Supply Chain Finance: Risk and Evaluation

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Abstract: This article starts from the financial innovation service product - fundamental mode of supply chain finance, explores the risk of supply chain finance for the purpose to establish the fundamental statistical indicators system to provide the foundation for evaluating risk of supply chain finance.

Keywords: Supply chain finance, mode, risk, evaluation.

1 Introduction

Since the 1990s, the market competition is no longer between the individual enterprises, but is the competition between the supply chains. The supply chain is a concept which refers to the complete process of circulation of commodities from raw materials, manufacturing to the sales. It includes the energy enterprises, the manufacture enterprises, commercial enterprises and so on. These enterprises have their own business modes, the suppliers and the retailing patterns as well as their derivative supply chains. Obviously the decentralized supply chain inevitably leads to decentralization of financial management and the financial resources. As a result, it is unable to control and integrate the various resources from the supply chain. Enhancing the efficiency of supplies chain will definitely result in request for optimizing the supply chain resources. It is only finance and the financial instruments that can play the role of integrating and optimizing supply chain resources. When goods are moving in the supply chain, cash flows are in motion simultaneously because flows of logistics and the cash flow are inseparable. There is inalienable relationship between finance and the logistics. The financial instruments can keep the static assets moving, but also reasonably allocate and restructure cash flow for related activities in the supply chain. Thus the issue of competition between supply chains and optimization of supply chain has turned into how to combine finance with supply chains. Therefore, analyzing the relationship between the supply chains and the cash flow has become a crucial question.

This article discusses the supply chain finance from three aspects: the fundamental mode of the supply chain finance and the radiation effect of improvement of the supply chain and the commercial bank performance, accompanying forms of risks and characteristics of the financial instruments while financial instruments help save the transaction cost of supply chains, property shift, creation liquidity and settlement, establishing the fundamental system of statistical indicators to appraise the risk of supply chain finance.

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2 Basic Mode of Supply Chain Finance

Supply chain finance is to provide financial services to all related businesses of both upstream and downstream industries as a whole. As a result, the supply chain-related enterprises receive financing support and grow rapidly, so as to solve the supply chain problem of uneven distribution of funds and upgrade the entire supply chain, even the whole industry's competitiveness. And the commercial banks providing the service of supply chain have also opened up their own business channel, and even dominate the chain of all relevant financial business enterprises. This innovative model has brought dramatic improvement in the rationalization of allocating resources and performance to the banks and enterprises on the supply chain. For example in 2006, Shenzhen Development Bank integrated resources and provided such financial services as RMB, foreign currencies and integrative off and on shore financial services in full-chain to chain-oriented industries. Trade financing customers and business volume both had the 50% growth, and that year the total amount of finance was up to 300 billion , at the same time their ratio of non-performing loans kept below 1 percent, and the overall ratios of non-performing loans were only 0.4%.In the process, business cash flow has been ensured, then doubled sales growth, such as Yongan corporation in Chongqing, cooperated with Shenzhen Development Bank for three years, their sales increased from 600 million yuan to 2.5 billion.

Despite the Shenzhen Development Bank, Shanghai Pudong Development Bank, Minsheng Bank , Industrial and Commercial Bank of China have their respective supply chain finance programs, but their basic pattern is the same: it is a financial service that, with well-known large-scale manufacturing enterprises as the core, makes full use of the core upstream and downstream businesses and fixed commercial relations, upward extension of the upstream and downstream enterprises and radiation . This kind of upstream and downstream business relationships arising from logistics and cash flow has helped remove the obstacles in the logistics through improvements in cash flow, thus greatly increasing performance in banks and the supply chain. So it is a comparison between the basic model of supply chain in finance and the traditional model

Tt can be found that in traditional model, the relation-

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ship between banking and supply chain is that the dominant core enterprises take advantage of its strong position to demand for delivery of raw material suppliers before payments while they request payment before delivery of goods from wholesalers and retailers. There are many critical terms from these core enterprises in trading process of delivery, pricing, accounting from the upstream and downstream enterprises, thereby causing tremendous pressure on these enterprises. However the upstream and downstream enterprises are always small and medium-sized enterprises. Therefore it is difficulty to finance from banks. At a result it is very tense for funding chain, causing an imbalance in the whole supply chain. The core businesses with larger-scale and stronger competitiveness give more pressure on the funds for upstream and downstream enterprises, and these upstream and downstream enterprises are being affected by the limitations of all kinds of resources and small-scale and difficult to negotiate with their respective banks individually to require financing, let alone the preferential loan. Therefore, the reasons for financing difficulties of those small and medium-sized enterprises are not necessarily in the enterprises themselves, because the chain's core business have occupied capital and credit of upstream and downstream small and medium-sized enterprises. But often the value of its inventory and accounts receivable from these enterprises is about 1.5 times of the value of its real estate. If these enterprises inventory and accounts receivable can be made move around, it will solve the problem of supply chain cash flow and expand the profit for banks, thus giving rise to the concept of supply chain finance.

