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Supply chain finance on corporate debt financing behavior under uncertainty

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Abstract

At present, the world is undergoing a major change that has not been seen in a century. How to deal with the increase in environmental uncertainty has become an important problem facing the high-quality development of Chinese enterprises. Chinese enterprises generally face financing constraints, and weak debt financing channels hinder the process of high-quality development of enterprises. How to improve debt financing capabilities has become a practical problem that Chinese enterprises urgently need to solve in response to the increase in environmental uncertainty. This paper first introduces the concept, characteristics and common patterns of supply chain finance , and also explains the definition of uncertainty environment and its impact on corporate operations and financing. By systematically combing through relevant domestic and foreign literature, this paper summarizes the results of existing research on supply chain finance, uncertainty environment and corporate debt financing behavior, laying a theoretical foundation for subsequent analysis. Secondly, this paper demonstrates the specific application of supply chain finance in an uncertain environment and its impact on corporate debt financing behavior through case analysis. By analyzing the success factors of these cases, such as risk management, support from financial institutions and technological innovation, the application value of supply chain finance in an uncertain environment is revealed. It is hoped that theoretical support and practical guidance will be provided for policymakers, financial institutions and enterprises to promote the development of supply chain finance and promote sound financing of enterprises.

Keywords

Uncertain environment, supply chain finance, debt financing, risk management.

1. Introduction

1.1. Research Background

Against the backdrop of an increasingly complex and uncertain global economic situation, companies are facing a more severe financing environment. Traditional financing methods often make it difficult for companies, especially small and medium-sized enterprises, to obtain the required financial support in an uncertain environment due to strict credit requirements and complex approval procedures. Supply chain finance, as an innovative financial model, provides companies, especially small and medium-sized enterprises, with a more flexible and efficient financing channel by embedding financial services into every link of the supply chain. The development of supply chain finance has benefited from the advancement of information technology and the promotion of financial innovation. Through supply chain finance, companies can use supply chain assets such as accounts receivable, inventory, and prepayments for financing, thereby alleviating cash flow pressure and improving capital turnover efficiency. This model not only helps to enhance the company's ability to resist risks,

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but also strengthens the cooperative relationship between upstream and downstream companies in the supply chain and optimizes the resource allocation of the entire supply chain. In an uncertain environment, the importance of supply chain finance is particularly prominent. First, supply chain finance can provide more diversified financing options to help companies cope with market fluctuations and financing difficulties. Second, through supply chain finance, financial institutions can better understand the actual operation of enterprises, reduce information asymmetry and credit risks, and improve financing efficiency. Finally, the widespread application of supply chain finance will help promote the overall stability and development of the industrial chain and provide strong support for the sustainable development of the economy. In summary, in the current complex and changing economic environment, supply chain finance , as an important means to cope with uncertainty, has shown broad development prospects and important practical significance.

1.2. Significance

The conclusions of this paper are helpful to enrich and improve the theoretical framework of the impact of supply chain finance on corporate investment and financing behavior. Existing studies mainly explore the role of supply chain finance in alleviating financing constraints from the perspective of small and medium-sized enterprises, and study the risk prevention and control and model innovation of supply chain finance from the perspective of commercial banks . However, the impact of supply chain finance on the investment and financing decisions of core enterprises has not received sufficient attention, and there is also a lack of corresponding theoretical guidance framework. Through the research of this paper, we can fill this gap, further improve the debt maturity structure trade-off theory based on the Chinese institutional background, provide new research scenarios for this field, and expand its research boundaries. In addition, the research conclusions of this paper have made incremental contributions to the improvement of the trade-off theory of capital structure adjustment, and provided a new perspective for the dynamic adjustment of corporate capital structure. The study also made new contributions to the study of strategic choices of enterprises in uncertain environments, and provided a new scenario for strategic choices of enterprises to cope with uncertain environmental shocks . At the same time, it has important practical significance for policy making and corporate practice. First, the research conclusions provide decision-making references for relevant government departments to improve financial policies and further release the effects of supply chain finance on the real economy. By deeply understanding the impact of supply chain finance on corporate debt financing behavior in an uncertain environment, the government can formulate more targeted policies to support the sustainable development of enterprises. Second, the research conclusions provide valuable experience for enterprises to make strategic choices in response to environmental uncertainty. Enterprises can use the ideas provided by this study to moderately expand the scale of debt financing, optimize the debt maturity structure, speed up the adjustment of capital structure, optimize the allocation of supply chain resources , and improve the ability to cope with environmental uncertainties.

