

Financial Innovation Risk Assessment under the Background of Blockchain Technology

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Abstract: With the continuous development of blockchain technology, it has greatly promoted the innovation and development of the financial industry, but there are also many problems and risks in the application process. These risks with wider dissemination and greater complexity are difficult to control with traditional methods, which brings new challenges to the assessment and management of financial risks. This paper aims to analyze the financial innovation under the background of blockchain technology, explore the risks and put forward the corresponding risk assessment countermeasures, create a regulatory environment, and allow the healthy and orderly development of blockchain technology.

Keywords: Blockchain; Financial Innovation; Risk Assessment; Factor Analysis; Finance Technology

1. Introduction

With the rapid development of the world's science and technology, a new round of scientific and technological revolution has accelerated its evolution, and digital currency and online transactions have developed rapidly [1]. With the emergence and development of Bitcoin, blockchain technology has also received more and more attention, and the combination of blockchain and finance has made the wave of financial innovation continue to roll forward. The development speed of blockchain technology is getting faster and faster, and it has made great progress in many fields, playing a very important role in the country's economy [2].

Traditional financial institutions and fintech companies often rely too much on third-party institutions, resulting in information asymmetry and mutual segmentation of

financial transactions [3], resulting in turmoil in the financial market. The peer-to-peer characteristics of blockchain can well solve this drawback. Thanks to the distributed storage technology of blockchain, the reliability and security of data are greatly improved. In the application of the financial industry, the use of blockchain technology can effectively solve the problem of information asymmetry between the financial industry and the physical financial industry, transform the traditional value into digital currency.

Although blockchain technology has great potential to create new financial systems, it is often seen as a panacea for problems. After all, the application of blockchain technology in reality is only a few years of history. Because the technology is not perfect enough, the blockchain technology can not completely change the financial risk factors [4]. In addition, the characteristics of blockchain technology, such as sharing, autonomy and decentralization, also make it more difficult to find risks, and its potential systemic risks, technical risks and legal risks have become more complex and prominent.

Based on the analysis of the risk factors of financial innovation under the background of blockchain technology, this paper finds out the most noteworthy and studied risk factors, which is of great significance for optimizing the overall financial innovation risk assessment under the background of blockchain technology.

2. The Characteristics of Blockchain

2.1 Autonomy

The autonomy of the blockchain is based on consensus norms and agreements, without the participation of any third-party institutions and equipment, and all nodes in the system can independently complete complex data

exchange, recording and updating processing without any human intervention.

2.2 Sharing

The sharing of blockchain technology means that, except for some private information or private information that cannot be disclosed, the use and data information of the blockchain system is open to everyone, and everyone can use the public interface to query and apply the blockchain data. The ledger of the whole network is not encrypted, but is shared by all nodes, with highly transparent information.

2.3 Tamper-proof

After being added to the blockchain through the consensus mechanism, all the information of these blockchains will be recorded by all nodes together to form a vast distributed ledger^[5], and the specific content of these information will be verified using cryptography to ensure that they are interrelated. For the information that already exists in the system, it is almost impossible to be tampered with, because the blockchain has memory, if someone wants to tamper with the blockchain data, the difficulty and cost of tampering are very high. If someone wants to change or modify the network data, a prerequisite is to master more than 51% of the data nodes. This also makes the blockchain tamper-proof, and the data is difficult to subjectively tamper with.

2.4 Decentralization

Decentralization is the most prominent and essential feature of blockchain. Decentralization, Blockchain technology is not like the traditional distributed system by a unified scheduling of nodes by an organization as there is a so-called central control party. In this decentralized system, there is a large number of distributed nodes^[6], they divide the blockchain into different modules, but the responsibilities and rights between each module are the same. There is no status. Each node carries out the steps of information verification, transmission and management respectively, which is realized by consistency algorithm and consensus mechanism^[7].

