

Research on Financing Strategies of Small and Medium-sized Enterprises in the Context of Blockchain

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ABSTRACT

The application potential of blockchain is huge. First of all, the paper introduces blockchain technology from the meaning and characteristics of blockchain. Secondly, it discusses the development status of blockchain and points out that it is difficult to use blockchain technology to solve the financing problems of small and medium-sized enterprises. Finally, the existing literature on the technical advantages and bottlenecks to solve the financing difficulties blockchain in-depth analysis put forward the application of blockchain technology to solve the shortage exists in small and medium-sized enterprise financing and points out the future need for blockchain technology and the development level of maturity, determine whether the blockchain technology to solve the problem of financing difficulties of small and medium-sized enterprises.

Keywords: Financing, Blockchain, Advantage.

1. INTRODUCTION

1.1. Background

Financing difficulty is an important difficulty for the development of small and medium-sized enterprises. Because small and medium-sized enterprises do not have the advantages of large enterprises, they are at an obvious disadvantage in social financing and want to change the status quo, so that enterprises can obtain more lasting development [1]. It is necessary to find the root cause of financing difficulties for small and medium-sized enterprises so that small and medium-sized enterprises can have the capital for development. Because most small and medium-sized enterprises are soft information, transparency is not high, it is difficult to accurately produce and transmit. For the financial status of SMEs, information such as leaders' personalities is internalized and difficult to quantify. For large enterprises, financial institutions can obtain enterprise information at a lower cost by checking their financial statements and other public information. This information asymmetry between financing parties is more obvious in SME financing, which is also the main reason for their financing difficulties. Secondly, for risk prevention reasons, commercial banks generally only issue financing to enterprises with high credit ratings and low costs. Small and medium-sized enterprises have no higher

qualifications and because their own financing time is tight, high frequency and a small amount, the cost of lending is too high. This makes it more difficult for small and medium-sized enterprises to obtain financing. Due to the information asymmetry between lenders and borrowers in the credit market, banks cannot produce sufficient information. In order to avoid credit risks, they can only require borrowers to provide sufficient collateral to compensate for losses [2]. However, small and medium-sized enterprises lack sufficient chattel or rights as collateral, and their short life and long-term credit record make small and medium-sized financial institutions with poor-risk resistance to them back away. About the blockchain, the application of this technology can solve the trust and security issues in transactions. Blockchain technology has become an optional direction for the future upgrading of the financial industry. Through blockchain, both parties of transactions can carry out economic activities without resorting to third-party credit intermediaries, thus reducing the cost of assets that can be transferred around the world [3].

1.2. Related research

As for the discussion on financing and trade financing mode, Li pointed out that due to the low credit rating and uncontrollable risks of small and medium-sized private enterprises, banks tend to lend to large enterprises and

turn a deaf ear to small and medium-sized enterprises. In order to improve this situation, Tang and Feng believe that enterprises must innovate their own financing mode if they want to have a good financing environment. Following the emergence of blockchain technology, quite a several scholars have combined blockchain technology with financing and explored many new financing paths [4]. Wang and Tan started from the principle of blockchain technology and conducted a feasibility analysis on the application of blockchain technology in China's financial institutions. Hu took the Bank of China as an example to introduce the cross-border payment system with blockchain as the underlying technology and put forward the countermeasures of applying blockchain to cross-border payment of commercial banks. Cui analyzed the specific application of the cross-border trade finance blockchain platform in the Guangdong-Hong Kong-Macao Greater Bay Area, pointing out that the blockchain platform has significant advantages for improving cross-border trade settlement and cross-border trade finance business [5].

2. THE GENERATION, DEVELOPMENT AND APPLICATION OF BLOCKCHAIN

2.1. Generation

The concept of blockchain first appeared in A paper (Bitcoin: A Peer-to-peer Electronic Cash System) published by Satoshi Nakamoto at the end of 2008. Blockchain technology is mentioned in the article. It is the basic technology for constructing a bitcoin data structure and encrypting transaction information transmission, and it is the bottom core and bottom technology supporting the operation of Bitcoin technology. The paper points out the problems and inadequacies in the existing transaction methods and creates bitcoin based on blockchain. In January 2009, the first "Chuang" code-named 0. The world block "is born, followed by the serial number 0 and the subsequent serial number 1 block is connected to form a chain, which marks the birth of blockchain [6].

2.2. Development

The recent development of Bitcoin is the origin of blockchain technology, which is essentially a decentralized, shared and trusted accounting innovation. Technically, it is a distributed storage block of data, and each block contains a whole block of blockchain information, which determines that the blockchain can prove its own trust and solve the trust problem without a reliable third party. In layman's terms, blockchain technology is like a ledger system, and each blockchain can act as an independent ledger containing this period. All of the information is generated, and these records, once added, are essentially untampered with or deleted [7].

Based on the concept and operation mechanism of blockchain, blockchain technology has the following characteristics, and by summarizing the reasons for the financing difficulties of small and medium-sized enterprises, one of the main reasons is information asymmetry, which makes the blockchain technology can be combined with the financing of small and medium-sized enterprises.

