

Application of Industry Chain Theory in the Financial Services of Small and Medium-sized Enterprises

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Abstract. Industry chain theory is one of the basic tools in industrial research, finance directly acts on various industries and their internal enterprises through establishment of the overall financial model of the industrial chain, which can effectively solve the problem of insufficient financial services for small and medium-sized enterprises within the industry, it is of great significance for promoting the development of small and medium-sized enterprises, balancing the economic structure, and expanding the bank's asset business.

Keywords: industrial chain; industrial chain finance; finance of small and medium-sized enterprises.

1. Introduction

In recent years, domestic financial reforms have made profound changes in the bank's operating mechanism and business emphasis. Many banks have made great efforts to expand the financial business of small and medium-sized enterprises (SMEs). However, it is difficult to achieve a balance between expanding businesses and controlling risks in practice, the problem of insufficient financing for SMEs has not been fundamentally solved. SMEs tend to focus on the development of large-scale enterprises in the industrial chain, according to this basic situation, this paper proposes to apply the industrial chain theory in the financial services of SMEs, establishes the financial model industrial chain, and effectively promotes the development of financial services for SMEs.

2. The Industrial Chain Theory and its Theoretical Significance for Financial Business

The industrial chain theory is carried out with the enterprise division of labor and value distribution. Generally speaking, as the division of labor within the industry continues to develop deeply, different types of value creation activities within the traditional industry are gradually dominated by one enterprise separated into activities of multiple enterprises, these enterprises constitute upstream and downstream relationships and create value together. The industrial chain is composed of a series of interdependent upstream and downstream chains involved in serving a specific demand or producing specific products (and providing services).

The intrinsic value creation is the core interpretation of the industry chain theory. The industrial chain is more reflected in the value creation process, which is basically equivalent to the definition of the industrial value chain. American economist Michael Porter is the creator of this interpretation. He believes that every enterprise is a collection of mutually separate activities for designing, producing, marketing, delivering, etc., and supporting the product, that is to say, the value chain of any enterprise is composed of a series of interconnected value-creating activities, these activities are distributed at every link from the acquisition of suppliers' raw materials and the service of the final product consumption, these links are interrelated and mutually influential. The related industrial links analyzed by Porter are actually the industrial chain, but he uses the value main line. Porter points out that the enterprise value chain does not exist in isolation, but exists in the value chain system consisting of the supplier value chain, the enterprise value chain, the channel value chain and the buyer value chain. Porter also points out that the characteristics of the industrial value chain are mainly reflected in the following aspects: (1) the various components that constitute the industrial value chain are an organic whole, they are mutually interactive, restricted and interdependent, there is a large amount of exchanges in information, material and funds between (links) in upstream industries (links) and downstream industries, which is a process of value transfer, (2) Each link of the

industrial value chain is technically related and technically hierarchical, (3) there is a difference between the increase and the profit level in each link of the industrial value chain, (4) there is a difference in the demand for factor conditions in each link of the industrial value chain.

Another interpretation of the industry chain is from external products and the division of labor process. In this theory, economists generally define the broad industrial chain as based on the Intra-industry division of labor and the relationship between supply and demand, this network system is composed of a number of enterprises as large nodes and products as small nodes vertically and horizontally. The vertical relationship of the industrial chain refers to the division of labor in the upper, middle and lower of the industry and the horizontal relationship refers to the service cooperation and support of the industry. In the vertical supply and demand chain and horizontal cooperation chain of the industry, the vertical supply and demand chain is the core of the industrial chain. According to this feature, some economists describe the industrial chain as a path in which one or several resources are continuously transferred to downstream industries through a number of industrial levels until they reach consumers. They pointed out that the industrial chain has four meanings: the industrial chain is the expression of the industrial level; the industrial chain is the expression of industrial correlation, the stronger the industrial correlation, the tighter the chain, the higher the efficiency of resource allocation; Industry chain is the expression of resource processing depth, the longer the industrial chain, the deeper processing depth can be achieved; the industrial chain is the expression to meet the demand level.

No matter from which angle to explain the industrial chain, the importance of the industrial chain is unquestioned, its theoretical and practical significance for commercial banking financial business is mainly:

1. Industry selection when banks conduct asset business. A mature industry will inevitably form a complete industrial chain, and each link in the industrial chain will form a stable division of labor and cooperation. The clearer the division of labor, the clearer the responsibilities, and the more people can do the work deeper, and the overall coordinative advantages of the industrial chain can also be brought to the extreme. This kind of industry is also suitable for banking business do deeply and carefully, and the overall risk is low.