3. Financial Innovation in the Context of Blockchain Technology

In the traditional financial industry, there are

often a lot of risks due to credit problems, which has caused great obstacles to the development of the financial industry. As a decentralized database, blockchain is closely related to finance, and is an innovative financial infrastructure. Blockchain technology with P2P network technology, database technology, time stamp technology, asymmetric encryption technology, smart contract as the five technical support, with the characteristics of security, flexibility, high transparency and decentralization, can solve many pain points in the financial industry, but also greatly improve service efficiency, reduce system costs, empower the financial industry. Financial innovation in the context of blockchain technology mainly takes the following forms:

3.1 Bank Payment and Settlement

In the traditional bank clearing service, both sides of the transaction need to keep accounts separately, and payment, settlement and clearing all require a lot of manpower, which is often low efficiency and high cost due to the asymmetry of information^[7]. Especially in cross-border remittance, it is difficult for small cross-border payments to be widely carried out due to the cost and other problems caused by the information asymmetry, and cross-institutional reconciliation will also consume a lot of manpower and material resources. In the process of financial services, human intervention and operational errors are more likely to occur, and inconsistent reconciliation is likely to cause disputes and lead to inefficiency.

The combination of blockchain and bank payment and clearing is one of the main application fields of financial innovation under the background of blockchain technology. The bank payment and clearing system has been reconstructed with the support of blockchain technology, which is characterized by transparency in the transaction data information chain, sharing of transaction data and information, avoiding the occurrence of inconsistent accounts, and saving manpower and material resources. It reduces the possibility of human intervention and operational error in the traditional cross-border remittance process, and improves the security of cross-border remittance. Due to the open and transparent characteristics of the system

combined with blockchain and bank payment and clearing, all transactions can be settled on the blockchain without relying on an intermediary system, thus reducing the high cost of the traditional network system^[8].

3.2 Supply Chain Financial Information Sharing

3.2.1 Data sharing

A major feature of blockchain technology is distributed ledger technology, which enables the information of all participants in the supply chain to be shared, and ensures that data is uniformly stored, traceable, and immutable. The application of supply chain finance is reflected in the real-time transmission of status data ^[9], storage and transportation data and transaction data of any link, so that the data flow of the entire supply chain is more efficient and can be monitored.

3.2.2 Data storage

Blockchain technology uses image and data transmission instead of traditional paper documents, the entire supply chain with online orders as the chain is the same blockchain, the use of digital signature to achieve the contract process ^[10], so that the work is more efficient, and at the same time, it can also use various data in the network to compare data. Accounts receivable, transaction data and other information in the transaction process of all parties in the supply chain are completely recorded in the blockchain database, and when financial institutions review the market risk or transaction risk of any enterprise in the chain, they can track and view the blockchain data at any time. Multi-layer real-time transmission of data enables non-core enterprises to share the credit endorsement of core enterprises, reduce financing time costs, economic costs, reduce manual workload, increase accuracy, and greatly improve the effect of work.

3.2.3 Smart Contracts

Smart contracts digitize a large number of paper documents, and then automatically execute them ^[11]. While ensuring data security, it is convenient for banks to grasp and monitor all stages of business operation in real time, realize transparent visualization of business processes, and thus reduce transaction risks. The conditions are clearly written out in a piece of code and recorded on the blockchain, and the whole process is carried out through a specific procedure, even the person who wrote

the code can not tamper with it, which can minimize the error rate and strengthen the reliability of transactions within the supply chain. Because of the removal of intermediaries, the smart contract of blockchain technology can completely rely on technology to allow users to independently establish contracts between themselves, significantly improving the overall operational efficiency of the supply chain.

3.3 Transparency in Insurance Review

3.3.1 Risk prevention and fraud identification

The application of blockchain technology can effectively solve the security loopholes existing in the Internet insurance system itself, thereby avoiding the inevitable security risks in traditional insurance applications. Due to the information asymmetry between the two parties, insurance fraud has always been a major problem in the industry, which causes consumers to bear a higher premium while the insurance coverage is very small. How to use blockchain technology to solve the problem of fraud in the insurance industry is one of the most concerned issues at present. Using blockchain technology could allow different insurance companies to better collaborate to combat insurance fraud. Blockchain can maintain a permanent claim record on the distributed ledger, and establish an ownership mechanism through digital certificates, strictly control access rights, and avoid identity falsification; it can reduce the situation of insurance brokers selling policies privately to collect premiums, and thus reduce the loss of insurance companies' premium income. It has promoted the cooperation between insurance companies, curbed the chaos of the traditional insurance market to a certain extent, and prevented problems such as insurance fraud and loss fraud.