2. Theoretical basis and literature review

2.1. The concept and model of supply chain finance

Supply chain finance is a financial innovation model that embeds financial services into supply chain management. It provides flexible and diverse financial products and services by evaluating the transactions and credit status of enterprises at each node in the supply chain. Its core lies in optimizing the capital flow in each link of the supply chain, reducing the financing cost of enterprises, and improving the overall operation efficiency of the supply chain. The

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characteristics of supply chain finance mainly include credit evaluation based on real transactions and logistics information of the supply chain, forming a cooperative model with the participation of multiple parties, flexible and diverse financial products to meet the financing needs of different enterprises, and effectively dispersing risks through information sharing and credit transmission. Common supply chain finance models include accounts receivable financing, inventory financing and prepayment financing. Accounts receivable financing refers to suppliers applying for financing from financial institutions with their accounts receivable from core enterprises as collateral, so as to obtain cash flow in advance. Inventory financing is that enterprises apply for loans from financial institutions with their inventory as collateral to ease financial pressure and maintain normal operations. Prepayment financing is that before paying suppliers, enterprises apply for financing from financial institutions with goods or services to be received in the future as collateral to ensure the smooth operation of the supply chain.

2.2. Definition and impact of uncertain environment

An uncertain environment refers to a situation where the uncertainty factors faced by enterprises in the operation and decision-making process increase, resulting in future market demand, supply conditions, policies and regulations, macroeconomic environment, etc., which are difficult to predict and control. This environment may be caused by a variety of factors such as the process of globalization, technological progress, policy changes, natural disasters, etc. The impact of an uncertain environment on the operation and financing of enterprises is mainly reflected in market demand fluctuations, supply chain disruption risks, increased difficulty in cost control, and policy change risks. The increase in market demand uncertainty makes it difficult for enterprises to accurately predict product demand, which in turn affects production plans and inventory management. The complexity and interconnectedness of the global supply chain increase the risk of supply chain disruptions. Natural disasters, political turmoil, trade disputes, etc. may lead to supply chain disruptions and affect the normal operation of enterprises. In addition, the volatility of raw material prices, logistics costs, labor costs, etc. has intensified, and enterprises are facing greater cost control pressure. Frequent changes in policies and regulations have also increased the compliance costs and operating risks of enterprises, especially policy adjustments in areas such as environmental protection, trade and taxation, which have a direct impact on the operation of enterprises. In terms of financing, in an uncertain environment, financial institutions are more cautious in credit assessment of enterprises, and financing standards are raised, which makes it more difficult for enterprises to obtain financing. At the same time, the increase in risk premiums has increased the financing costs of enterprises, further increasing the financial pressure on enterprises. An uncertain environment may also lead to restrictions on some financing channels, such as turbulence in the international financial market and tightening of domestic policies, which will make companies' financing options more limited, increase capital turnover pressure, and affect corporate liquidity.

2.3. Literature review

Hu Yuefei (2007) believes that supply chain finance is a self-paying trade financing structure of commercial banks based on the characteristics of the supply chain , providing comprehensive financial solutions for supply chain enterprises . Research shows that both strong and weak connections of small and medium-sized enterprises in the supply chain network can improve the financing performance of enterprises, especially weak connections (Lu Qiang et al., 2018). Cho (2019) found that focal firms can obtain compensation by sharing financial gains and leveraging their superior bargaining position. Song Hua et al. (2021) pointed out that the core of supply chain finance is the industrial supply chain, and the role of finance is to optimize industrial funds. Ling Runze et al. (2021) found that supply chain finance improved the innovation capabilities of enterprises and achieved high-quality development by easing financing constraints and consolidating supply chain relationships. Regarding corporate financing behavior, debt financing mainly includes bank credit financing and bond financing. Suppliers have information advantages over banks and can obtain buyer information at lower cost and faster (Biais and Gollier, 1997). A sound legal environment significantly increases the possibility of companies optimizing their capital structure by adjusting debt (Huang Chengi et al., 2014), and executive equity incentives can speed up capital structure adjustment (Sheng Mingquan et al., 2016). Macroeconomic environment and policies have an important impact on the scale of debt financing. Industrial policy support can help reduce corporate debt financing costs (Ma Wenchao et al., 2017), while economic policy uncertainty caused by changes in government officials will delay corporate financing plans and reduce the scale of debt financing (Jens, 2017; Ye Yong and Zhang Li, 2018). The market-oriented reform of loan interest rates has promoted over-indebted enterprises to accelerate capital structure adjustment (Zheng Manni et al., 2018), and improving the internal governance level of the team has significantly increased the company's debt level and capital structure adjustment speed (Zhang Bo et al., 2021).

