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Research on Risk Supervision and Prevention Countermeasures for Supply Chain Finance of Commercial Bank

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Abstract

In recent years, supply chain finance as a financial innovation service has developed rapidly in China, effectively alleviating the problem of difficult financing for many SMEs, expanding the business scope of commercial banks and enhancing its competitiveness, and promoting the development of the real economy, but at the same time, many risk factors such as imperfect legal system and imperfect internal management have been exposed. Especially when we enter the post-epidemic era, the more uncertain external environment will further aggravate the risks. Therefore, from the perspective of commercial banks, based on the development of commercial banks' supply chain finance, we analyze its existing risks and reasons, and discuss how to supervise and prevent risks in the post-epidemic era, so as to provide useful references and enlightenments for commercial banks to solve supply chain financial risks, which is of great significance to the further healthy development of the supply chain finance field.

Keywords

Commercial banks; Supply chain financial risks; Post-epidemic era; Prevention countermeasures.

1. Introduction

Supply chain finance is a financing model in which commercial banks provide financial products and services to support upstream and downstream enterprises in the supply chain based on the real transactions and future cash flows between supply chain enterprises, which improves the efficiency of capital flow and ensures the stability of the entire supply chain flow, in which the huge profits attract financial institutions, enterprises and other parties to use their own resource endowments and specific regional advantages to carry out full cooperation and competition in the field of supply chain finance [1].As China continues to promote supply-side reform and industrial transformation and upgrading, the country attaches great importance to the development of supply chain finance and has introduced policies related to supply chain finance one after another to promote enterprises to layout supply chain finance business.In 2017, the State Council issued the "Guiding Opinions on Actively Promoting Supply Chain Innovation and Application", which pointed out the need to actively and steadily develop supply chain finance, encourage the establishment of a supply chain financial service platform under the premise of effectively avoiding supply chain financial risks, and promote supply chain finance for the development of the real economy.In 2019, the State Council issued the "Guiding Opinions on Promoting the Healthy Development of Small and Medium-Sized Enterprises" to support small and medium-sized enterprises to rely on accounts receivable and supply chain financing to solve the problem of difficult and expensive financing.In the context of Sino-US trade frictions, coupled with the impact of the new crown pneumonia epidemic in 2020 on the global industrial chain, the country has successively introduced a number of measures to

continuously strengthen support for small and medium-sized enterprises to ensure the orderly resumption of work and production of enterprises, and has repeatedly emphasized the need to actively use supply Chain finance and other methods support corporate financing, requiring commercial banks to increase financial support for the coordinated resumption of work and production in the industrial chain, which shows the importance of supply chain finance to the stable development of China's economy.

Throughout the rapid development of China's supply chain finance over the past two decades, China's supply chain finance field has achieved leapfrog development from scratch, from weak to strong, but with the rapid development comes risks. Default risk events such as "Shanghai steel trade circle event" in 2012 and "Camsing Globalevent" in 2019 have occurred one after another, which has brought huge property losses to relevant subjects of the supply chain. Supply chain financial risk supervision has been paid more and more attention in the financial market [2].In 2019, the China Banking and Insurance Regulatory Commission issued the "Guiding Opinions of the General Office of the China Banking and Insurance Regulatory Commission on Promoting Supply Chain Financial Services for the Real Economy" and pointed out that it is necessary to adhere to precise financial services, adhere to the true transaction background, adhere to the availability of transaction information, and adhere to comprehensive risk management and control.In 2020, with the outbreak of COVID-19 around the world. The large-scale blockade policy has affected the import and export trade of enterprises to varying degrees, causing a huge impact on the global supply chain, bringing greater pressure on enterprises' accounts receivable, and continuing the risk of default payments rise. SMEs urgently need working capital to ease the pressure on production and operation. Therefore, this new crown pneumonia epidemic has increased the dependence of various fields on supply chain finance. Taulia, a San Francisco supply chain financial institution, has stated that the amount of advance payments on its platform has increased by more than 200% month-on-month in March 2020 alone. However, at the same time, the uncertainty and instability of the external environment also makes companies face a major test of their ability to resist risks and operating profitability. The asset quality and profitability of banks are further under pressure, and the industrial chain and supply chain are all threatened by certain risks.Under the background of the current post epidemic era, the repeated and continuous epidemic situation makes the global industrial chain and supply chain face a new trend of reconstruction, and the external environment is full of uncertainty, which has brought new challenges to China's economic and social development. As one of the important grasp of stabilizing the industrial chain and supply chain, supply chain finance still has many problems to be solved in the current actual business development. Andas an important subject in supply chain finance, commercial banks focus on long-term economic and social benefits, improve relevant businesses, do a good job in risk supervision and prevention has become the focus of their supply chain finance business.Therefore, from the perspective of the future development of commercial banks, this paper discusses and analyzes the risks and main causes of commercial banks' supply chain finance in the post epidemic era, and puts forward rectification suggestions for the deficiencies, which is of great significance to the healthy development of commercial banks' supply chain finance business.

