

Research Progress on Supply Chain Finance Alleviating Financing Constraints for Small and Medium-Sized Enterprises

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Abstract:

Financing constraints for small and medium-sized enterprises have always been a pain point in their development, and the emergence of supply chain finance has attracted widespread attention in the academic community. This article systematically reviews relevant literature. Firstly, starting from the issue of financing constraints for small and medium-sized enterprises, this paper summarizes relevant literature in recent years, discusses the causes of financing constraints for small and medium-sized enterprises from the perspectives of the supply and demand sides of funds, and summarizes countermeasures and suggestions to alleviate financing constraints for small and medium-sized enterprises. Secondly, starting from the background of the emergence of supply chain finance, this paper analyzes supply chain finance from three perspectives: core enterprises, transaction platform service providers, and commercial banks from multiple dimensions. At the same time, the operating mode of supply chain finance is summarized, and it is concluded that supply chain finance has advantages in weakening information asymmetry, alleviating credit pressure on small and medium-sized enterprises, and improving fund availability. Finally, the sources of supply chain finance risks and the construction of an evaluation system are sorted out to optimize the risk management of supply chain finance.

Keywords:

Financing for Small and Medium-Sized Enterprises, Financing Constraints, Supply Chain Finance

1. Introduction

In China's economic system, the majority of small and medium-sized enterprises (SMEs) are located, and their development is to some extent related to the transformation and upgrading of China's economic and social structure. For a long time, due to factors such as information asymmetry and mismatch between credit supply and demand between banks and enterprises, as well as the financial irregularities of small and medium-sized enterprises themselves, they have been subject to strong constraints in financing. However, as the driving force of China's

real economy, small and medium-sized enterprises (SMEs) lacking capital operation have poor resistance to risks, which may ultimately lead to bankruptcy and affect the healthy and stable development of China's real economy.

Faced with such a huge financing gap for small and medium-sized enterprises, how to solve the problem of difficult and expensive financing for small and medium-sized enterprises? How to promote the healthy development of small and medium-sized enterprises and promote the sustained improvement of China's economy? These issues have also become a focus of attention in the academic community. Is the emerging supply chain finance effective in solving such challenges? Has it improved the financing difficulties faced by small and medium-sized enterprises? This article attempts to combine relevant literature from scholars on financing constraints for small and medium-sized enterprises and supply chain finance, in order to find the answers to the above questions and provide reference for the government, enterprises, and financial institutions to carry out work in this field.

2. Research on Financing for Small and Medium Sized Enterprises

Small and medium-sized enterprises account for the vast majority of enterprises in China and are also the main driving force behind China's economic growth. In recent years, small and medium-sized enterprises have flourished through the dividends of informatization, making breakthrough progress in innovative technologies and other fields, playing an indispensable role in the transformation and upgrading of the national economy. Most of China's small and medium-sized enterprises belong to innovative enterprises, which value short-term growth and invest heavily in research and development. They are greatly affected by the company's cash flow. However, due to their small scale and limited funding sources, small and medium-sized enterprises have a low level of credit utilization in credit. In traditional bank enterprise financing, there is a serious problem of information asymmetry between small and medium-sized enterprises and banks, which makes it difficult for them to enter the capital market. However, small and medium-sized enterprises in our country have a significant demand gap in terms of funding, and are unable to obtain credit support during their development, resulting in insufficient endogenous driving force for their own development. Based on this, this article will summarize the relevant literature on the causes and solutions of financing constraints for small and medium-sized enterprises.

2.1. The causes of financing constraints for small and medium-sized enterprises

In the situation where banks are not compatible with the real economy represented by small and medium-sized enterprises, relying solely on the expansion of the total financial volume to promote the development of the real economy has a weak effect, making it difficult to solve the problem of financing constraints for small and medium-sized enterprises [1]. The inherent information asymmetry of traditional banks and enterprises and the inherent problems of the financial system itself have led to the dilemma of financing difficulties for small and medium-sized enterprises for a long time. The academic community has conducted extensive academic research on this issue, mainly from the perspectives of external funding providers (represented by banks) and internal funding demanders (represented by small and medium-sized enterprises).