The basic pattern of supply chain finance is that the bank providing comprehensive financial services to an industry through a single enterprise or a number of upstream and downstream enterprises in the supply chain in order to promote the core upstream and downstream enterprises and supporting enterprise "production - for - sell "the chain of solid and flow smoothly, and through financial capital to collaborate with the industrial economy, thus building eco-industries among banks, enterprises and commodity supply chain to achieve mutually beneficial co-existence and sustainable development. Because 80% of enterprises in China on supply chain are SMEs, with the shortage of funds, small and medium-sized enterprises are not only the main target to demand support from supply chain finance but also the important entry for banks to break into the industrial chain.

For example, Guangzhou Branch of Shenzhen Development Bank has found from their observation that the suppliers of energy industry generally do not have fixed assets, but have adequate accounts receivable. The staff customized a financing solution to solve these enterprises shortage of cash: pledging accounts receivable to the bank financing. This approach allows a large number of dealers flock to Shenzhen Development Bank because these suppliers are not only the suppliers of the power corporations, but also the suppliers of oil refineries, which also use the funds of suppliers. Having established the long-term credit relations with many suppliers, Shenzhen Development Bank along with many suppliers have negotiated with the refineries to raise funds, taking the refineries as the center and providing financing loans to their raw materials supplies and imported enterprises or to the distributors selling gasoline, diesel, PVC series of petrochemical products. After this, Shenzhen Development Bank and millions of distributors negotiated with the domestic energy giants such as Petrol China, Sinopec, CNOOC and so on. Then setting up finance system with these corporations throughout the country, Shenzhen Development Bank has become a dominant bank in the energy field

Nowadays, there are many financial service products in Shenzhen Development Bank, such as short-term loans, Banks Acceptance, Commercial acceptance bill discounting and other products. For specific customer, they also developed a business vote discounting and management, export credit insurance financial products of the extension and expansion of supply chain finance model. It not only helps domestic bank solve the long-term financing problems of small and medium enterprises, but also provides a great deal of new business opportunities for banks.

3 The Risk And Evaluation Of Supply Chain Finance

It can be seen from the basic model of supply chain finance that the effect of such a mode of financing is the concentration of more financial resources toward those core groups of enterprises. In practice, the domestic banks will usually enlarge the credit of core business by 10% -20% to develop more business through greater credit support to enterprises in the supply chain. This results in a series of practical problems. First, if this core group companies have business links with 10 banks and each bank provides similar credit support, the credit for those companies will be invisibly expanded by 100% -200%; however, enterprise whether its strength and capacity can support such a huge credit growth is still in doubt? Second, how do the banks supervise risks from the tremendous growth in credit? Third, given the lower degree of information technology in China, how to review and evaluate authenticity of the large number of trade documents? Fourth, how to guard against and prevent the financial risks and moral risk? Risks of financial supply chain will be analyzed below to tackle these problems.

First, the core corporations didn't have an adequate understanding of the risks. Because assets management in large groups in Chinese has often been neglected, many groups cannot distinguish between assets management department and investment department. With the lack of assets management rules as well as the shortage of appropriate professional staff, not enough attention has been paid to supply chain risk. The financial system in groups, because of their less sensitivity to market and their shortage of rational management system, has brought a lot of financial risks. Assets management of supply chain has caused operating difficulties or bankruptcy to several domestic companies. Once the finance chain of the core enterprises break down, it will bring disaster to the whole supply chain finance.

Second, the credit environment is complex. The credit situation in China is very serious. It is not rare to find the credit is not honored. For example, the debtors dare to borrow and use the large number of money, even dare not to return, a few enterprises owed enrichment and performance to justified arrears, there are lots of phenomena that scraping debts are paid, deadbeats are meritorious and refused paying debts is justified. International letter of credit is used to guarantee international trade, but there is no such domestic letter of credit in domestic trade. The bill settlement of accounts is mostly used in domestic trade. Administrative regulations on domestic letters of credit were announced in 1997, which has not been renewed within 10 years. There is less feasible pattern for RMB letter of credit in procedure where deposits and withdrawals are processed at any branch bank. The domestic trade settlement lacks consistent guarantee that can be circulated and accepted by all sides, which contributes to the risk in supply chain finance transaction and the operation.

Third, the process and recognition of property rights are complicated and confused. In China , there is lack of uniform standards in transportation and warehousing norms, and many property rights cases appeared frequently in transaction. The way that Chinese current legislation and the nomology deal with such cases is quite confused. It usually uses contract approach, but the contract is only the evidence of changes in debts, and it is not effective enough to bear evidence to illustrate the effect of changes in property rights occurred in circulation. Because it is difficult to obtain the corresponding guarantee, the banks can hardly exercise control over the property rights process, resulting in vulnerabilities inherent in supply chain management of financial risks.