2. Literature Review and Problem Raising

Foreign supply chain finance was established earlier, so the research on supply chain finance risk supervision is earlier and comprehensive. Trkman Pet al. pointed out that supply chain financial risks will evolve with changes in the scale and relationship of supply chain networks, innovation in financing models, and fluctuations in the external environment [3].Dawn Barnesschuster found through research on financial derivatives that financial derivatives can

effectively hedge the risks in the financial business of the supply chain, and comprehensively analyzed the role of these financial derivatives in risk prevention and control [4]. Subsequently, Barnes-Schuster et al. also pointed out in their research that companies can reduce supply chain financial risks through hedging transactions of various financial derivatives, scientifically formulating order pricing strategies, and accurately selecting partners [5]. K Sum's study proposes that value-at-risk hedging and the lack of risk models for commercial banks are important causes of supply chain finance risk, thus proposing solutions to enhance quantitative analysis of systemic risk [6].In order to improve the inefficiency of traditional supply chain finance, Jiri Cet al. pointed out that the application of blockchain technology can automate and make the supply chain business open and transparent, which can effectively reduce the financing risk and improve the efficiency of business activities, and advocated the active introduction of cutting-edge technologies such as blockchain in supply chain finance [7].

Compared with foreign scholars, China's research on supply chain finance started late, and the entry points of each stage are different. In the traditional offline supply chain finance model, initially most of the domestic literature studied from the perspective of three financing modes of SMEs' accounts receivable, confirming warehouse and financing warehouse in the supply chain. Yan Junhong, Xu Xiangqin(2006) and others, they believe that different financing models require different risk points of attention, and put forward relevant financing payment paths and related regulatory countermeasures in the study [8]. Subsequently, domestic scholars mostly conduct further research on the risk supervision of supply chain finance from the perspective of enterprises. According to Yang Yanzhong (2007), there are eight risks in supply chain finance, such as credit risk, legal risk and information transmission risk. He proposed four steps of risk management, namely identification, measurement, control and treatment, and five main forms of risk management, such as risk retention and risk portfolio [9].Guo Qingma (2010) considered that supply chain finance risk is divided into core enterprise moral risk, logistics enterprise malpractice risk, SMEs physical security risk, and operational risk in supply chain finance, and emphasized that the specificity of core enterprise as a risk determining variable has an important role in supply chain risk management [10]. Wang Yiming, Ning Ye et al. (2017) conducted case analysis from the perspective of counterparties, pointed out that supply chain finance has macro systematicness, industry risk, credit risk and counterparty credit risk, and focused on introducing counterparty credit risk. They are proposed to establish a risk early warning system to identify risks in time and establish a supply chain financial risk fund to reduce the losses caused by the outbreak of counterparty credit risk [11]. After entering the era of online supply chain finance, as the number of participants in supply chain finance continues to increase, the risks also continue to increase. GuoJu,et al. (2014) analyzed in depth the characteristics and risk elements of two different financing models of online supply chain finance, electronic warehouse receipts and electronic orders, and pointed out that compared with offline supply chain finance, the risks and challenges faced by banks have increased while the synergy and service efficiency have been greatly improved, and the risk control level of commercial banks is the main benchmark to determine whether the risks are increasing or decreasing, and made suggestions for bank supervision with recommendations [12]. Subsequently, Tian Jing and Song Yutian (2015) further studied the financial risks of online supply chains, analyzed the new operational risks, Internet security risks and proliferation risks in supply chains, and proposed corresponding regulatory measures [13]. He Shengxuan and Shen Songdong (2016) improved the identification of the main risks and proposed for the first time risk identification from the perspective of the cooperation model between commercial banks and B2B platforms in online supply chain finance, based on which an online supply chain finance risk evaluation system was constructed and improved to provide reference for further risk regulation in the supply chain [14].SongHua and YangXuan (2018) pointed out that the supply chain chain has a complex transaction structure, large transaction