3. Supply chain finance in uncertain environment

3.1. Application Case Analysis

In an uncertain environment, supply chain finance provides important financing support for enterprises and helps them tide over difficulties. A typical case is the response strategy of a large electronic manufacturing company during the global financial crisis. Due to the sharp decline in market demand, the company's cash flow had serious problems. By cooperating with banks, the company used accounts receivable financing to package and sell accounts receivable to banks, quickly obtained the required working capital and alleviated the capital pressure. In addition, through advance payment financing, the company obtained financing support from the bank before paying the supplier, ensuring the continuity of production. Another case is the financing strategy of a small and medium-sized automotive parts supplier during the epidemic. Due to supply chain disruptions, the company faced problems such as shortage of raw materials and difficulty in capital turnover. Through inventory financing, the company obtained loans from financial institutions with inventory as collateral to maintain production operations. These cases show the specific application of supply chain finance in an uncertain environment and its positive impact on corporate debt financing behavior.

3.2. Factor of success

In the above cases, the successful application of supply chain finance depends on several key factors. First, risk management is the foundation of the success of supply chain finance . In the above electronic manufacturing enterprise case, the enterprise established a close cooperative relationship with the bank and reduced the financing risk through detailed accounts receivable management and credit assessment. Secondly, the support of financial institutions is crucial. In the process of accounts receivable and advance payment financing, the bank provided flexible financing solutions and preferential loan conditions, which effectively alleviated the capital pressure of the enterprise. Technological innovation is also one of the key factors for success. With the development of financial technology, financial institutions use big data and blockchain technology to conduct real-time monitoring and data analysis of each link in the supply chain, improving the transparency and efficiency of financing. In the case of the automotive parts supplier, the financial institution dynamically evaluated the inventory of the enterprise through the online platform and provided accurate inventory financing services. Through the combined effect of these success factors, supply chain finance not only helps enterprises solve short-term funding problems in an uncertain environment, but also enhances the risk resistance of enterprises and promotes the long-term stable development of enterprises.

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4. The impact of supply chain finance on corporate debt financing behavior

4.1. Financing costs

In an uncertain environment, traditional financing methods lead to rising financing costs due to high risk premiums. Supply chain finance effectively reduces the financing costs of enterprises through its unique financing model. First, supply chain finance is based on real transactions in the supply chain, and financial institutions can more accurately assess the credit risk of enterprises, thereby reducing risk premiums. For example, accounts receivable financing allows enterprises to pledge their accounts receivable to obtain lower-cost loans. Secondly, supply chain finance uses the mutual credit of upstream and downstream enterprises in the supply chain to reduce financing costs through a credit transmission mechanism. The credit advantage of core enterprises can be passed on to suppliers and distributors, allowing these enterprises to enjoy lower interest rates and better loan terms when financing. Finally, models such as advance payment financing and inventory financing in supply chain finance can provide financial support in all aspects of enterprise production and operation, reduce enterprises' dependence on high-cost short-term loans, and further reduce overall financing costs.

4.2. Diversification of financing channels

Supply chain finance provides enterprises with more financing channels through diversified financing models. Especially in an uncertain environment, supply chain finance can effectively alleviate the financing difficulties of enterprises. First of all, supply chain finance not only includes traditional bank credit, but also covers a variety of financial instruments, such as commercial factoring, financial leasing and supply chain bills. These tools enable enterprises to obtain corresponding financial support in different business links. Secondly, the development of financial technology has further broadened the financing channels of supply chain finance . For example, the supply chain finance platform based on blockchain technology can realize real-time information sharing and automated transactions among all parties in the supply chain, greatly improving financing efficiency and transparency. Furthermore, supply chain finance has a wide range of application scenarios. From raw material procurement to product sales, enterprises can seek suitable financing solutions at every link of the supply chain, thereby enhancing the financial flexibility and adaptability of enterprises in an uncertain environment.