From the perspective of funding supply, analyzing the causes of financing

constraints on small and medium-sized enterprises, and from the perspective of commercial banks pursuing profits, it is believed that the causes of financing constraints on small and medium-sized enterprises stem from the inability to form “economies of scale”. Banks have “systemic discrimination” against small and medium-sized enterprises, and excessive restrictions on their credit seriously affect their credit allocation [2]. In research on financial institutions such as banks that provide funding, it is mentioned that in obtaining financial information of small and medium-sized enterprises, only financial data disclosed by third-party intermediaries or the enterprise itself is used to indirectly estimate the credit value level and risk response ability of the enterprise. This is essentially a deviation from the actual risk of the enterprise [3]. From the perspective of banks and other financial institutions, the optimal choice is to allocate resources to the most efficient sectors, leading to financing difficulties for small and medium-sized enterprises [4].

Most scholars believe that financing for small and medium-sized enterprises is difficult, and there is a natural information asymmetry and huge risk on the supply side. They have redefined the problem that causes financing constraints for small and medium-sized enterprises, summarizing it as the failure of bank economies of scale. Due to the inadequate information disclosure of small and medium-sized enterprises, the cost of establishing long-term cooperation between banks and small and medium-sized enterprises is too high, especially for financial institutions that adopt branch agency. The instability caused by personnel performance fluctuations in branch agency institutions leads to insufficient accumulation of information for small and medium-sized enterprises [5]. As informal financial institutions, they have more advantages in obtaining information about small and medium-sized enterprises than financial institutions. By constructing a financial market model, it is analyzed that the existence of informal financial institutions can promote credit financing for small and medium-sized enterprises [6]. With the continuous promotion of interest rate marketization, financial institutions have shifted their financing constraints on small and medium-sized enterprises from interest rate based to non price based fees, which have increased the actual financing costs of enterprises in both explicit and implicit ways [7].

2.2. Strategies to address financing constraints for small and medium-sized enterprises

Before the formal emergence and application of supply chain finance, the academic community conducted research on how to solve the financing constraints of small and medium-sized enterprises. Domestic and foreign scholars explored supply side structural reform, government optimization measures, and proposed solutions for reference.

As early as exploring the issue of financing difficulties for small and medium-sized enterprises in China, it was proposed that the efficiency of different types of financial institutions in providing services to small and medium-sized enterprises of different capacity scales varies, and it is necessary to improve the solution from the perspective of financial institutions on the funding supply side [8]. Scholars are studying the “relational financing hypothesis”, where the information in relational lending mentioned in the hypothesis is generally difficult to measure with data. Large financial institutions have complex organizational structures, and organizations are mainly composed of various types of people. Therefore, the personification feature is most evident in large financial institutions, and the cost of transmitting information

from small and medium-sized enterprises within large institutions is too high. Small and medium-sized financial institutions have cost advantages in this regard, and small and medium-sized enterprises can establish stable cooperative relationships with them. Long term information exchange can reduce the troubles caused by information asymmetry and improve the accessibility of financing for small and medium-sized enterprises to a certain extent [9]. Improving the financing environment for small and medium-sized enterprises can be achieved by developing small and medium-sized commercial banks and supporting the development of rural credit cooperatives, thereby improving the credit environment for small and medium-sized enterprises [10]. In terms of self reform of banks, commercial banks face the problem of idle credit funds. From the supply side, banks need to improve the efficiency of fund utilization, implement equal credit conditions for small and medium-sized enterprises, large enterprises or state-owned enterprises, establish a credit linked system, and increase the work enthusiasm of credit staff [11]. From the perspective of large state-owned banks, credit policies should be dynamically adjusted, procedures for approving enterprises should be simplified, approval authority for enterprise loans should be delegated, and the enthusiasm for small and medium-sized enterprise loans should be increased [12].

From the perspective of reputation chain analysis, there is a natural “symbiotic” social relationship between large enterprises and small and medium-sized enterprises. The value chain and supply chain based information sharing formed through cooperation between manufacturers are also known as the reputation chain. The reputation chain links the reputation of upstream and downstream, and constructs a stable reputation chain through a “large enterprise supervision style financial system”. Small and medium-sized enterprises can rely on the reputation of large enterprises to be at the same level in credit. Becoming an important way for small and medium-sized enterprises to break free from financing constraints [13]. By calculating the financing constraints of small and medium-sized enterprises in China through two sets of micro data, it was found that enterprises have a positive sensitivity in cash cash flow sensitivity, and can clearly feel the current financing constraints of small and medium-sized enterprises [14]. In the study, it was found that small and medium-sized enterprises in China face obvious financing constraints, and supply chain finance can effectively solve the problem of financing constraints [15].