volume and high frequency, and the manual reconciliation and clearing is inefficient and poorly accurate, and financial institutions cannot achieve dynamic and penetrating supervision of a large number of assets, thus it brings hidden dangers to supply chain finance, and on this basis, financial technology provides technical means to effectively prevent supply chain finance risks [15]. Under the credit-penetrating supply chain finance model, Wei Yannan et al. (2018) argue that the decentralization of blockchain and the characteristics of tamper-evident information can be used to better solve the two major pain points of information asymmetry and irregular business operation process in supply chain finance [16]. Xuejian Chu and Bo Gao (2018) also analyzed the role of blockchain technology in solving the challenges (such as credit identification, transaction supervision and risk control) faced in the business segment of supply chain finance [17]. Didi Xu (2019) combined with specific cases, by analyzing the composition and functions of blockchain technology certified that blockchain technology is naturally suitable for supply chain finance business and can be a good aid for supply chain finance risk regulation and prevention [18].

With the continuous development of supply chain finance, the financing mode tends to be diversified and personalized, and the industries and subjects covered by it are increasing, and the internal and external environment faced by it is constantly changing, so the risk regulation of supply chain becomes more complex and detailed. New risks will emerge in various models and environments, the lack of research based on specific environments and development conditions is often easy to deviate from the actual situation, and if traditional research theories are still used for these specific risks, it is often impossible to solve the problem fundamentally,especially in the current post-epidemic era, it is difficult for the traditional risk prevention and control system to effectively deal with the risks of supply chain finance at this stage. And in the past, Chinese scholars' research was more based on enterprise perspective, but rarely explored the risk of supply chain finance through the perspective of commercial banks, and the research on the risk was mainly focused on the analysis of case studies and models, lacking of deeper digging into the causes of its formation.Therefore, from the perspective of commercial banks, based on the development status of supply chain finance of Chinese commercial banks, analyze the risks and reasons for its existence,and discuss how to supervise and prevent risks in the post-epidemic era provides useful reference and enlightenment for commercial banks to solve supply chain financial risks, and is of great significance to the further healthy development of the supply chain financial industry.

3. Current status of Supply Chain Finance Development of Commercial banks

From the pilot launch of inventory pledge credit business by Shenzhen Development Bank in Guangdong, the bank-led offline "1+N" supply chain finance 1.0 model was proposed, and then extended to the whole country. Under the influence of the rapid development of the Internet, the supply chain finance model has been developing rapidly in recent years. It has successively experienced the online supply chain finance 2.0 model and the platform 3.0 model, which realizes the high integration of the Internet, industry chain and finance.

In recent years, with blockchain technology, big data, Internet of Things and other fields gradually showing strong development momentum, commercial banks have accelerated their financial technology empowerment, a digital 4.0 model that uses blockchain technology to split and penetrate enterprise credit is growing rapidly, hitting the pain points of the traditional supply chain finance industry, transforming the competition between enterprises into competition between "representative industry chains", not only promoting win-win cooperation in a certain chain, but also improving the whole industry chain and ecological chain.The industrial ecology is stable and prosperous, and the scale of financing has grown

steadily. As of 2020, the scale of the domestic supply chain financial market has approached 24.9 trillion yuan.In 2020, the People's Bank of China issued the "Financial Distributed Ledger Technology Security Specification", which regulates the technical standards of cryptographic algorithms, consensus protocols, smart contracts, identity management, etc., and further lays a solid foundation for the application of blockchain technology in the financial field. However, we must admit that over the past two decades, supply chain finance has not only helped commercial banks expand their business scope and enhance their competitiveness, but also effectively alleviated the financing difficulties of many small and medium-sized enterprises, but also exposed many risk factors such as imperfect legal system and lack of credit system. Although the Internet has greatly improved the convenience of financing, it has also accelerated the transmission speed of financial risks in the supply chain. Once the capital flow breaks among users, e-commerce platforms and loan subjects on the platform, the risks will spread to other fields and cause serious financial risks. Moreover, the application of the overall mode of supply chain finance of Chinese commercial banks is not mature enough. Some banks have gradually broken through the credit support of core enterprises, and can directly connect with the comprehensive service platform. They can use big data, blockchain, Internet of Things and other technologies to timely identify and effectively control some risks in supply chain finance. However, some banks still lag behind in business development and remain in online mode. The competitive advantage of commercial banks lies in innovation. The various risks that accompany the innovation of products and services should also be effectively prevented and controlled to ensure the smooth circulation of the supply chain and ensure that commercial banks obtain better operating benefits.

