

Optimize Financial Supply to Promote the Transformation and Upgrading of the Manufacturing Industry

--Take Jiangsu Province as an Example

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Abstract

Due to the characteristics of advanced manufacturing industry itself, its demand for financing is often difficult to be met. The current global promotion of the fourth industrial revolution and the impact of Covid-19 have further put forward brand-new requirements for financial supply. Based on in-depth interviews with some manufacturing enterprises and financial institutions in Jiangsu Province, this paper analyzed the development pattern and financing status of the manufacturing industry so as to explore the new characteristics of its demand for finance and the limitations of financial supply. Applying related economic theories, we further explored the countermeasures to optimize the financial supply in order to promote the transformation and upgrading of traditional manufacturing industry.

Keywords

Financial Supply; Manufacturing Industry; Financing Difficulties; Jiangsu Province.

1. Introduction

Since the 18th National Congress of the Communist Party of China(CPC), Jiangsu Province has attached great importance to the development of the substantial economy and introduced a series of policies and measures to promote the manufacturing industry so as to achieve the transformation from quality to quantity. Such as Provincial Government's Opinions on Further Strengthening the Technological Transformation of Enterprises (2013), Provincial Government's Opinions on Financial Support for the Development of Manufacturing Industry (2016), Provincial Government's Opinions on Accelerating the Development of Advanced (2017). At the end of 2020, it proposed a three-year action plan of industrial chain strengthening to optimize the layout of industrial chain structure and enhance the level of industrial chain intelligence. These initiatives of Jiangsu Province are committed to improving the security, stability and competitiveness of the supply chain and even the whole industrial chain so as to accelerate the cultivation of manufacturing clusters with better economies of scale, with a view to achieving High-quality and healthy development of the manufacturing industry and building a more solid and reliable pillar of industry for Jiangsu Province. It can be said that the high quality development of Jiangsu economy is inseparable from the contribution of high quality development of manufacturing industry.

Nowadays, digital economy empowers real economy. Financial supply is more closely related to the transformation and upgrading of manufacturing industry. How the financial service industry can support the supply-side structural reform of manufacturing industry and how to increase credit investment in manufacturing industry effectively, so as to support the transformation of traditional manufacturing industry to advanced manufacturing industry is a valuable question.

2. The Financial Reform and High-quality Development of Manufacturing Industry Promote Each Other

2.1. Financial Support for the Restructuring and Upgrading of the Manufacturing Industry has been Effective

The financial industry is responsible for supporting the transformation and upgrading of traditional manufacturing industries as well as the development of advanced manufacturing industries. On one hand, the financial industry should return to its origin and give full play to its role in serving the real economy; on the other hand, it is to assume social responsibility, reduce the burden for enterprises and help promote the High-quality development of manufacturing industries in Jiangsu. To this end, Jiangsu has introduced a series of guidelines and policies. And these methods reaped better results.

2.1.1. Moderate Growth in Total Manufacturing Credit

Jiangsu Province takes promoting the development of manufacturing industry as the center of financial work. It maintains reasonable and stable growth of credit for manufacturing industry while continuously innovating financial products and services in order to provide sufficient financial support for the transformation of manufacturing industry.

According to the statistical yearbook of Jiangsu Provincial Bureau for the past ten years, the year-end balance of financial institutions in the province for manufacturing loans showed a trend of steady growth year by year. Last year, in the face of the impact of the Covid-19, Jiangsu Province continued to make efforts in financial services for the real economy. The year-end balance of whole financing for manufacturing in banking financial institutions was 2.85 trillion yuan, an increase of 493.3 billion yuan from the beginning of the year. The growth rate was 20.92%.

Especially in early 2020, the prefecture-level cities in Jiangsu Province actively responded to the decision and deployment at the provincial level to face the economic downturn and the lack of liquidity. The government further strengthens the financial industry's support and service guarantee for the manufacturing industry. For example, Nantong City put forward "12 policy opinions" in early 2020, following the principle of "one enterprise, one policy" to make service plans so as to match the financing needs of manufacturing enterprises more accurately.

