

Research on the operation mode and risk management strategy of supply chain finance

Wenwen Wei

Jilin University Changchun City, Jilin Province 130012, China

Abstract: Supply chain finance, as a crucial field of modern financial innovation, effectively addresses the funding challenges faced by small and medium-sized enterprises by integrating financial services deeply into the management of supply chains. This enhances the resilience and efficiency of the entire supply chain. This paper systematically analyses the operating models of supply chain finance, especially the bank-led model and platform model, as well as their innovative risk management strategies. Through case studies, we demonstrate how supply chain finance uses technological tools such as big data analysis and smart contracts to optimize capital allocation, reduce transaction costs, enhance supply chain transparency, and promote the diversification and inclusiveness of the financial market, thereby facilitating the provision of inclusive financial services.

Keywords: Supply Chain Finance, Operation Mode, Block Chain, Risk Management, Financial Services

1. The research background of supply chain finance

Under the wave of economic globalization and digital transformation, supply chain finance, as a new financial service model, is gradually becoming a key force to promote the development of industrial economy. It breaks through the limitations of the traditional financial system and provides more convenient and efficient financing channels for small and medium-sized enterprises by integrating upstream and downstream resources in the supply chain^[1]. With the rapid development of financial technology, especially the application of block chain, national Business and Fig data, cloud computing and other technologies, the operation mode of supply chain finance is more flexible and diverse, and the risk management ability has been significantly improved, which not only enhances the financial support of the supply chain, but also promotes the coordination and optimization of the entire industrial chain.

2. The main mode of operation of supply chain finance

2.1 Bank-led model

The bank-led model refers to the model in which commercial banks play a central role in the supply chain finance business, integrating the information flow, logistics and capital flow in the supply chain and providing comprehensive financial services for enterprises in the supply chain^[2]. With its financial strength, risk control capabilities and financial service experience, banks provide customized financing solutions for upstream and downstream Ames around the core enterprises in the supply chain, so as to optimize the capital allocation of the entire supply chain, reduce financing costs, and improve the overall efficiency of the supply chain.

For example, consider a commercial bank working with a large automobile manufacturer to provide accounts receivable financing services for the company's parts suppliers. Suppliers use accounts receivable from the automobile manufacturer as collateral, and banks can quickly approve and provide financing by viewing order, delivery, acceptance and other data in the supply chain management system in real-time. Under this model, suppliers receive timely liquidity support, while banks effectively control loan risks through the credit guarantee of core enterprises and monitoring of supply chain data, achieving a win-win situation.

Through the deep integration of bank resources and supply chain characteristics, the bank-led supply chain finance effectively solves the problem of financing difficulties in the supply chain, especially for small and medium-sized enterprises, and promotes the healthy development of the supply chain as a whole. With the continuous progress of financial technology, supply chain financial services under the bank-led model will become more intelligent and personalized, and play a greater role in promoting the high-quality development of the real economy.

2.2 Platform driven mode

Platform-driven refers to the use of digital platforms as the core carrier to integrate the capital flow, information flow and logistics of upstream and downstream enterprises in the supply chain, and provide convenient and efficient financial services for small and medium-sized enterprises in the supply chain. Under this model, the platform becomes a bridge connecting financial institutions, core enterprises, suppliers, distributors and other supply chain participants, and realizes rapid matching of financing needs, risk assessment and capital flow through big data analysis, cloud computing, block chain and other technologies^[3].

Alabama's Ant Financial, a subsidiary of Ali baba, has built a supply chain finance platform to provide transaction-based financing services to merchants on Ant Financial. Merchants can apply for loans based on past sales records and customer evaluations, and the platform uses big data analysis to evaluate the credit status of merchants and quickly complete loan approval with cooperative banks. The loan funds were directly used to purchase inventory or expand operations, effectively alleviating the financial pressure on merchants, while Ant Financial enhanced the stickiness and competitiveness of the platform through the expansion of financial business.

