field of the financial industry. Therefore, it is necessary to have a scientific understanding of the defects of blockchain technology, keep the spirit of exploration, promote the continuous development and maturity of blockchain technology, and strengthen the innovative integration of blockchain technology and the financial field.

3.2 Application of Blockchain Technology by Bank Credit Information System

As the scale of transactions in the financial sector continues to expand, cross-border transactions are bound to occur. At present, many commercial Banks in China have started to carry out transnational credit business, and transnational now involves a more important issue is the credit problem. Credit verification must be ensured before cross-border credit operations can be carried out^[7]. Only by clarifying the credit status of the lending entity can the smooth development of credit transactions be effectively guaranteed. However, each country's

cross-border credit business is not the same, and there are many differences in the credit collection system on which cross-border credit depends, so it is necessary to carry out systematic analysis on it. On the other hand, the credit verification work of the transnational credit business is more complex, involving several work links. In the process of multi-layer approval, it is easy to have problems such as low efficiency of data use and incomplete information. In addition, the complex work will lead to the high cost of credit verification. As a result, some data will likely be leaked or tampered with^[8]. Under the background of The Belt and Road Initiative Strategy, the new business of transnational financial transactions must be carried out on the premise of a good credit investigation. With the application of blockchain technology, the optimization and adjustment of information records in China can be made more efficient and scientific, and the storage and application of a huge amount of information can be completed. The application of blockchain technology can improve the difficulty of data tampering, reduce the possibility of data tampering, and realize the sharing of customer credit information records, thus making this work more open and transparent. Thus, it not only simplifies the work process of credit investigation and verification but also reduces the cost of credit investigation and verification. At the same time, the credit investigation and verification work of transnational credit businesses are more systematic^[9]. Under the background of The Belt and Road Initiative Strategy, cross-border credit investigation cooperation must be strengthened to carry out financial cooperation. Countries should jointly establish credit rating standards and realize automatic recording and storage of credit information based on blockchain technology. This will effectively prevent information leakage, data tampering, and other credit risks.

3.3 Application of Financial Regulation to Blockchain Technology

Under the background of The Belt and Road Initiative Strategy, the financial regulation of various countries faces huge challenges. In China, there are some problems in the supervision of the financial industry, such as imperfect system and incomplete implementation, which lead to a relatively low level of supervision. Although The Belt and Road Initiative Strategy has promoted the development of China's foreign economy, it has also accelerated the outflow of capital and the inflow of foreign capital, thus increasing the relevant financial risks^[10]. In particular, in recent years, the blind growth of shadow Banks, underground Banks and other improper financial

trading institutions will lead to the excessive expansion of credit. Without timely and effective supervision, it is likely to trigger a financial crisis that is difficult to control, bring a very negative impact on the development of China's real economy, and increase the instability of China's international financial market. The application of blockchain technology in financial supervision can digitize customer information, to guarantee the reliability of user identity information, and realize the traceability of user-related data in real-time, which greatly reduces the possibility of abnormal transactions such as shadow banking and underground Banks. To strengthen the financial supervision in China, to ensure the orderly and normative development of financial business. From the current experimental situation, blockchain technology can well ensure the convenience and security of financial transactions, promote the establishment of a more secure and fair international financial transaction system, and strengthen the financial cooperation between countries.

4. Conclusion

To sum up, the author makes a comprehensive analysis of it in this paper, hoping to give readers some inspiration. The application of blockchain in the financial field has a very broad prospect. Although it is still in the experimental stage, it still needs to be improved in terms of technology and security. However, in the future, with the continuous improvement and development of blockchain technology, it will be able to be applied to a larger scale in the financial field. In order to ensure that blockchain technology can better promote the development and progress of the financial industry, it is necessary to ensure a good application environment for it, constantly improving the awareness of service innovation in the industry, strengthening relevant financial legislation, and enhancing the regulatory capacity of the government.

References

- [1] Qing Chen. Research on the application of blockchain technology in the financial field under the background of "The Belt and Road Initiative Strategy"[J]. *Fortune today*, 2019(07).
- [2] Tao Jin. Practice and prospect of blockchain technology in the financial field[J]. *Tsinghua financial review*, 2016(09).
- [3] Yan Zhao. Research on the application of blockchain technology in China's financial field[J]. *New finance*, 2020(03).
- [4] Shiying Zhang. Research on financial innovation based on block chain technology [J]. *Finance and*

- economics, 2020(08).
- [5] Qilei Hu. Application research of blockchain technology in the financial field -- based on the perspective of "The Belt and Road Initiative Strategy"[J]. Friends of accounting, 2019(05).
- [6] Hongyuan Hao. Application of block chain technology in economic and financial field[J]. Economist, 2018(09).
- [7] Qing Liu. Discussion on blockchain technology and its application in the financial field [J]. Modern business, 2018(32).
- [8] Yunfan Zhang. Application of blockchain technology under "The Belt and Road Initiative Strategy" in the financial field[J]. Times finance, 2017(03).
- [9] Shiyin Li. Turning a block into a circle: analysis of the application of blockchain technology in the financial sector and ways to solve difficulties[J]. Information security and communication confidentiality, 2018(02).
- [10] Yu Wang. A brief analysis of the application of blockchain technology in the financial field[J]. China collective economy, 2019(02).