2.3. Application

In the financial field, the application scope of blockchain technology is very wide and the prospect is also very broad, which makes the development very rapid in recent years. At present, many enterprises have carried out the exploration and layout of blockchain applications. Through research and literature review, the author summarizes a series of various forms of exploration and layout of small and medium-sized enterprises in the field of blockchain. There are mainly the following application fields based on blockchain:

Firstly, solve the problem of banks' cross-border business and promote the development of cross-border trade payment financing and settlement system. If enterprises want to carry out cross-border transactions, they have to go through very complicated procedures and wait for a long time. Therefore, enterprises have to pay a lot of time costs, which has a great impact on the development of enterprises. Therefore, the current situation of high investment and low return in cross-border transactions is formed.

The application of blockchain technology in the cross-border trade financing business forms a scientific and reasonable distributed transaction agreement between banks, and blockchain technology can also help enterprises at home and abroad to carry out cross-border and inter-bank currency settlement, making the cross-border transaction process less complicated, saving a lot of costs for enterprises and improving transaction efficiency. At the same time, promoting the cross-border trade payment financing and settlement system can also bring customers a satisfactory service experience. Therefore, representative international commercial banks are relatively early in the field of cross-border payment.

Secondly, the relevant departments should reduce the degree of information asymmetry in the credit business and reshape the mortgage loan business and supply chain finance model. The credit business has been plagued by series of problems such as information asymmetry, high management costs, and difficulty in launching credit and payment scenarios. The application of blockchain technology can be a good solution to these problems. First of all, it will upload all transaction records to the platform, and then the platform will automatically track the information of these transactions, establish a shared database, and then provide services to customers

according to the content in the database. In this way, there are few cases of serious information asymmetry. International representative commercial banks focus on blockchain technology in this application field.

Third, expand the boundary of financial services and build an ecological service system of financial scenes. The basic feature of blockchain technology is an immutable database, so the information recorded in it is very reliable, which can bring users more intelligent, more convenient and better services. Therefore, representative international commercial banks have begun to expand the scope of services in the financial industry, using blockchain technology to combine commodity security, education, public welfare, food safety and other aspects to form a blockchain ecological service system.

3. CHALLENGES FACED BY TRADITIONAL SUPPLY CHAIN FINANCE

At present, blockchain technology is in the theoretical stage and has not been widely applied. There are still many problems that need to be solved. At present, blockchain technology to solve the financing difficulties of small and medium-sized enterprises only stays in the stage of theoretical imagination and has not been implemented. This paper analyzes the bottleneck that blockchain technology solves financing difficulties of small and medium-sized enterprises from the four aspects of "technology, market regulation, application field and reality", and hopes that blockchain technology can be accurately used in practical problems.

3.1. The technical level

Blockchain technology uses computer encryption algorithms to ensure the authenticity of transaction records. Therefore, in the key generation process, there is a lack of effective supervision by the third party; In the storage process, there is no corresponding storage record; In the implantation process, there is no mechanism to suppress the transfer of key automatically. The limitations of blockchain's own technology will make it subject to hacker attacks under certain circumstances, resulting in data tampering or even loss.

3.2. Market regulation

First of all, the decentralized characteristics of blockchain technology will lead to the fuzzy ontology of its supervision, which makes it difficult for the regulatory authorities to supervise and control the ontology to a large extent. Moreover, the "decentralization" of blockchain directly questions the existing economic system and has a high degree of social controversy. Secondly, due to the limitations of existing technologies, it is difficult for the regulatory authorities to comprehensively supervise this new technology, leading

to regulatory gaps and omissions in the process of applying blockchain technology to solve the financing difficulties of SMEs, which cannot effectively prevent market risks.

3.3. Application domain level

At present, the relatively mature field of blockchain application is mainly digital currency represented by Bitcoin. Therefore, there is no established industry standard to regulate blockchain technology at home and abroad.

3.4. The practical level

The basic reasons why banks and other financial institutions do not lend to SMEs are their low ability to resist risks, relatively bad credit and extremely high cost of medium loans. Although the credit records of SMEs under blockchain technology are open and transparent, they are largely superficial and do not fundamentally solve the substantial problems of SMEs' financing, such as "unbalanced regional distribution and lack of financial stratification". Therefore, in reality, blockchain technology has not solved the problem that banks and other financial institutions worry about the defects of SMEs.

4. SOLUTION

Given the problems and shortcomings of blockchain technology in enterprise financing, this paper proposes the following three points.

4.1 SMEs should attach importance to the training of talents in blockchain technology

First, strengthen the enterprise's own publicity. On the one hand, to popularize blockchain knowledge for enterprises, they take the initiative to use the advantages of blockchain for financing, solve their own financial problems, and promote the development of enterprises. On the other hand, we will strengthen the publicity to local governments, introduce the technical advantages of Qulink technology and the role of blockchain in serving the financing of small and micro enterprises, access more local government agencies, and actively introduce enterprises and financial institutions into the blockchain platform to build a good credit infrastructure [8].