2. The customer group selection when the bank conducts SMEs financial business. The industrial chain is connected and constructed by value. The large-scale backbone enterprises often at the core position of the value, the SMEs that live around large enterprises will certainly be able to share their value, if the financial business of SMEs can be developed around this clue, the customer groups of the financial business will have a clear vein, and also have higher returns and lower risks.

3. The risk control when the bank conducts asset business. In the industrial chain of various industries, there is an industrial chain transmission process in the industry boom, which is transmitted from the downstream industry to the upstream industry. In industries with high prosperity, their upstream industries will also enter into the booming stage; if the downstream industries are surplus, the upstream industries will also face excess industries. The economic impact of various economic policies and external factors are also reflected in the different industries and enterprises in different positions in the industrial chain. Understanding and analyzing this point is also of significance for banks to analyze and diversify credit risk.

3. Rely on the Industrial Chain and Promote Financial Innovation of SMEs

(1) The significance of developing SMEs finance and the contradiction of the operating characteristics of SMEs

The development of SMEs financial business has two important significances; one is the expansion and development needs of commercial banks' own assets; the other is the need for optimization of social and economic structure and balance.

At present, there are contradictions in the traditional asset business of China's commercial banks, it is necessary to develop SMEs finance: 1, lending impulses and customer structure under the excess liquidity of commercial banks are unreasonable. Among the household savings deposits in China,

high-cost fixed-term liabilities and wealth management deposits have grown rapidly, at the same time, some listed banks face the pressure of shareholder returns after the expansion of capital, which has promoted the lending impulse of commercial banks. However, the customer structure of the commercial bank's asset business is unreasonable, most banks concentrate on a small number of industries and enterprises with high returns, resulting in a high concentration of loans, the proportion of credit in individual industries and large enterprises is too large, which has caused the bank's "debt capture", the risk of large lending and lending monopoly increases.² The phenomenon of "financial disintermediation" of large enterprises has intensified, and bank asset business has been increasingly affected. The impact of the capital market is inevitable; especially high-quality large clients conduct direct financing in large quantities through short-term financing bonds and other instruments. After the Central Bank promulgated the "Management Methods for the Short-term Financing", large-scale enterprises have loosely issued conditions, lower interest rates, and the speed of enterprise issuance significantly increases. After the bond financing was issued by these enterprises, a large number of bank loans were returned, which narrowed the commercial bank's expansion space for asset business of large enterprises. It can be seen that China's commercial banks are facing the above contradictions, and the development of financial services for SMEs will become a trend, which is the need of commercial banks' own business.

On the other hand, SMEs are of great significance for the optimization and balance of social and economic structures. American economist Bain has pointed out: in most industries, enterprises that reach economic scale are the main force of the market, for example, 70% of the 20 industries in the US, such as automobile, cement, food and steel, 90% of the products are produced by enterprises with economic scale, but in most industries, there are also a number of non-economic-scale SMEs, these enterprises are flexible and unique, and do not withdraw from the market, they are still of great significance to the integrity of the industrial chain and economic development. If an industry over-economically concentrates on various types of resources (including financial resources), in fact, it will actually reduce the efficiency of the scale structure of the industry. It can be seen that SMEs have at least the following important functions: 1. SMEs can balance the organizational structure within the industry, effectively activate the market, maintain the overall competitive environment of the industry, and adjust the structure of the national economy. 2. SMEs are of great significance to social employment. For a country with a large population like China, the development of SMEs is a practical way to solve the employment of the labor force. 3. SMEs have also gathered a lot of innovative enterprises, which are of great significance to industrial technology advancement and industrial development.

Many countries abroad pay attention to this point. For example, Japan has always attached importance to the support of SMEs to enhance the competitiveness of SMEs. From the early postwar period to the mid-1950s, Japan adopted a large number of financial and organizational policies to promote SMEs. For example, in 1949, the "National Financial Public Library" for the purpose of lending to small businesses was established, and the "Cooperative Combination Law for Small and Medium Enterprises" was enacted, in 1953, the "SMEs Financial Public Library" was established for the purpose of long-term loans, the "Credit Guarantee Association Law" was formulated and so on.

Although SMEs are very important, with respect to China's situation, SMEs loans are generally very difficult, mainly because SMEs in China often have some defects in their own operation characteristics. These characteristics are in contradiction with the development of SMEs financial business, which limits the expansion of asset business of commercial banks. One is that SMEs are not financially standard and their financial strength is weak, which makes it difficult to pass the banks' rating system, the other is that SMEs generally have less real estate, the collateral is often insufficient, and it is more difficult to obtain traditional loans. In addition, there are also irregularities in the management of SMEs; it is not easy for financial institutions to have a sense of identity.

The above contradictions have caused financial products and business models of commercial banks suitable for SMEs to be seriously inadequate. It does not only directly affect the sustainable development of China's bank asset business, but also affects the development of industry and economy. The real solution only depends on the business innovation of commercial banks.