3.3.2 Information sharing and data security

Using encryption algorithms to ensure the authenticity and integrity of insurance policy information, and also to realize the functions of information unfalsifiable, untampered and traceable, thus greatly improving the security of insurance business and effectively preventing risks and effectively protecting the privacy of customers.

With the help of blockchain, industry data sharing can be gradually realized, and insurance companies and other organizations

in the industry chain can use the cryptographic design principle of blockchain to view relevant information under the condition of authorization to achieve mutual benefit and win-win. Connect disparate data and processes with a distributed ledger to securely share customer information, risk categories, exposures, and information related to insurance contracts, making data consistent and transparent, dramatically simplifying business processes and making business more efficient.

3.3.3 Reduce transaction costs

In the context of blockchain technology, the Internet insurance market does not require the participation of third-party intermediaries to achieve real peer-to-peer transactions, which can effectively reduce the transaction settlement cost of insurance business, improve the efficiency of business processing, avoid the intermediary behavior of intermediary agents, reduce the intermediary cost, and effectively avoid insurance disputes caused by moral hazard. With the support of blockchain technology, insurance companies can upload relevant transaction information on the blockchain node, and upload relevant supporting documents such as insurance policies and fund flows, and other nodes can verify and confirm relevant transaction information through the consensus mechanism, reducing costs. Blockchain technology can also fully integrate scattered user information to facilitate the management of information and funds. With this distributed ledger and the collective maintenance of data, the information maintenance cost of insurance companies can be greatly reduced.

3.3.4 Simplify the trading process

The traditional insurance claim method has great subjectivity and validity problems. The smart contract established by blockchain technology will be automatically executed as long as the conditions are met, and can independently carry out transaction confirmation, record, underwriting, claims and other work, without the need for survey, loss assessment, assessment and other links, reducing the impact of human subjective factors, transparent transaction process, improve the processing efficiency of insurance business, save transaction costs, and improve customer experience.

3.3.5 Improve the regulatory model

In the context of blockchain technology, each user has a corresponding blockchain identity, and all transaction information is immutable, open and transparent. When retrieving historical transaction data, we are able to better understand the actual transaction situation and find some abnormal transactions in time, so as to make a fair judgment on insurance disputes. In the handling of claims and surrender, the user and the parties to mutual verification, which will to a large extent to avoid a variety of insurance fraud phenomenon, reduce the risk of insurance fraud. In addition, with the traceability of the blockchain, we are able to clearly understand the direction of each money, so that insurance companies can be more effective supervision and better protection of customers' property.

4. Analysis of Financial Innovation Risk Factors in the Context of Blockchain Technology

4.1 Establishing a Risk Indicator System

With the further improvement of the financial system, the development potential of the financial market has been gradually released, the scale of the financial market has expanded rapidly, and the number of financial institutions has increased rapidly. However, at the same time of economic development, the financial industry has also exposed some problems such as the lax examination and approval of local financial organizations and the unclear definition of business scope. At present, commercial banks and non-bank financial institutions in major cities of the country generally have some serious illegal operations, resulting in their internal control, asset quality is declining, which has a bad impact on the financial system. Many banks have declared bankruptcy because of their lack of risk management ability. If the risks of these financial institutions are not properly handled, it will easily affect the economic and financial security of the country. Taking into account the characteristics of China's economic operation, technical risk, operational risk, legal risk, liquidity risk and credit risk are the main forms of financial risk in the country.

4.1.1 Technical risks

The technical risk mainly comes from the inherent technical loopholes when blockchain technology is applied to the field of financial

innovation. In this article, the technical risk is mainly considered from the following five aspects: private key security risk, verification mechanism risk, technical failure, network virus, computing power defect.