2.1.2. Effective Reduction of Manufacturing Financing Costs

Jiangsu Province has introduced a series of measures to reduce the comprehensive financing costs of manufacturing enterprises. Firstly, it optimizes the financing support mechanism and focuses on the integration of advantageous resources in all aspects. Constructing province's financial services platform to optimize the credit system which plays a great role in reducing the information asymmetry between banks and enterprises. Secondly, it improves the emergency on-lending mechanism to guide state-owned, social capital to establish an on-lending fund. Provincial Department of Finance provides a maximum of 3 ‰ of risk compensation funds for loans issued by them below 5 million yuan on a quarterly basis. Thirdly, it establishes a credit Risk-sharing mechanism. Establish a provincial financing guarantee compensation pool which is based on national financing guarantee fund. Moreover, supply it with dynamic compensation, to increase the guarantee of the manufacturing industry, thereby improving the success rate of manufacturing enterprises to apply for loans.

These proactive policies to reduce costs achieve a better "cost reduction" result. The financing costs continue to fall in 2020. The province's average interest rate for manufacturing loans was reduced to 4.19%, including the average interest rate of 3.78% for loans from branches of the banking industry.

2.2. High-quality Development of Manufacturing Industry Lays the Foundation for Stable and Healthy Financial Development

The High-quality development of manufacturing industry has been an important carrier for the economic development in Jiangsu Province. Jiangsu Province has always attached great importance to the conversion of old and new developing dynamics of manufacturing industry, and strives to cultivate new developing dynamics in order to convert and upgrade this industry. Jiangsu Province apply the increment of advanced manufacturing industry to hedge against the decline of traditional manufacturing industry, so as to achieve a smooth transformation of manufacturing industry. In the past few years, Jiangsu Province has deepened the implementation of the Made in China 2025 Jiangsu Action Plan. It has making breakthroughs in fifteen key areas such as intelligent manufacturing equipment, new power equipment and new energy to promoted the deep integration of modern information technology and manufacturing industry so that the transformation of "Made in Jiangsu" to "Made in Jiangsu" can be realized. In 2020, the main development indexes of Jiangsu advanced manufacturing industry are better than the national average, and the financing demand is richer than other provinces.

According to Made in China 2025 Jiangsu Action Plan, the manufacturing structure of Jiangsu Province will be continuously optimized from 2015 to 2025, and the output value of strategic new industries will increase from 29% of the manufacturing industry in 2015 to 38% in 2025. According to the relevant data from the National Bureau of Statistics and Jiangsu Provincial Bureau of Statistics, the DGP of Jiangsu Province was 10.27 trillion in 2020, second only to Guangdong's 11.07 trillion. Among them, the output value of strategic emerging industries and high-tech manufacturing industries accounted for 37.8% and 46.5% of the above-scale industries respectively, an increase of 5.0% and 2.1% over 2019. By the end of 2020, there will be more than 10,000 high-tech above-scale enterprises in Jiangsu Province. Although their number only accounts for 26.9% of the province's industrial above-scale enterprises, their output value, profit, and high-tech industry output value, respectively, reach 38.3%, 50.0%, and 68.7%. During the same period, the financial institutions in Jiangsu Province have also achieved a certain growth in domestic and foreign currency credit. By the end of 2020, the balance of medium and long-term loans to manufacturing industries in Jiangsu Province was 557.1 billion yuan, representing an increase of 39.73% over the beginning of the year. What's more it accounting for 25.06% of manufacturing loans, up 4.54 percentage points from 2019.

3. The New Trend of Financial Demand and Financing Dilemma of Jiangsu in Manufacturing Transformation and Upgrading

3.1. Deepening Industry Segmentation, Differentiated Financial Needs are Increasingly Prominent

In deepening the spatial layout of advanced manufacturing industry, Jiangsu divides the manufacturing space into "two belts and two regions" according to the advantages of resources and industrial base. Take Yangzhou's along-river economic belt as an example. It is based on the strength of science and education reserve. The along-river economic belt takes high-end information technology, cutting-edge new materials, integrated circuits and other strategic emerging industries as breakthroughs and the transformation of innovation achievements as entry points to accelerates the cultivation of new kinetic energy, renovates and upgrades old kinetic energy so as to supports the smooth transformation of new and old kinetic energy. However, with the continuous development of advanced manufacturing industries, the variety of high-end manufacturing industries has increased, the industry segmentation has deepened, as a result, the products of these industries have shown a trend of differentiation. Its personalized demand for financial supply is also increasingly prominent, which puts forward new requirements for financial resource allocation.