Commercial banks should take the initiative to improve their risk-taking ability through innovation, adjust their product structure in market competition, and rationally arrange their own risk-return ratio relationship.

This paper believes that for the characteristics of SMEs around the survival of large enterprises, banks can analyze the internal economic relations of the industry, strengthen the research on loan investment, and make full use of the principles of the industrial chain to carry out asset business innovation.

(2) Definition and practical application of industrial chain finance

This paper defines the concept of industrial chain finance as follows: industrial chain finance is: Financial institutions lend to enterprises at the core of the industry through the development of large-scale core loan enterprises, develop credit business for upstream and downstream SMEs around core enterprises, and provide intermediate services, and form a financial business model of the industry loan chain or service chain. This financing model jumps out of the traditional limitations of individual enterprises, stands in the overall situation and height of the industrial chain or supply chain, suits the industrial economy, provides financial services, and well adapts to the trend of industrial competition upgrading and collaborative competition. It does not only avoid the long-standing problems of SMEs financing, but also extends the deep service of banks, which is unique in solving the financing problems of SMEs, especially trade-oriented SMEs.

Another background of industrial chain finance with practical operability is that the core chain in the middle of the industry chain is the supply chain, in recent years; the development of industrial economy has shifted from the competition in enterprises to the competition in supply chains, and SMEs can be better served by conducting financial business around the supply chain. Generally speaking, the supply chain of a particular commodity from the purchase of raw materials to the production of intermediate and final products, it is ultimately sent to the consumer by the sales network, suppliers, manufacturers, distributors, retailers, to end users are connected into a whole. In this supply chain, core enterprises with strong competitiveness and large scale often have strict requirements for upstream and downstream supporting enterprises in delivery, price, and payment days due to their strong position, thus causing huge pressure to these enterprises. The upstream and downstream supporting enterprises are mostly SMEs, which are difficult to finance from banks, as a result, the capital chain is very tight and the entire supply chain is out of balance. Effectively injecting funds into the relatively weak upstream and downstream supporting SMEs, which can solve the problem of financing difficulties and supply chain imbalances of SMEs, and integrates bank credit into the purchase and sale of upstream and downstream enterprises, enhances their commercial credit, and promote SMEs and cores enterprises to establish long-term strategic cooperative relation and enhances the competitiveness of the supply chain. Therefore, industrial chain finance can derive from various forms such as supply chain finance and trade chain finance. Industrial chain finance has the following characteristics and advantages:

1. Industry chain finance is a new mode of asset business of traditional commercial banks, under this financing mode, banks and enterprises can achieve a win-win situation. At present, the financial business field has just begun to try industrial chain financial services. Relying on the analysis of industrial chain, innovation and promotion of commercial banks' industrial chain finance for SMEs can not only promote the innovation of commercial banks' asset business, but also enhance the industrial service function. It makes commercial banks to cut into the industrial chain vertically to ensure the security of credit assets, reduces the scale of receivables and payments of upstream and downstream enterprises, and improve the turnover rate of enterprises, which not only promotes the healthy development of the industry, but also improves the quality of loans for SMEs. Once the enterprises in the chain get the support of the bank, the funds are injected into the supporting enterprises, and it means that they have entered into the industrial chain, which can activate the operation of the entire "chai", by providing funds, credit, and services into the chain, banks not only effectively solve the financing problems of SMEs, but also promote the effective interaction between finance and industry.

2. Industry chain finance is the innovation of credit culture of financial enterprises. This kind of financial model prompts banks to jump out of the limitation of individual enterprises, investigates the development of industrial economy from a broader perspective, from the focus on statics to the dynamic tracking of business operations, which will fundamentally change the perspective, credit culture and development strategy of the banking industry. This kind of financing concept is called "1+N" mode in some commercial banks, it connects large enterprise customers with its many upstream and downstream SMEs, and expand the business and reduce risks through the overall service of enterprises in the industry chain. For example, Guangzhou Branch of Shenzhen Development Bank Co., Ltd., Based on the fact that the Chinese oil market is mainly concentrated in the Pearl River Delta, first of all, the oil product business was carried out, and then its model was copied to the distribution fields of coal, steel and electric power. Its discounted bills account for 80% of the business volume in the energy industry in Guangdong. The bank is positioned as trade finance professional with certain industry finance as its distinctive industry management characteristics.