4. Types of Risks in Supply Chain Finance of Commercial Banks

4.1. Credit risk

As the most concerned risk in the supply chain finance business of commercial banks, credit risk is highly contagious, which is related to the development of related enterprises in the supply chain and the operation of the whole supply chain, and can subsequently cause very large economic losses. Credit risk often arises from whether each transaction entity fulfills its obligations as stipulated in the contract, whether there is deception or concealment of relevant important information, and whether there is delay in debt repayment or default caused by external environment or internal operation of the enterprise. Credit problems show a certain hidden nature, coupled with the small scale of small and medium-sized enterprises, relatively weak asset position, the current enterprise default costs are low, in this case, the credit risk of enterprises gradually formed, to commercial banks in the supply chain finance risk identification and prevention work also brings a great challenge, posing a great potential threat to commercial banks.

4.2. Legal risks

The implementation of relevant policies and regulations is a key condition for commercial banks to guarantee their business activities. The supply chain finance business has relatively diversified participants, and the law covers all the business management activities of commercial banks, so there are no clear laws and contract clauses to stipulate and restrict the rights, responsibilities and transaction behaviors of borrowers and lenders, which will also aggravate the occurrence of operation risk, credit risk and many other potential risks.Only based on the characteristics of commercial banks, fully connected with the actual demand of the current market, timely promulgation of policies and regulations for each supply chain finance mode can ensure that commercial banks can truly give more legal protection to both parties in the implementation of control.

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4.3. Market risks

The market risk of supply chain finance mainly refers to the risk caused by the change of commodity and asset prices due to the change of market environment. The market is always in a state of constant fluctuation under the influence of many factors such as interest rate and exchange rate, and there are existing relations between the mutual factors in the market. The change of one factor often causes the fluctuation and change of other elements existing in the market. In supply chain finance, many loan operations are covered by the lender's assets, the value of the assets depends mainly on the market price, market fluctuations will often drive commodity prices, changes in asset returns, and may even lead to a decline in the actual value and thus increase the risk of poor business conditions of the lender's enterprises, repayment failure or loss of assets of the borrower's commercial bank. Therefore, it is particularly important for commercial banks to control the market risk arising from changes in the value of collateral.

4.4. Operational risk

Basel Accord defines operational risk as the risk of loss to commercial banks due to imperfect or malfunctioning internal control, human error, system loopholes and external events. Compared with the above types of risks, risks from actual operations are more random and have a low probability of occurrence. However, supply chain finance business has diversified participants, complicated economic relations and complicated business processes. Once there are mistakes in decision-making, management, control, fraud, human factors and other careless operations will lead to customer privacy disclosure, network threats to the system, will cause a fatal blow to the operation of the entire supply chain. In particular, under the trend of digitalization and intelligence, higher and higher requirements are put forward on the rigor, professionalism and execution of operation, which is also one of the potential risks that commercial banks need to prevent most.

5. The Main Causes of Supply Chain Financial Risks of Commercial Banks

5.1. Laws and regulations are not perfect and business standards are not standardized

In recent years, as a financial innovation business, supply chain finance has developed rapidly in China. It has experienced the transformation of supply chain finance from 1.0 to 4.0. However, the applicable laws and regulations have not kept up with the rapid development of the industry. The main legal basis is the "Property Law" and the "Property Law". The Guarantee Law, the Measures for the Registration of Movable Property Mortgage, and the Measures for the Registration of Pledge of Accounts Receivable, etc., the above-mentioned existing laws have relatively complete protection of the rights and interests of creditors, but there are still few laws that specifically target the supply chain finance of commercial banks.The supply chain finance business model of Chinese commercial banks is complex and changeable, innovative, and lacks supporting laws and regulations to regulate and restrict. For example, in online supply chain finance, legal systems related to Internet financial supervision are only useful for Internet financial products, but supply chain financial products are not necessarily applicable; there are legal problems in multiple links, such as inconsistent interpretations of electronic contracts in different legal systems, lack of access standards for participants, etc. The loopholes can easily induce supply chain financial risks and endanger commercial banks.With the continuous introduction of high technology such as blockchain and big data, there is no clear operating standard that runs through the entire supply chain financial process, and the obligations and behavior rules between entities are not clearly stipulated.For example, logistics supervisors may act to the detriment of banks out of their own interest pursuit. At the same

time, poor industry regulation is not conducive to banks making the most accurate judgments, and legal risks further escalate and infringe on banks' rights and interests.