4.1.2 Operational risks

Operational risk mainly refers to the potential loss caused by internal process defects or system defects, human error or external environment. Some financial institutions, in order to obtain the maximum profit, illegal operations, excessive speculation, resulting in huge economic losses. At the same time, due to the large amount of money involved in the financial market, it has also become a high incidence area of economic crimes such as theft and fraud. Some companies, without the approval of any institution, use the Internet financial market to carry out illegal fund-raising, disguised fund-raising and other illegal acts, due to the difficulties in due payment, causing huge losses to investors. This paper mainly considers operational risk from three aspects: consumer operational risk, financial institution operational risk, third party operational risk.

4.1.3 Legal risks

In the process of using blockchain technology for financial innovation, legal risks are mainly reflected in: traditional legal provisions are limited for the network environment with blockchain technology, and cannot be applied to innovative technology, which may cause legal disputes or even crimes, bringing huge losses to participants. On this basis, this paper mainly considers the legal risk from three aspects: the legal lag, the abuse of personal information, and blurred legal boundaries of smart contracts.

4.1.4 Liquidity risk

Liquidity risk mainly refers to the situation that although financial institutions or enterprises or individuals have enough assets, they cannot quickly realize the formation of insufficient liquidity and cash flow fracture when they urgently need funds. For financial institutions,

whether they can maintain high asset liquidity is an important condition to ensure the stability of their operations. Although China's current commercial bank capital adequacy ratio and other indicators meet the regulatory requirements on the whole, but there are more prominent structural problems, once the bank "run" event, it is easy to cause systemic financial risks, and even lead to financial crisis. This paper mainly considers liquidity risk from two aspects: maturity mismatch risk and capital pool risk.

4.1.5 Credit risk

Credit risk mainly refers to the risk that the counterparty will not fulfill the due debt. Due to information asymmetry and other factors, the proportion of "more than two stay" in China's state-owned commercial banks is very high, and has reached a relatively serious level. In addition, the non-performing loans and bad debt rates of some local banks have also increased, resulting in the deterioration of the credit asset quality of China's commercial banks. This set the stage for some of the financial and credit crises. This paper mainly considers credit risk from five aspects: fraud risk, credit system risk, decentralization risk, terrorist crime risk, anti-money laundering risk.

4.2 Analytic Hierarchy Process to Determine Risk Indicators and Weights at all Levels

By summarizing relevant literature on risk identification and control, combining the relevant theories of blockchain and the actual situation of financial innovation under the background of blockchain technology, the risk factors of financial innovation under the background of blockchain technology are summarized. Five first-level indicators of risk indicators and 18 second-level indicators extended under first-level indicators are obtained according to the Delphi method. The financial innovation risk index system under the background of blockchain technology is constructed, as shown in Table 1.

Table 1. Financial Innovation Risk Index System under the background of Blockchain Technology

Target level	Primary index	Secondary index
Financial innovation risk Index system under the	Law risk A_1	Lag of law A_{11}
		Abuse of personal information A_{12}
		Blurred legal boundaries of smart contracts A_{13}
	Operation risk A_2	Consumer operational risk A_{21}

	Operational risks of financial institutionsA ₂₂	Third party operating riskA ₂₃	
		Private key security risksA ₃₁	
		Validation mechanism riskA ₃₂	
	Technology riskA ₃	Technical failureA ₃₃	
		Network virusA ₃₄	
		Computing power defectA ₃₅	
		Liquidity riskA ₄	Maturity mismatch riskA ₄₁
			Capital pool riskA ₄₂
	Credit riskA ₅	Fraud riskA ₅₁	
		Credit system riskA ₅₂	
		Decentralization riskA ₅₃	
		Anti-money laundering riskA ₅₄	
		Terrorist crime RiskA ₅₅	

This paper adopts the Delphi method of expert scoring. A total of 33 people, including 11 scholars, 11 company finance employees and 11 bank employees, are surveyed in this subject. They are issued paper questionnaires and graded according to their professional experience and knowledge. This paper compares the influence degree of the five major factors involving technical risk, legal risk, credit risk, liquidity risk and operational risk on China's financial risk, and determines a value by comparing the influencing factors, thus forming an evaluation matrix.