3. The innovation and expansion of industrial chain finance has also brought a broad business space for commercial banks of small and medium-sized city. Mega-commercial banks generally focus on marketing of large enterprises that do not need loans, and lack the incentive to lend to ordinary SMEs. For many commercial banks of small and medium-sized city, the large-scale joint restructuring is a way to compete with big banks; however, scale expansion is not the only option for the future development of Chinese city commercial banks, they can be positioned in chain finance service providers of urban small and medium-sized private enterprise, through strengthening wholesale loans to private enterprises, carry out comprehensive credit financial services for the private enterprise industry chain, and use flexible business methods and accurate information channels to do characteristic business. This not only meets the needs of industrial development, but also seeks funding channels under the premise of controlling risks. In addition to banks, financial institutions such as securities, trusts, and guarantees should also be included in the industrial financial chain, the good development of this business is also conducive to the development of a city as an industrial financial center.

4. Industrial chain finance is a favorable way to solve the risks of financial business in different places. The People's Bank of China has increasingly loosened the regulation of off-site finance; commercial banks generally have a large number of off-site businesses, especially banks with large difference between deposits and loans, the implementation of off-site financial services is a realistic breakthrough. However, the difficulty in controlling off-site financial risks has always been a problem, and the improvement of industrial financial chain can make up for this deficiency, since off-site enterprises belong to the industrial chain affiliates of local enterprises, they can control risks from the perspective of information. Local governments generally attach importance to the improvement of the industrial chain, including moderately heavy industrialization, provides opportunities for local financial institutions to play their financial functions and strengthen themselves. Following the extension of the local enterprise industry chain, innovative industrial chain financial services can make financial institutions active in national markets and even international markets.

5. Industry chain finance can generate a lot of new products and services related finance, which not only enriches the business of the financial sector, enhances business security, and it is conducive to provide multi-faceted financial services for industrial development. In the solution of foreign trade funds, we can also use the industrial chain principle to innovate many new products, such as supply chain finance, trade chain finance, and so on. Shanghai Pudong Development Bank recently launched two new financial services for import and export enterprises, namely "Enterprise Supply Chain Financing Solution" and "Offshore Customer Service Solution", these two solutions are integrated in the brand of "Pufa Chuangfu", it covers online account management, buyer support, supplier support, regional corporate trade finance, ship export services, and engineering contracting credit support and so on.

6. This business has driven the bank's new risk assessment technology. In the past, banks' judgments on risk mainly focused on static financial data of individual enterprises, SMEs often have disadvantages in transparency of financial information. In supply chain finance, banks are concerned

about the risks of the entire supply chain transaction, the assessment of risk is more to evaluate the transaction, which not only truly assesses the real risk of the business, but also make more SMEs enter into the scope of services of banks. For example, Shenzhen Development Bank has set up a special risk management method for supply chain finance; the core feature is to combine the subject rating and loan rating into one. Even if an enterprise does not meet the standards of the bank, as long as the bank has control over the flow and capital flow of this business, it can be financed, thus avoiding the financing obstacles of SMEs in the disclosure of information and finance.

The measurement of financial indicators is less in the risk assessment, and the upstream credit, the price trend involved commodities, the control ability of the transaction process, and the past transaction records of the enterprise have become the key point of the assessment. This practice can be said to have undergone fundamental changes in the risk management system. According to the statistics of Shenzhen Development Bank, the bank's total investment in supply chain trade financing is more than 250 billion yuan, and accumulated more than 10,000 SMEs to achieve business growth. The supply chain financial business maintained a good asset quality, taking the cargo escrow business as an example; the non-performing rate was controlled within 0.5% since the start of the business.

Although the financial model of industrial chain has many advantages, when carrying out this business in a healthy and orderly manner, it is an important prerequisite for the bank to must have talents who are familiar with the urban industry and the industrial chain. Therefore, banks that attach importance to financial business of industrial chain must strengthen their work in the following aspects: 1. banks not only need more than financial professionals, but also it is necessary to introduce talents with practical experience in enterprises, these people can truly familiarize themselves with the internal conditions of the industry and help the choice of industry and small and medium customer groups, 2. strengthen training and promote the construction of bank credit culture. An excellent credit culture is that banks should pay attention to both large enterprises and small and medium-sized enterprises; value the financial and fundamental analysis of customers, carry out value and risk judgment through the position of customers in the overall industry chain, 3, strengthen the construction of modern information means. The financial service development of SMEs can be effectively guaranteed through the construction of SMEs credit database, etc.,

References

- [1]. Cohn, R. and Coleman, S. 2000, Small firms' use of financial leverage: Evidence from the 1993 National Survey of Small Business Finance, *Journal of Business and Entrepreneurship*.
- [2]. Korajczyk, P. A. and Levy, A. 2003, Capital Structure Choice: Macroeconomic Conditions and Financial Constraints, *Journal of Financial Economics*.
- [3]. Huang, G. H. and Song, F. M, 2006, The Determinants of Capital Structure: Evidence from China, *China Economic Review*.