Second, we need to strengthen innovation and lower the entry threshold. Since most need financing enterprise itself the credit situation is bad, and it is most in need of financing of enterprise in the market, can by strengthening technology research and development, perfect the function blockchain platform, providing can meet the multi-level credit rating blockchain financing platform, the traditional financing mode and financing

based on the blockchain, for the enterprise credit, and meet the financing needs of the enterprise.

Third, enterprises develop blockchain products with regulatory functions. As an emerging technology, blockchain technology has many regulatory loopholes. Blockchain enterprises, should strictly abide by the laws and regulations of the government, cooperate with the government, develop blockchain products with regulatory functions, introduce regulatory authorities into the blockchain, and reduce the probability of financial risks [9].

4.2 Regulatory authorities shall improve the supervision of blockchain enterprises

First of all, due to blocking the wider business involved in the process of chain enterprises usually make full use of existing regulators to classify the most effective way is to regulate, different areas of the business conducted by regulators in the field of corresponding regulation, such as for blockchain business by financial departments in the field of financial regulation, The application of the law is regulated by the judiciary [10].

Secondly, the industry self-regulatory organization can establish an effective platform for the communication between enterprises and regulatory authorities, prevent the supervision is too strict, hindering the development of the industry, or the supervision is not in place to cause chaos, and explore the establishment of industry self-regulatory norms and restrain the behavior of enterprises. Finally, because the blockchain technology has a certain complexity, and the rapid development of regulators only be equipped with the appropriate people, and a better understanding of the field, can better find blockchain technology risks existing in the application process, promoting the healthy development of blockchain enterprises so regulators should pay attention to blockchain in the field of professional personnel training, Provide basic support for blockchain enterprise supervision.

4.3 Banks should build blockchain industrial ecology

Focus on the research and development and optimization of the underlying and basic technology of blockchain, establish a public service platform of blockchain technology research and development at the national level. In the application scenarios of blockchain finance, take "blockchain + supply chain finance" as the breakthrough point, and gradually extend to various fields such as financial liabilities, assets and intermediate links.

4.3.1 Establish a multi-party cooperation platform for government, industry, university, research and application

At the present stage, the integration of SMEs with blockchain technology and other technologies is a long-term systematic project, which requires communication and joint promotion by third-party technology service providers, regulators and other parties. This cannot be separated from the role of self-discipline and the bridge of China's banking association. Association of China banking association should use close to the market and the advantage of resources integration, gathers blockchain technology application of administration, production, study and research, with many forces, establish and improve the government, banking institutions, research institutions, financial technology companies, universities and think-tank coordinate mechanism, set up the basic research, interdisciplinary research and technical application of fusion research innovation platform, Strengthen the bottlenecks in technology and technological breakthrough, standards and other aspects of the coordination and leading to promote a technology research and development and application of alliance, ecological figure guide the construction of multi-party cooperation, promote the financial innovation of science and technology achievements transformation and sharing in time, to solve the small and medium-sized enterprises (SMEs) blockchain applications, business pain points, and the generic technology challenges facing the system obstacles. At present, China Banking Association vigorously promotes the construction of evaluation and evaluation of the integrated development between blockchain technology and small and medium-sized enterprises and other financial institutions and accelerates the extensive promotion of the innovative achievements and application of innovative experience of blockchain technology.

4.3.2 Establish the blockchain management Committee for small and medium-sized enterprises

China banking association should be considered for chain technology business set up professional the blockchain management committee and the financial industry. Based on the current characteristics of communication of SMEs and communication status quo among blockchain industry, relevant departments should put forward a new communication mechanism. Blockchain management committee can further speed up the chain blocks level of SMEs continuously. SMEs are encouraged to carry out blockchain technology cooperation, and vigorously promote the integration and practical application of blockchain technology and commercial banking business.

Blockchain technology developing rapidly in our country, but the current blockchain technology in the development of small and medium-sized enterprises as there is the problem, the respective blockchain between enterprises to promote technology, the application scenario incompatible problems, so the blockchain technologies applied in different between small and medium-sized enterprises tend to show significant differences in the process of and harmful to business docking process [11]. The decentralized advantage of blockchain technology requires that the business of SMEs must be completed through close cooperation between different banks. The banking industry association should consider establishing a professional blockchain financial industry management committee for blockchain technology business. Based on the current characteristics of communication between small and medium-sized enterprises (SMEs) and communication between the status quo of the blockchain industry put forward a new communication mechanism, and further accelerate the speed of small and medium-sized enterprises in the chain blocks and continuous increase technology research and development level, encourage blockchain of small and medium-sized enterprises and technological cooperation, push blockchain integration between technology and small and medium-sized enterprise business roots and practical application.

5. CONCLUSION

With the continuous development of modern society, blockchain has achieved good development, and blockchain technology has four characteristics of decentralization, immutability, intelligent contract, and value uniqueness, making blockchain technology have great application potential. Although the development of blockchain has achieved certain results, there are still problems such as information leakage under the restriction of technology, being prone to oversight, mismatching of costs and benefits, and high technical costs. Correct treatment is required to ensure accurate use of the technique. Due to the problem of the high cost of this technology, it is difficult to implement the introduction of blockchain technology to solve the financing difficulties of SMEs. Whether to adopt blockchain technology should be further considered according to the development level and maturity of blockchain.

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