A total of 33 expert rating sheets were collected, and the recovery rate was 100%. However, each expert's understanding and evaluation of indicator factors are different, which may cause errors, so it is necessary to delete and summarize the opinions with great differences in extreme. Therefore, after filtering and combining the expert rating tables collected, three invalid tables were deleted, and a total of 30 valid tables were deleted, with a pass rate of 90.90%. The evaluation results of the expert evaluation are synthesized, and the values of the elements of the evaluation matrix reflect the relative importance of the experts to all factors.

According to the 1-9 degree scale method, the

Table 3. Weight Distribution of Financial Innovation Risk Indicators under the Background of Blockchain Technology

Target layer	Primary index	weight	Secondary index	weight	Comprehensive weight
Financial innovation risk Index system under the background of blockchain technology	Law risk A ₁	0.407	Lag of lawA ₁₁	0.297	0.121
			Abuse of personal informationA ₁₂	0.164	0.067
			Blurred legal boundaries of smart contractsA ₁₃	0.539	0.219
	Operatio	0.060	Consumer operational riskA ₂₁	0.164	0.010

pairwise comparative importance of the constructed risk factors of the same level is scored, and a judgment matrix is established for the first level indicators of the first level.

$$A = \begin{bmatrix} 1 & 5 & 2 & 4 & 3 \\ 1/5 & 1 & 1/4 & 1/2 & 1/3 \\ 1/2 & 4 & 1 & 3 & 2 \\ 1/4 & 2 & 1/3 & 1 & 1/2 \\ 1/3 & 3 & 1/2 & 2 & 1 \end{bmatrix}$$

$$\lambda_{\max} = 5.069, CR = 0.015 < 0.1$$

The matrix passes the consistency test, and the index weights of each layer are as followed in Table 2.

Table 2. Weight Ranking of First Level Risk Indicators

Risk indicator	Weight
Law risk A ₁	0.407
Operation risk A ₂	0.060
Technology risk A ₃	0.267
Liquidity risk A ₄	0.099
Credit risk A ₅	0.167
Total	1

The judgment matrix of the second level index is also established, and all levels pass the consistency test. The weight of the first level index is multiplied by the weight of the corresponding second level index, and finally the comprehensive weight value is obtained. As shown in Table 3.

			Operational risks of financial institutionsA ₂₂	0.539	0.032
			Third party operating riskA ₂₃	0.297	0.018
	Technology risk A ₃	0.267	Private key security risksA ₃₁	0.416	0.111
			Validation mechanism riskA ₃₂	0.161	0.043
			Technical failureA ₃₃	0.262	0.070
			Network virusA ₃₄	0.062	0.017
			Computing power defectA ₃₅	0.099	0.026
	Liquidity risk A ₄	0.099	Maturity mismatch riskA ₄₁	0.500	0.050
			Capital pool riskA ₄₂	0.500	0.050
	Credit risk A ₅	0.167	Fraud riskA ₅₁	0.262	0.044
			Credit system riskA ₅₂	0.161	0.027
			Decentralization riskA ₅₃	0.416	0.069
			Anti-money laundering riskA ₅₄	0.062	0.010
			Terrorist crime RiskA ₅₅	0.099	0.017

Through analytic hierarchy process, the weight analysis of financial innovation risk index system under the background of blockchain technology is carried out. The research finds that the legal boundary of smart contracts is blurred, the law is lagging behind, and the relative weight of private key security risk ranks the top three, accounting for 21.90%, 12.10% and 11.10% of the total weight respectively. In the context of blockchain technology, the blurred legal boundaries of smart contracts and the lagging of laws caused by legal risks in financial innovation and the private key security risks caused by technical risks have a great impact on the healthy development of financial innovation. In the process of risk control, it is necessary to focus on improving and optimizing these aspects.

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5. Empirical Analysis of the Risk Calculation of Blockchain Financial Projects – case of Taiyi Cloud

5.1 Company Introduction

Taiyi Cloud is one of the earliest teams to invest in blockchain research and application development in China. As early as 2014, Taiyi Cloud has developed a financial level blockchain system with domestic independent

intellectual property rights, and is one of the earliest enterprises to conduct blockchain technology research and development and popularization in China. Taiyi Cloud provides a stable underlying infrastructure and common business platform components for blockchain applications in various fields, and can combine blockchain with traditional IT technology, Internet of Things, big data, cloud computing, artificial intelligence, etc., to provide a reasonable mixed-match system architecture for specific business needs. Up to now, the company has built an industry blockchain system in many fields such as copyright, food, transportation, medical care, public welfare, supply chain, big data, tourism, and finance, and supplemented by providing industry solutions.