3. Research on Supply Chain Finance

3.1. Supply chain finance from different perspectives

With the continuous refinement of industries and the complexity of manufacturing models, competition in industries has shifted from enterprise enterprise competition to supply chain competition. In this context, supply chain finance has also emerged. Scholars at home and abroad have put forward many suggestions on the application and various categories of supply chain finance. At the same time, various fields derived from the development of supply chain finance have also received widespread attention from scholars.

The research on supply chain finance is mainly based on three perspectives, namely the perspective of core enterprises, the perspective of transaction platform service providers, and the perspective of commercial banks. From the perspective of core enterprises, supply chain finance is based on the ecosystem of core enterprises, providing credit endorsement to enterprises on the supply chain, improving the

accessibility of funds and optimizing system costs for small and medium-sized enterprises. This optimization in financing is attributed to the process of integrating, packaging, and analyzing information flow on the chain [16]; From the perspective of trading platform service providers, the explanation of supply chain finance is to achieve effective integration of resources on the supply chain, with specific financial institutions serving as organizers to provide solutions for enterprises on the chain, linking information from both trading parties to financial institutions, and using the technology platform as a trigger button, such as providing credit products to suppliers and buyers to achieve financial integration [17]. From the perspective of commercial banks, supply chain finance provides new channels for financing for small and medium-sized enterprises. Banks provide comprehensive credit to relevant enterprises in the entire supply chain, and can effectively integrate idle funds into the supply chain. This not only provides trade funding services for enterprises in the supply chain, but also new funding loan services for vulnerable enterprises in the supply chain, becoming a financing model where all parties can flexibly participate in financial services [18].

3.2. Analysis of the operational model of supply chain finance

As early as the 1980s, world-class business giants derived the operation model of supply chain finance in order to seek cost minimization, accelerating the process of global business outsourcing. Under the traditional credit system, core enterprises in the supply chain are defined as low-risk lenders. Core enterprises have a financing advantage due to their scale advantage and low cost, while small and medium-sized enterprises in the supply chain are high-risk lenders. There is inequality in financing with banks and other financial institutions, making it difficult to obtain low-cost financing. Therefore, traditional credit services will inevitably affect the long-term stable development of enterprises in the supply chain [19]. As an interdisciplinary field of financing and management, many literature on supply chain finance focuses on analyzing the value and management models it generates.

Supply chain finance can transfer the risk of a single enterprise from the past to the risk management of the entire supply chain. Three operational models of accounts receivable financing, confirmed warehouse financing, and integrated warehouse financing have been designed, and the differences and potential advantages of these three models have been elaborated in detail in the article [20]. Based on the analysis of the traditional supply chain finance operation mode, financial services have been extended to integrated supply chain services, and a new business model of "cloud warehouse" has been proposed. He believes that this model can demonstrate the mechanism of discovering transaction prices and reduce the financing risk of small and medium-sized enterprises [21]. With the development of supply chain finance, blockchain technology has been applied to the supply chain. With its advantages of traceability and immutability, blockchain has reduced the difficulty of core enterprises unwilling to endorse credit, ensured the security and reliability of logistics, information flow, and fund flow information data, and thus improved economic benefits [22].

Regarding the research on accounts receivable financing, as early as 1999, Liang Hong borrowed mature Western asset securitization experience and innovated new financing tools for accounts receivable securitization in her book "Innovation in Enterprise Accounts Receivable Financing". Scholars have further studied the securitization of accounts receivable and found that more than half of the assets of

small and medium-sized enterprises in China exist in the form of accounts receivable and inventory. Adopting credit sales can reduce the proportion of inventory in small and medium-sized enterprises, and securitization of accounts receivable can provide guarantees for the collection of accounts receivable for small and medium-sized enterprises and guarantee the operation of funds for enterprises in the supply chain [23]. Another important concept corresponding to supply chain finance is logistics finance, and scholars have paid attention to the importance of supply chain fund flow management in studying logistics finance. The earliest research direction in logistics finance was inventory pledge financing business. Poe introduced in the article that logistics finance is an asset based financing project, in which inventory serves as the main collateral for your consideration, and wholesalers, suppliers, and distributors are the research objects of logistics finance. Scholars believe that logistics finance, as a means of banking and financial innovation, locks and manages the logistics and capital flows of financing enterprises, emphasizing more on settlement, insurance, transportation and other services of logistics enterprises, and improving the operational efficiency of enterprises in the supply chain [24].