In general, the services of Jiangsu financial market for advanced manufacturing enterprises, especially small and medium-sized enterprises, are generally in the initial stage. And relatively single product structure is the problem to be solved. From the perspective of enterprises, the dilution effect is also an important factor to be considered in addition to financing cost for manufacturing enterprises to ensure the core team's control over long-term strategic decisions. The current capital market investment for small and medium-sized enterprises is mainly limited to equity investment, while in fact the combination of equity and debt products may be more suitable for the development of such enterprises. From the perspective of investors, its input and output patterns have changed with the transformation and upgrading of the manufacturing industry. However, the richness of existing investment products can hardly match the diversity of their risk characteristics, so that how to match venture capital funds more effectively becomes a problem.

3.2. Credit Requirements have Increased, and Information Asymmetry Restricts the Matching of Financial Supply and Demand

Through in-depth interviews with credit principal of local commercial banks, it is not difficult to find out that the credit system is an important factor that restricts the transformation and upgrading of manufacturing industry. With the transformation of traditional manufacturing industry, the credit system needs to keep pace with the times to meet the needs of market development. Credit collection, investigation and assessment tools need to be further optimized. Take information collection channels as an example, the current collection of enterprise information by commercial banks is relatively scattered and lacks a more scientific and perfect way for effective integration. The credit information currently comes from the database of the local government. However, the database also has some drawbacks. For example, the information coverage is not comprehensive and the percentage of loan enterprises is not high. This directly leads to the phenomenon of information asymmetry between manufacturing enterprises and financial service institutions.

According to the results of in-depth research, the current information asymmetry between manufacturing enterprises and financial service institutions exists simultaneously. From the perspective of financial service institutions, commercial banks generally have difficulty in having a more comprehensive understanding of the company characteristics development stage and risk bearing capacity of new manufacturing industries by the limit of current credit information. The most prominent one is that the credit departments of commercial banks are generally worried about the acceptance of innovative downstream products of new manufacturing industries. Coupled with the characteristics of the capital structure of the new manufacturing industry, it is relatively even more difficult for commercial banks to accurately estimate its debt servicing capacity. Commercial banks can only control the capital risk by raising the financing threshold and making the pre-credit approval process stricter. This has greatly increased the difficulty of financing for new manufacturing industries. In addition, the inadequate information of manufacturing industry will also indirectly hinder the landing of innovative financial products of commercial banks, in order to inhibiting the diversity of credit financial products to a certain extent. From the perspective of manufacturing enterprises, they lack cognitive channels for the loan products of financial service institutions, especially innovative products, so that it is difficult for them to choose the product which is best for them. According to the research, most of the manufacturing enterprises that succeed in loan financing passively accept the products recommended by commercial banks. However, this is not always the best choice of financing for manufacturing enterprises. This phenomena shows that there is information asymmetry between the supply and demand sides of manufacturing enterprises' financing, which directly leads to the low efficiency of two sides.

3.3. Core Assets Converse and Pledged Intellectual Property Financing has Difficulty in Landing

Unlike traditional manufacturing industries, the core assets of advanced manufacturing industries have shown a tendency to shift to intellectual property such as patented technologies. And intellectual property belongs to the category of intangible assets. Its difficult recognition and measurement qualities restrict the placement of intellectual property pledge financing. Specifically, there are three reasons for this. One is that the ability to assess the value of IPRs needs to be improved, and it becomes difficult to find IPRs with real market value and development space. Secondly, there is a significant difference in the discount rate of different IPRs, especially in the valuation of IPR transfer and disposal which requires a more mature market mechanism. Thirdly, the registration of intellectual property rights is not convenient enough, and the procedures of intellectual property pledge loans are cumbersome, which makes financing for advanced manufacturing difficult.