The platform-driven supply chain finance optimizes the process of traditional finance through scientific and technological means, reduces information asymmetry, improves the availability and efficiency of financial services, provides important financing channels for small and medium-sized enterprises in the supply chain, and promotes the stability and development of the entire supply chain. With the continuous advancement of technology and the expansion of application scenarios, the influence of the platform-driven model in the field of supply chain finance will continue to increase.

2.3 Application of block chain technology

The combination of supply chain finance and block chain technology is a major innovation in the field of financial technology, which aims to solve the problems of information asymmetry, lack of trust, and cumbersome processes in supply chain finance through the characteristics and advantages of block chain technology.

UMF uses block chain technology to realize the transparency and efficiency improvement of cross-border factoring financing. The company records trade data through the block chain platform, realizes real-time sharing and transparency of information, and effectively reduces information asymmetry. This not only helps financial institutions to more accurately assess the credit profile of enterprises, but also prevents the risk of over financing and long borrowing caused by information asymmetry. The immutability of block chain technology ensures the authenticity and integrity of trade data, enabling all participants to view and verify transaction information in real time, thereby reducing transaction costs and risks^[4]. In addition, the automated execution of smart contracts simplifies the transaction process, reduces manual intervention and errors, and further improves the efficiency of cross-border factoring financing.

The application of block chain technology in supply chain finance effectively solves many pain points in traditional supply chain finance by providing immutable data records, automatically executed smart contracts, enhanced trust mechanisms, etc., promotes the efficient flow of funds, and enhances the transparency and anti-risk ability of the supply chain. With the continuous maturity of technology and the continuous expansion of application scenarios, block chain will become an important driving force to promote the future development of supply chain finance.

3. Supply chain financial risk management strategy

As a core component of the modern economic system, supply chain finance is of key significance for promoting the capital flow and risk control of upstream and downstream enterprises in the industrial chain. Supply chain finance risks mainly cover credit risk, liquidity risk, operational risk, market risk, legal and compliance risk, etc., and there is an intrinsic relationship and interaction between each risk type, which poses a threat to the stable operation of supply chain finance. Therefore, the comprehensive identification and classification of supply chain financial risks is a prerequisite for risk management^[5].

In terms of credit risk management, it emphasizes the establishment of a strict credit evaluation system, the implementation of a dynamic credit monitoring mechanism, and the reduction of credit risk exposure through credit enhancement measures. In terms of liquidity

risk management, we focus on optimizing cash flow management, establishing an emergency fund reserve mechanism, and actively seeking in-depth cooperation with financial institutions to ensure stable financing support. In terms of operational risk management, we improved the internal control system, strengthened employee training and risk awareness, and built an information technology security shield to ensure the safe and stable operation of supply chain financial activities. In terms of market risk management, it emphasizes paying close attention to market dynamics, flexibly adjusting business strategies, and using financial derivatives to hedge risks to mitigate the negative impact of market risks. In terms of legal and compliance risk management, we adhere to compliance with relevant laws and regulations and international trade rules, establish a compliance review mechanism, strengthen communication and cooperation with the legal counsel team, and ensure the legality and compliance of all business activities.

4. Conclusion

As an innovative financial service model, supply chain finance effectively alleviates the financing problems of small and medium-sized enterprises and promotes the overall stability and optimization of the supply chain through the deep integration of supply chain management and financial services. Compared with traditional financial services, supply chain finance shows more efficient capital allocation capabilities, broader financial coverage, and stronger risk management mechanisms, which are mainly due to its deep integration of modern technology, especially the application of big data, cloud computing and block chain technology^[6]. In terms of risk management, supply chain finance has built a multi-dimensional risk assessment system, strengthened credit management, and enhanced the control of operational risks, market risks and compliance risks by improving the transparency of the supply chain. By cooperating with core enterprises and using financial technology, supply chain finance can not only quickly respond to market changes, but also provide customized and flexible financing solutions for all links of the supply chain, and promote the smooth and optimal flow of funds. In short, supply chain finance, with its unique advantages, is gradually becoming an important force to promote the development of global trade and promote the deep integration of the real economy and finance.

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