5.2 Determine the Risk Level of Taiyi Cloud

This paper classifies risk into high risk, medium risk and low risk, as shown in Table 4.

Table 4. Risk Assessment Grade Evaluation

	Value range	connotation
High risk	60-100	Indicators have high risk connotations
Medium risk	24-60	Indicators have contains medium risk
Low risk	0-24	Indicators have a low risk connotation

Low risk means that the risk management mechanism is effective and the tax-related process is effective, so possible financial risks can be managed in a timely and effective manner, and enterprises are required to pay attention to the identified problems in a timely

manner. Medium risk means that there are problems in the financial risk management mechanism, and there are also many loopholes in the financial risk management, which requires the company to investigate and solve the problems found respectively, and regularly evaluate these problems. High risk refers to the large loopholes and deficiencies in the company's financial risk management, poor business processes, and many loopholes in

financial risk management. Enterprises must investigate financial risks comprehensively and reconstruct financial risk management system.

Compare the financial risk assessment grade evaluation table in Table 4, and combine Taiyi Cloud to quantify the results of the indicators in the financial risk management structure model, and calculate the evaluation results, as shown in Table 5.

Table 5. Summary of Financial Risk Evaluation Results

Primary index	Secondary index	Quantization index value	Index weight	Calculated value	Total calculated value
Law risk A ₁	Lag of lawA ₁₁	65	0.121	7.865	30.41
	Abuse of personal informationA ₁₂	75	0.067	5.025	
	Blurred legal boundaries of smart contractsA ₁₃	80	0.219	17.520	
Operation risk A ₂	Consumer operational riskA ₂₁	60	0.010	0.600	4.28
	Operational risks of financial institutionsA ₂₂	70	0.032	2.240	
	Third party operating riskA ₂₃	80	0.018	1.440	
Technology risk A ₃	Private key security risksA ₃₁	75	0.111	8.325	19.81
	Validation mechanism riskA ₃₂	70	0.043	3.010	
	Technical failureA ₃₃	75	0.070	5.250	
	Network virusA ₃₄	75	0.017	1.275	
	Computing power defectA ₃₅	75	0.026	1.950	
Liquidity risk A ₄	Maturity mismatch riskA ₄₁	75	0.050	3.750	7.50
	Capital pool riskA ₄₂	75	0.050	3.750	
Credit risk A ₅	Fraud riskA ₅₁	70	0.044	3.080	12.70
	Credit system riskA ₅₂	75	0.027	2.025	
	Decentralization riskA ₅₃	80	0.069	5.520	
	Anti-money laundering riskA ₅₄	80	0.010	0.800	
	Terrorist crime RiskA ₅₅	75	0.017	1.275	
Total points		74.70			

As can be seen from Table 5, the score of Taiyi Cloud's risk assessment is 74.70 points, indicating that Taiyi Cloud is located in a high-risk financial risk area, which is not a good result. Enterprises need to comprehensively investigate financial risks and reconstruct the financial risk management system.

5.3 Taiyi Cloud Financial Risk Results Evaluation

First of all, at the level of first-level risk, the proportion of legal risk is the highest. Taiyi Cloud has a big problem in the prevention of legal risk in the process of blockchain financial innovation, and should strictly abide by laws and regulations to fundamentally reduce the generation of financial risks. Technical risk ranked second, indicating that the technical

risk of Taiyi cloud is the main reason affecting the overall risk assessment of enterprises should be paid attention to prevention, and there is a great room for improvement in technology; Credit risk ranks third, the company's internal risk assessment has no decisive factor for the overall risk assessment, and the business process of Taiyi Cloud is always in a benign range. Liquidity risk ranks fourth, also in a benign range; Operational risk ranks fifth, indicating that Taiyi Cloud's operational risk management has been relatively perfect, there is no need to pay too much attention, and the risk is relatively low, but it cannot be ignored.