5.2. The external environment needs to be improved

The market is changing rapidly, and if the upstream and downstream enterprises in the supply chain fail to adapt to the changes in the market and commercial banks do not do a good job in preventing risks, the risks spread rapidly through the supply chain, thus affecting the normal operation of the supply chain as a whole. What needs to be focused on is that in the post-epidemic era, the new crown epidemic has become a major variable in the global economy, and the risks are constantly magnified by the increased uncertainty in the external environment, such as the impact of commodity prices, financing environment and other force majeure factors. The risk of market uncertainty increases under epidemic disturbance, and the price of loan collateral changes constantly with market fluctuations, which may lead to errors in corporate forecasts, unstable product sales, economic losses, funding gaps, or commercial bank mortgage guarantees that are less than financing exposures, and increase the potential risks of commercial banks. China’s battle of epidemic prevention and control has achieved major strategic results, the current economic operation is generally stable and improving, and the supply chain financial market space has further expanded. However, global capital has been madly suppressing China’s manufacturing industry, the continuous increase in the cost of raw materials such as cement, glass and foam, as well as the prices of bulk commodities, will promote the general increase in commodity prices and accelerate inflation; the downward pressure on the economy is high, coupled with the structural adjustment and transformation of the real economy, and the deep reorganization of the industrial chain value chain, etc. Affected by multiple factors, China's banking industry is facing realistic challenges such as weakened profitability and pressure on asset quality.And by the impact of the epidemic, many SMEs in the supply chain have not yet recovered to the pre-epidemic level, and the normalization of the epidemic has increased the challenge to the operation of SMEs, commercial banks, and even the normal operation of the entire supply chain. In addition, the deterioration of the financial environment under the tight market liquidity may lead to an increase in financing costs, especially when the market interest rates are volatile, which may easily cause the supply chain finance business to contract in profit.

5.3. Internal management needs to be strengthened

According to the actual development status of supply chain finance of Chinese commercial banks at this stage, in reviewing credit, Chinese commercial banks at this stage mainly rely on online system big data monitoring and analysis when conducting supply chain financial services, especially for cross-provincial and cross-border of customers are unable to conduct in-depth on-site investigations, and can only grant credit based on the online supply chain platform in credit evaluation. Most of their behaviors rely on system judgment. Although the credit approval and authorization time is shortened and the efficiency is greatly improved, the bank cannot grasp the supply chain The real-time business conditions of the enterprise, if there are concealed data, false orders, or intentional operations by enterprise personnel, risks cannot be discovered in a timely manner through the system.In the post-lending management, after some commercial banks apply blockchain technology to supply chain finance, the highly autonomous nature of blockchain technology and data encryption make it more difficult to identify and control the irregularities and potential risks of supply chain enterprises.At present, commercial banks rely on big data to remotely monitor the actual operating conditions of enterprises in the supply chain, and a large number of enterprises use collateral for financing in their financing activities, coupled with the lack of sensitivity to collateral regulation and the lack of the most effective method for commercial banks to measure the value of collateral at present, so when the value of commodities and collateral changes with the market environment,

it will lead to enterprises facing the risk of not being able to fulfill their contractual repayment obligations on time and The risk of property loss to commercial banks due to the lagging regulation of collateral prices.Supply chain finance has many business links and complex operation steps, but there is still no unified business process, contract terms and conditions norms and operation standards which greatly increase the potential risks of commercial banks. In the actual operation, the practitioners of each link do not strictly follow the standard process or the low moral quality of the relevant operators themselves may lead to the generation of risks. Therefore, the imperfect internal control and supervision mechanism of commercial banks is a key problem that needs to be solved immediately.