3.4. Green Manufacturing Request for Green Financial Supply

Green manufacturing and High-quality economic development are mutually causal. Adhering to the concept of green development is conducive to the transformation and upgrading of the traditional manufacturing industry. At the same time, the High-quality operation of the manufacturing economic system can also promote the level of green industrial development. However, the status of development-intensive spatial structure, heavy chemical industry structure and coal-based energy structure in Jiangsu Province has not changed fundamentally. The problem is even more acute in the context of the continuous decline of resource reserves and increasingly prominent environmental problems. In general, the manufacturing industry in Jiangsu Province mainly faces several dilemmas, for instance, the formation of green industry has not been completed, the R&D capability of environment-friendly technology needs to be improved, and the mechanism system which can promote the development of green manufacturing industry needs to be further improved. From the perspective of financial demand, the realization of "green" manufacturing technology and production method means more expensive R&D expenditure. The rising cost will be transmitted down the industrial chain, and the current high financing cost greatly restricts the development of green manufacturing.

4. Optimize the Financial Supply to Support the Transformation and Upgrading of Jiangsu Manufacturing Industry

4.1. Innovative Financial Products, Effectively Docking Personalized Needs

It is important to continuously enrich and innovate the financial products of manufacturing financing to meet the personalized needs of manufacturing transformation in order to promote the smooth transformation and upgrading of manufacturing industry. We should mainly consider the breakthrough from these following four aspects:

The first one is to continuously enrich the financing tools for manufacturing enterprises. On the one hand, we ought to promote the construction of science and technology version system, improve the equity financing mechanism, and expand the channels of medium and long-term capital sources for manufacturing enterprises through multiple channels. On the other hand, it is urgent to improve the corporate bond market. We should bring the synergy of multi-level capital market into play, discover the real High-quality manufacturing enterprises and provide them with practical and convenient conditions for financing.

The second one is to promote the optimization of the structure of capital market investment instruments. The capital market should take the industrial structure and debt-servicing ability of advanced manufacturing industries into full consideration and promote the development of products combining equity investment and debt investment. At the same time, the structure of

private equity investment and venture capital (PE/VC) should be optimized, and the heterogeneous effect that different funds on the development of advanced manufacturing industry should be fully considered.

The third one is to fully consider the logical relationship between upstream and downstream enterprises supporting each other targeting each link of the industrial chain of advanced manufacturing industry. Financial institution should design personalized financial service products to precisely match the capital supply and demand of industrial chain enterprises and improve the efficiency of capital allocation.

Last but not least, guide financial institutions to increase investment in research and development of information technology, making the data collection and analyze of relevant manufacturing enterprises more efficiently so as to and discover the real capital gap. Moreover, it ought to customize the supply of funds suitable for their transformation and upgrading and long-term development to fully meet their capital needs in a specific development cycle.

4.2. Improve the Credit System and Build a Risk-sharing Mechanism

The government and related departments should play a guiding role in continuously develop and improve the credit collection system adapted to the new manufacturing industry, and establish a sound bottom-up information collection mechanism, with a top-down information processing mechanism. Through block chain and other emerging communication technologies to realize the credit management in big data mode. At the same time, the information sharing among commercial banks should be promoted to enhance the accuracy and efficiency of credit risk assessment through cross-reuse.

With the continuous improvement of the credit system, it is meaningful to learn from the operation of Sesame Credit under Ant Financial Services. By analyzing the historical behavior data of manufacturing enterprises and evaluating five dimensions, including credit history, behavioral preferences, performance ability, corporate characteristics and social relationships so as to accurately outlined the credit portraits of different manufacturing enterprises. On the basis of this model, financial service institutions can effectively judge the enterprise's business condition and willingness to repay to provide them with targeted quick loans and cash installment products. Currently, commercial banks' credit lending is limited to personal loans only. However, providing credit loans to enterprises can largely meet the small and high-frequency financing needs of manufacturing enterprises, especially small and medium-sized enterprises, and thus effectively promote the development and upgrading of their industries.