4.3. Financing efficiency

Supply chain finance has greatly improved the financing efficiency of enterprises by optimizing capital flow and improving information transparency. First, the accounts receivable financing, prepayment financing and inventory financing models in supply chain finance enable enterprises to convert assets in the supply chain into cash flow more quickly, thus accelerating capital turnover. For example, accounts receivable financing allows enterprises to obtain loans immediately after selling goods without waiting for payment from customers, thereby quickly recovering funds. Secondly, supply chain finance uses big data analysis and blockchain technology to achieve information transparency and real-time sharing among all parties in the supply chain . Financial institutions can grasp the operating conditions and capital needs of enterprises in real time, make financing decisions quickly, shorten approval time, and improve financing efficiency. In addition, supply chain finance also integrates the capital needs of upstream and downstream enterprises and provides a package of financial solutions, reducing the complex procedures and time costs of enterprises seeking financing alone, and further improving the efficiency of capital use. In an uncertain environment, the efficient financing capabilities of supply chain finance help enterprises stabilize operations and enhance their ability to resist risks.

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5. Challenges and countermeasures of supply chain finance in an uncertain environment

5.1. Challenge Analysis

In an uncertain environment, supply chain finance faces many challenges. First, credit risk is the primary issue facing supply chain finance . In an uncertain environment, the financial status and credit status of enterprises may fluctuate greatly, which increases the difficulty of financial institutions in assessing the credit of enterprises, thereby increasing the credit risk of supply chain finance . Secondly, the uncertainty brought about by market fluctuations increases the risk of supply chain finance . Factors such as changes in market demand, fluctuations in raw material prices and exchange rate fluctuations in an uncertain environment will affect the operation and repayment ability of enterprises, thereby affecting the security of supply chain finance . Thirdly, policy changes are also a major challenge. The uncertainty of government policies, such as frequent adjustments in tax policies, financial regulatory policies and environmental protection policies, may lead to changes in the financing environment of enterprises and the operating procedures of supply chain finance , increasing the risks and uncertainties of supply chain finance . In addition, the complexity and interconnectedness of the global supply chain will also bring about the risk of supply chain disruption in an uncertain environment, affecting the stability and sustainability of supply chain finance .

5.2. Countermeasures and Suggestions

Supply chain finance in an uncertain environment , the following countermeasures and measures are proposed. First, strengthening risk management is the key to dealing with credit risks and market fluctuations. Financial institutions should establish a sound credit assessment system, use big data and artificial intelligence technology to comprehensively assess the financial status, operation and market environment of enterprises, and dynamically monitor the credit risks of enterprises. At the same time, financial institutions should spread risks to all links of the supply chain through risk diversification mechanisms to reduce the credit risks of single enterprises. Secondly, optimizing policy support is an important means to deal with policy changes. The government should formulate stable supply chain financial policies, reduce the frequency and amplitude of policy adjustments, and provide a stable policy environment for enterprises and financial institutions. At the same time, the government should encourage financial institutions and enterprises to actively participate in supply chain financial business through tax incentives, financial subsidies and credit guarantees. Thirdly, improving technical level is an important way to improve the efficiency of supply chain finance and reduce risks. Financial institutions should strengthen the application of financial technology, realize real-time sharing and transparent management of supply chain information through blockchain technology , and improve the security and efficiency of supply chain finance . In addition, financial institutions should also actively develop and apply supply chain financial platforms to achieve information exchange and automated transactions among all parties in the supply chain , and improve the operational efficiency and management level of supply chain finance .

6. Conclusion and Outlook

Supply chain finance in an uncertain environment , this article reveals its important role in reducing corporate financing costs, providing diversified financing channels, and improving financing efficiency. Through case analysis, we found that supply chain finance has significant advantages in dealing with challenges such as market fluctuations, credit risks and policy changes. Supply chain finance can not only optimize the capital flow of enterprises and improve the efficiency of capital use, but also reduce financing costs through the credit transmission mechanism. However, there are some limitations to the study. First, the analysis in this article is mainly based on existing cases and theories and lacks the support of large-scale empirical data; secondly, the differences in financing behaviors of different types of enterprises in uncertain environments have not been fully explored. Future research can be further refined to explore how companies of different industries and sizes use supply chain finance for financing in uncertain environments . In addition, with the development of financial technology, studying how to better use new technologies to improve the efficiency and security of supply chain finance is also a direction worthy of attention. Through further research, more comprehensive theoretical support and practical guidance can be provided to policymakers, financial institutions and enterprises, and the continuous innovation and development of supply chain finance can be promoted.

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