Secondly, at the level of secondary risk indicators, the biggest reason for Taiyi Cloud's current financial risks is the blurred legal

boundaries of smart contracts and private key security risks, indicating that Taiyi Cloud's legal and technical support mechanism is imperfect, which has a greater impact on the company's financial risks. We should attach importance to the relevant quality of legal and technical personnel and strengthen the training of personnel. In terms of legal risks, from the highest to the lowest, the legal boundary of smart contracts is blurred, the legal lag, and the abuse of personal information. Compared with the legal lag and the abuse of personal information, the legal boundary ambiguity of smart contracts is the most serious problem, and compared with other risk categories, the risk of this problem is the highest, so attention should be paid to it. In terms of operational risk, from high to low, it is the operational risk of financial institutions, third-party operational risk, and consumer operational risk, indicating that Taiyi Cloud should pay more attention to the operational risk of financial institutions, and the third-party operational risk can not be ignored, which will have a significant impact on the enterprise. Among the liquidity risks, the size of the maturity mismatch risk and the capital pool risk is basically the same. This shows that enterprises should pay attention to the risk loss caused by liquidity problems; from high to low, the credit risk is decentralization risk, fraud risk, credit system risk, terrorist crime risk and anti-money laundering risk. Special attention should also be paid to the risks of decentralization.

6. Conclusion

Blockchain finance has both huge development space and more uncertainties, and is the most subversive innovation in the financial field. With the continuous maturity of blockchain technology, risk assessment should also follow the development direction of blockchain finance, establish a risk assessment system in line with China's national conditions, and allow the healthy and orderly development of blockchain technology in China.

According to the risk index system summarized by internal and external environmental factors of financial innovation under the background of blockchain technology, the risk weight of indicators is sorted through analytic hierarchy process, and it is concluded that private key security risks and legal risks caused by technical risks of

financial innovation under the background of blockchain technology have a greater impact on the healthy development of financial innovation. In the process of risk control, we must focus on improving and optimizing these aspects. In order to ensure the professionalism and reliability of financial innovation risk assessment under the background of blockchain technology, it is necessary to strengthen the quality construction of professionals, enhance professional capabilities, establish a systematic, authoritative and standardized assessment system, improve the construction of various systems, and actively formulate international standards, so that blockchain technology and financial innovation can organically integrate and develop healthily.

6.1 Establish a Standardized Evaluation System

Compared with traditional financial projects, in the context of blockchain technology, the risk assessment of financial projects not only requires a higher degree of specialization, but also requires a deeper understanding of the situation of the project, and some risks are not easy to be found, and the risks are hidden and complex. Therefore, it is necessary to use the power of external experts to conduct in-depth analysis of blockchain financial innovation projects, dig out risk factor indicators, and conduct more professional calculation, adopt various evaluation methods, and select the most suitable indicators through multiple solicitation and comprehensive expert opinions, so as to focus on the problems that need attention. In risk assessment, all kinds of vague qualitative indicators involved are gradually decomposed into several low-level indicators, and then evaluated one by one to obtain more objective evaluation results. Through the research of the market situation and the analysis of the project data, the development trend of specific projects is predicted, and the future development of financial projects is made reasonable planning. On this basis, the weight ratio of each index is determined for financial projects, so as to form a comprehensive evaluation system of financial risk.

6.2 Improving All Systems

Improve theoretical research, learn experience

and lessons from practice, so that the development of blockchain financial projects have rules to follow, and lay the foundation for the healthy and rapid development of blockchain financial innovation. A sound risk assessment system and operation process can help us make a more rational assessment and judgment, and a reasonable assessment provides a basis for subsequent risk management and control, and is also the key to ensure the smooth progress of the entire financial project. At present, there is no complete system for the evaluation of blockchain finance at home and abroad, nor is there a uniform set of evaluation standards. Therefore, in the context of the application of blockchain technology, the role of financial institutions should be given full play, and on this basis, a set of blockchain evaluation system and institutional standards suitable for China's national conditions should be developed.

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