In addition, to alleviate the risk of commercial banks issuing credit loans, the government and banks can jointly fund in proportion. Establish a risk fund for manufacturing enterprises and improve the risk compensation mechanism for credit loans from financial institutions. At the same time, in terms of financial taxation, financial and tax institutions should apply compensating fiscal policy and increase the amount of tax relief to the small and medium-sized manufacturing enterprises so as to effectively and efficiently provide protection for commercial banks' manufacturing credit.

4.3. Optimize Credit Structure and Promote Securitization of Intellectual Property

Commercial banks are duty-bound to expand the investment of intellectual property pledge financing. First of all, we should consider setting a separate index for IPR pledge loans in the credit plan of commercial banks and setting special assessment incentives. Secondly, we should develop intellectual property pledge products and broaden the combination of pledged objects, such as the combination of intellectual property and other collateral. This can be reflected as a combination of intellectual property as the main guarantee and fixed assets such as property and equipment as collateral to supplement the guarantee. Again, commercial banks should

improve their risk tolerance for IPR pledge financing. For example, the non-performing ratio of loans financed by intellectual property pledges can be appropriately higher than that of other corporate loans, and the weighting should be reduced when deducting points in the assessment. In addition, the synergy of multiple sectors should be brought into play, such as the banking industry cooperating with the insurance industry to jointly play the function of risk diversification.

The development of intellectual property pledge financing, at a deeper level, is to promote the securitization of intellectual property. On the one hand, we encourage advanced manufacturing enterprises to cede the right to income from intellectual property rights in a specific period in the future, so as to obtain the required funds at a lower cost. On the other hand, we will expand the scale and number of pertinent securitization institutions and continue to improve the credit rating mechanism for issuance. Through the securitization of IPRs, assets and financial capital can be effectively integrated, thus giving full play to the role of the market and realizing a virtuous cycle of capital supply and demand in the process of continuous innovation and upgrading.

4.4. Develop Green Finance to Promote the Sustainable Development of Advanced Manufacturing Industries

Improving the green financial system and increasing the inflow of funds to the green manufacturing industry require the joint action of all actors in the financial market. Governments at all levels should actively issue special bonds for environmental protection within the quota to provide green enterprises with a higher quality source of medium and long-term funding. At the same time, preferential policies such as interest subsidies and awards should be given to qualified green bonds and other financing actions that have environmental benefits. Commercial banks should vigorously develop green credit, improve the green credit risk monitoring and assessment mechanism and the risk sharing mechanism of loans for environmental protection projects, and effectively increase the output and scale of green financial products. The insurance industry should accelerate the development of green insurance, and actively play the role of insurance for green manufacturing financing risk guarantee so as to provide protection for the cultivation of new dynamic energy for economic development. Social capital should also actively join the manufacturing financing activities explore new profitable models of sustainable development such as the remediation of contaminated sites, ecological protection and restoration, comprehensive environmental improvement and so forth.

5. Conclusion

Through the analysis of the economic statistics of Jiangsu Province, we believe that Jiangsu province is currently in a historical period of mutual promotion between the optimization of financial supply and the High-quality development of manufacturing industry. Through the research and analysis of manufacturing enterprises and financial institutions in Jiangsu Province, we found that the current financial demand of advanced manufacturing industry in Jiangsu province has the following 4 new trends: differentiated financial demand is prominent, credit requirements are improved, intellectual property securitization needs to be implemented and green financial demand. Based on the actual situation, combined with theoretical analysis, this paper believes that the transformation and upgrading of advanced manufacturing industry in Jiangsu province can have these following optimization path. They are, respectively, to innovate financial products, effectively meet personalized needs; to improve the credit system, building a risk sharing mechanism so as to optimizing the credit structure; to promote intellectual property securitization and to develop green finance, promoting the sustainable development of advanced manufacturing industry. It is not difficult

to envisage that with the continuous optimization of financial supply, the advanced manufacturing industry in Jiangsu province will be able to smoothly transform and upgrade, and move steadily and far.

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