5.4. Information asymmetry exists in principal-agent

In recent years, China's commercial banks have made great efforts to improve the degree of informatization, but there are still some gaps between the current stage and the development of The Times. Some small and medium-sized enterprise production and business operation scale is small, low level of internal management, business performance is poorer, and don't want to open outward enterprise financial situation, now the normalization of the epidemic brings more uncertainty to business in the future, compounded the problem of information asymmetry between companies and Banks, commercial Banks can't accurate access to current enterprise's actual situation. And in the evaluation of enterprises, not only based on their operating conditions, but also pay attention to the real transactions of enterprises. Especially in the current business dealings is through the online platform, commercial Banks are difficult to detect the enterprise to obtain the high loan and the occurrence of risk events such as false data, and commercial Banks are hard to be offline confirmed the information, if you can't guarantee the accuracy of the commercial bank supply chain finance platform information online, it will take big risks.

5.5. The technical level is relatively backward

Chinese financial institutions have not invested enough in information technology development for the time being, which in turn affects their business and risk management capabilities. On the one hand, a large number of commercial banks in China are still at a relatively backward stage in the development of supply chain financial business systems, and the construction of information management systems is lagging, which intensifies the risks of supply chain financial information flow such as information leakage and information loss. Malicious attacks that cause system crashes, tampering with network data, and leaking party information will cause significant impacts and losses on the financial system and enterprises, and therefore need to be further improved.On the other hand, the third-party monitoring technology for commercial banks needs to be gradually refined and implemented. At this stage, a large number of high-tech technologies are still in the development stage, many technologies need to be updated iteratively, and commercial banks are still in the groping stage for their applications, such as block The high degree of autonomy and data encryption of chain technology makes it more difficult to identify the violations and potential risks of supply chain companies. Transaction information is registered on the chain, but it also causes commercial banks to be unable to identify the authenticity and accuracy of information and data, and there are system risks. Besides, the Internet of things system may be interfered and interrupted by signals, resulting in differences in information transmission and wrong instructions. The lack of technical support for risk management has led to the inability of commercial banks to conduct comprehensive and timely forecasting and supervision of enterprises in the course of conducting business activities, which has increased the potential risks of commercial banks. Therefore, the level of risk prevention technology needs to be improved.

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6. Measures to Prevent Financial Risks in the Supply Chain of Commercial Banks

6.1. Improve laws and regulations, cultivate a good legal environment and credit environment

A sound legal and credit environment provides a guarantee for the healthy development of commercial banks' supply chain finance and risk prevention and control work. The first is to keep pace with the times, improve supply chain finance laws and regulations to meet the requirements of supply chain finance development models at various stages, and legislate to protect the rights of commercial banks and customer data privacy, so that commercial banks can implement relevant businesses with evidence; The second is to strictly regulate various business process standards, and urge employees to standardize their business activities through business standards and supervision and management, so as to reduce the adverse effects caused by legal deficiencies or improper performance of their duties. The third is to strengthen supervision and management, strengthen the construction of Internet credit investigation platforms, regulate the collection, transmission, use and sharing of information from the legal level, and establish credit files to register corporate credit; formulate incentive measures and exemption systems to actively guide enterprises to conduct business Strictly abide by relevant rules and regulations during activities, severely punish untrustworthy enterprises, increase the cost of violations of enterprises, reduce risks and losses undertaken by commercial banks, and appropriately use public opinion to restrain the credit and social responsibilities of enterprises, and strengthen the legal and social responsibilities of enterprises consciousness.

6.2. Establish a standardized dynamic supervision mechanism

The first is to establish professional databases for various industries, use big data and information technology to comprehensively detect various data changes of enterprises, strengthen forward-looking and professional analysis and judgment, so that commercial banks can accurately and timely grasp the overall truth of enterprises and supply chains Operational conditions to ensure the timeliness and overall nature of bank risk supervision. The second is to actively introduce machine learning and data mining technology to identify consumer preferences and habits, and build market forecasting models. On the one hand, it can prevent changes in the external environment from increasing the risk of bank loans that cannot be recovered. On the other hand, it can also prevent inventory backlogs of logistics warehousing parties and corporate sales. Problems such as poor performance have enabled commercial banks to take the initiative in financial risk early warning and prevent market risks more effectively. At the same time, it should be noted that in the current complex external environment, when companies encounter operating difficulties due to external environmental impacts, banks can ensure that Under the security of credit funds, measures are taken to provide support as needed to help companies tide over the difficulties, instead of blindly drawing loans and ultimately damaging the interests of both parties. The third is to use the smart contract technology of the blockchain to evaluate the market value of the collateral in real time. When the price is lower than the specified price risk control line, an alarm will be issued, and the sale of collateral will be automatically executed based on the agreed conditions for value preservation or the financing party will be required to add the collateral. And other operations to improve the effectiveness of collateral management.