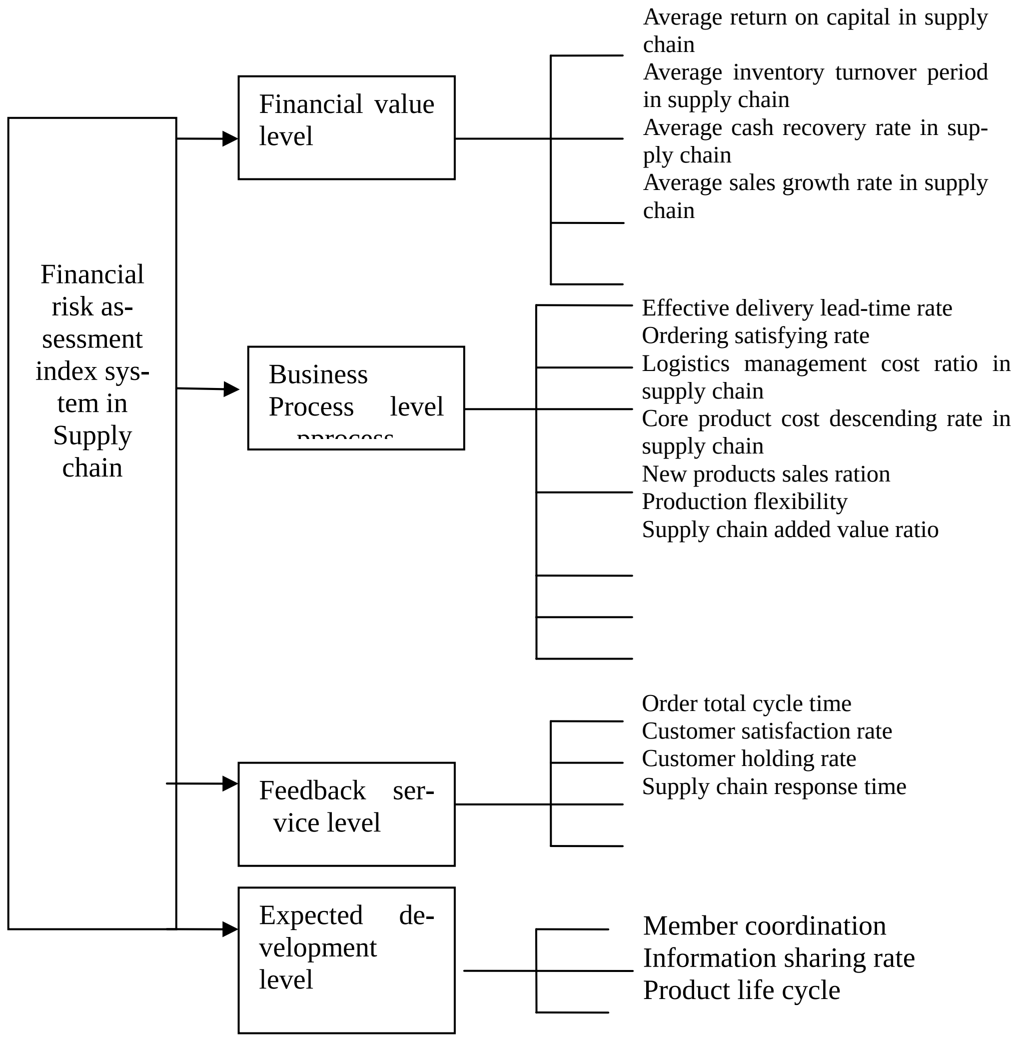

Figure 1 The framework of risk assessment index system

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Based on the above analysis, in order to prevent possible risks, the key is to establish a national credit management system and improve the formulation of standardization of financial instruments in trading process. Prior to that, it is necessary to establish a relatively unified index system of risk assessment framework through which the supply chain finance, business processes, business prospects and other supply chain information can be reflected , which can serve as a basis for financial risk assessment. As the supply chain enterprises involve production, circulation, re-entry into the next production and circulation enterprises, and connect to the wholesale, retail and end-user. It is a process of social reproduction, but also a social process of re-circulation; it is enterprises from the purchase of raw materials, through the production, manufacture, sales to end-users to the entire process. Therefore, the evaluation of supply chain financial risk does not lie in the existence of small and medium-sized non-performing assets hidden dangers, but in the possibility of closing the transaction and the future assessment of the expected return in the whole supply chain. That is, transaction risk in the supply chain contributes to financial risks in supply chain. Figure 1 the risk assessment index system framework. The statistical indicators is established, from such four aspects as finance, supply chain business processes, customer feedback of supply chain and expected supply chain development, to detect the transaction flow in the manufacturing process in supply chain and current and future situation of funding chain of its owners or investors to provide the information about the possible financial risk, thus paving the way for establishing standard financial instruments in trading procedure.

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