3.3. Research on Credit Risk in Supply Chain Finance

The development of supply chain finance began with trade, and there are significant risks to the performance of both trading parties. Therefore, early research on supply chain finance risks began with the most primitive financial risks. Supply chain finance involves various stages, such as the sources and evaluation of risks, and scholars have studied the existence of different credit risks in different stages.

In the study of risk sources in supply chain finance, different scholars have proposed different perspectives on identifying risks. For example, the risks of supply chain finance are divided into systematic and non systematic risks. Systematic risks mainly involve risks caused by macro and industry factors, while non systematic risks tend to be more inclined towards risks generated by credit, inventory realization, and operations [25]. Starting from the perspectives of “supply chain orientation” and “financial orientation” in supply chain finance, Song Hua focused on exploring three sources of uncertainty risks in “supply chain orientation”. He explored external environmental risks in the supply chain, enterprise risks in the supply chain, and network risks in the supply chain, and proposed the construction of an integrated supply chain management framework to control risks [26]. There is still asymmetry in information in supply chain finance. Based on previous research perspectives, a game model was constructed for banks, core enterprises, and small and medium-sized enterprises. Qualitative and quantitative methods were used to examine the risk-taking situation of all parties in the game, providing effective solutions for exploring the sources of credit risk for small and medium-sized enterprises [27].

In the evaluation research of supply chain finance risks, relevant scholars construct indicators for evaluating supply chain finance risks from various dimensions. By analyzing the factors that affect risks in the supply chain and combining the 3C theory, namely character, capital, and capacity, a credit evaluation system for supply chain finance is constructed [28]. Based on the analysis of financing and risk characteristics in Jinan supply chain finance, factor analysis and logistic models are used to empirically study the risk level of enterprises. It is proposed to achieve diversified data collection, pay attention to the characteristics and stability of core enterprises, and enhance the monitoring and risk evaluation capabilities of commercial banks for enterprises in the supply chain [29]. In analyzing the credit risk of the SME board

listed on the Shenzhen Stock Exchange from 2014 to 2018, four criteria layers were selected, including applicant qualifications and counterparty qualifications, 14 secondary indicators such as accounts receivable characteristics and performance, and 127 tertiary indicators such as credit rating and guarantee status. A risk evaluation system for the entire chain was constructed [30]. In building a credit evaluation system for small and medium-sized enterprises, a combination of macro and micro factors should be followed, and appropriate indicator systems should be selected from different evaluation subjects.

4. Conclusions

In recent years, the academic community has paid increasing attention to the alleviation of financing constraints for small and medium-sized enterprises through supply chain finance. Starting from the issue of financing constraints for small and medium-sized enterprises, this article discusses the reasons for financing constraints and proposes solutions. It further analyzes the models for optimizing the financing environment for small and medium-sized enterprises through supply chain finance and provides a review of supply chain finance risks. The difficulty in financing for small and medium-sized enterprises is the driving force behind the emergence of supply chain finance, which has practical significance in opening up new perspectives for financing for small and medium-sized enterprises. The emergence of logistics finance has increased the attention of supply chain finance in the logistics end. Logistics finance provides a solution for financing small and medium-sized enterprises at a certain link in the chain, and the warehouse receipt pledge financing model in logistics finance has broken through the limitations of real estate for the first time. Through the review of existing literature, it has been found that there is still room for further improvement and development in related research: the definition of "supply chain" in the academic community has not been clearly unified, and the difference between it and the concept of "logistics finance" needs further improvement. Most definitions remain in the process operation of supply chain. Secondly, research has mainly focused on the development of supply chain finance with core enterprises, and there is still limited research on newly established "baby" enterprises and small and medium-sized enterprises that have just reached cooperation agreements. It is necessary to conduct detailed research on enterprises throughout the entire supply chain, and explore the financing relationships between enterprises with different borrowing and lending relationships at different stages, in order to provide reference and guidance in alleviating financing constraints for small and medium-sized enterprises.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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