6.3. Improve the internal control governance system

Before carrying out cooperation, commercial banks should fully understand the development status and qualifications of cooperative enterprises, treat enterprises in the same chain as an

organic whole, systematically analyze the feasibility of business development, predict potential risks, and facilitate subsequent reasonable determination of credit lines; strict pre-loan Review the authenticity of transaction orders, review the reasonableness, legality, and compliance of contracts, and take precautions against risks beforehand. During the incident, real-time monitoring of enterprise production and operation, supply chain transactions, etc., dynamic monitoring of corporate public opinion, and risk prediction; closely tracking the flow of funds, and immediately taking effective control measures if false transactions are discovered; establishing a network security guarantee system, Improve the level of system protection, and use the positive effect of the block chain to be non-tamperable and traceable to ensure the safety and reliability of data. After the fact, sort out the summary in time, analyze the link where the problem occurred, and summarize the preventive measures. At the same time, commercial banks should standardize their internal assessment mechanisms as soon as possible, establish a sound reward and punishment mechanism, conduct regular assessments of employees, and fully mobilize employees' initiative and enthusiasm in standardizing business activities and improving service quality.

6.4. Strengthen the construction of information technology support platform

Improve the information collection management platform, realize the extensive collection of enterprise-related information across industries through the platform, strengthen the ability to integrate and analyze data, and timely track and evaluate the business status of the enterprise during business activities; optimize the platform for customer information management, and continue to increase network risks Defensive capabilities to ensure the security of customer privacy data. Establish a mutual trust mechanism for enterprises, establish a network communication service platform to provide legal consultation and information inquiry services, display supply chain information openly and transparently for all participants in supply chain finance and the general public, strengthen information exchange and communication, improve the efficiency of information communication, and reduce the supply chain The cost of data collection for financial service providers. The traceability of data information is realized through blockchain technology, and at the same time, a large number of relevant information and the information to be verified are used for cross-certification to solve the problem of false information, to ensure the authenticity, reliability and symmetry of the information, and effectively solve the risk of information asymmetry.

6.5. Strengthen the construction of risk prevention system

The complex epidemic situation and economic environment make a perfect risk prevention system the core competitiveness of banks in the future. First, improve the credit assessment system of supply chain finance, use big data to obtain comprehensive and accurate data of each enterprise in each link, realize the standard scenario of credit assessment, strengthen the internal credit rating, take the enterprise credit file as the basis of assessment, and give the enterprise reasonable credit rating and credit limit by integrating information from all parties.Second, the establishment of risk warning and emergency management system, through the establishment of scientific risk measurement methods, the establishment of personalized risk warning indicator system, and the risk warning indicator system for regular review, dynamic management, to ensure that the system to keep pace with the times, through the early warning indicator system real-time monitoring of the risk of each link and timely alerts to make the corresponding emergency measures.The third is to set up an independent supervision group to review all aspects of business on a regular basis, supervise and improve illegal operations and potential risks in a timely manner, formulate a strict supervision system to strengthen the supervision and incentive of employees, and try to avoid operational risks by relying on the double review of business lines and related personnel.

6.6. Strengthen the construction of supply chain finance talent team

With the increasing number of participants in supply chain finance, business models have become more complex, and a large number of risks have arisen. Therefore, higher requirements are placed on the quality of talents. Commercial banks should further strengthen the introduction and cultivation of relevant talents. On the one hand, it is necessary to strengthen business model research and innovation, popularize relevant knowledge of various industries and product characteristics of the chain for business personnel, strengthen training on business operations, product design, etc., deepen the standardized application of artificial intelligence, blockchain and other technologies, and the digital model of supply chain finance Innovative research. On the other hand, we will strengthen research on risk management and control, actively cultivate technical talents, continue to carry out technological research and development, continue to improve cyber risk defense capabilities, and prevent technical loopholes from causing system risks; customer segmentation based on market information and risk assessments, follow-up and closely monitor market trends, and improve The ability to prevent, identify and deal with risks can be flexibly predicted and respond to various complex situations to meet the requirements of supply chain financial risk management under technological innovation. In addition, it is necessary to continuously strengthen the construction of supply chain financial culture, cultivate employees' professional ethics and risk awareness, and ensure the healthy and stable development of supply chain finance.

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