

Research on the Transformation and Upgrading of Green Finance Enabling Enterprises in China under the Goal of "Double-Carbon"

Qiuyu Zhang^{1, a}, Jiafeng Li^{1, b}, Jin Chen^{2, c, *}

¹ School of Finance, Anhui University of Finance and Economics, Bengbu, Anhui, 233030, China

² School of Accountancy, Anhui University of Finance and Economics, Bengbu, Anhui, 233030, China

^a1422337990@qq.com, ^b2512664186@qq.com, ^{c, *}1730607338@qq.com

Abstract

Under the background of China's "Double-carbon" goal, the development of green finance is extremely urgent. At present, the transformation and upgrading of green finance enabling enterprises are faced with challenges such as different standards and regulatory loopholes. The study on the mechanism of green finance on low-carbon transformation of enterprises can effectively solve the stagnation of green finance in China, and contribute to the sustainable development of China's economy under the "Double-carbon" standard. Based on the existing literature, this paper expounds the necessity and feasibility of the transformation and upgrading of green finance-enabled enterprises, studies the mechanism and specific forms of the transformation and upgrading of green finance-enabled enterprises under the goal of "Double-carbon", and puts forward feasible policy suggestions.

Keywords

Green Finance; Enterprise Transformation and Upgrading; Two-carbon Goals; Low-carbon Development.

1. Introduction

In September 2020, China clearly stated the goal of "Carbon peak" by 2030 and "Carbon neutrality" by 2060. Under this goal, China advocates a green, environmentally friendly and low-carbon lifestyle, and enhances the global competitiveness of industry and economy. This requires all industries in China to continue to promote the adjustment of industrial structure and energy structure, and accelerate the pace of low-carbon transformation. With the goal of "Double-carbon", the green transformation of enterprises cannot be separated from more efficient and higher-quality financial services, which coincides with China's long-term green finance industry strategy.

Green finance is to explore the sustainable development of financial industry, environmental protection and economic and society, and promote the sustainable development of enterprises based on this. In 2021, Chen Yulu, deputy governor of the People's Bank of China, said at the annual meeting of the Green Finance Professional Committee of the China Society for Finance and Banking in 2021 that after several years of efforts, China has initially formed a policy system and market environment to support the development of green finance. It can be seen that green finance plays an important role in promoting the green transformation of the economy. In the process of implementing China's "Dual-carbon" goal and promoting green and low-carbon development, promoting the healthy and sustainable development of green finance is the top priority for the reform and development of China's financial institutions.

However, in the process of low-carbon transformation, China's small and medium-sized enterprises usually encounter investment and financing difficulties due to their small operation scale and high investment risks. At this time, green finance should give full play to its function of guiding resources, supporting environmental protection and the sustainable development of the economy and society, and empower enterprises to carry out transformation and upgrading. Therefore, by studying the enabling path and direction of green finance for enterprises, the development direction of green finance in China can be further analyzed, and ways to improve the factor productivity of enterprises can be explored. The study of the enabling form of green finance is conducive to the high-quality development of enterprises, clear the guiding role of green finance in the sustainable development of China's economy, and the construction of a new development pattern of green and environmental protection.

2. The Necessity and Feasibility of Enterprise Transformation and Upgrading

2.1. The Necessity of Green Finance Development to Enable Enterprises to Transform and Upgrade

Green finance is a financial service that produces good benefits for the environment. Under the context of our "Double-carbon" goal, it is particularly critical to promote the integration of green finance and the sustainable development of China's economy. The foundation of economic development lies in enterprises, so the research focus of this project is to study the role form of green finance for the low-carbon transformation and upgrading of Chinese enterprises in China and the mechanism of action for the development of green industry. On this basis, we will deeply explore the different roles of green credit business in the early stage, growth stage and maturity stage of enterprise transformation, and then analyze the path of green finance to promote the development of green industry. At the same time, China's current public green finance system, with policy-based finance as the main finance and commercial finance as the auxiliary finance, plays an all-round and multi-functional leading position in the transformation process of green enterprises, enabling the development of enterprises in the form of direct financing and indirect financing. Theoretically, the green development of enterprises can significantly enhance their value; with the deepening of financial support for green development policies, the role of green development in enhancing enterprise value is increasing [1].

At the present stage, the growth and high-quality development of green economy have become the main direction and goal of China's economic development [2], and guiding polluting enterprises to carry out green transformation is the key to achieve high-quality economic growth. In terms of function, green finance, as a financial tool, can provide enterprises with financial support in renewable energy, energy conservation, emission reduction and environmental protection technologies, and help enterprises achieve green transformation. Secondly, the development of green finance can promote enterprises to achieve better performance in the sustainable economic and social development. By guiding funds to environmental protection and sustainable development, green finance helps enterprises to achieve long-term benefits in reducing environmental risks, improving resource utilization efficiency and enhancing social image. In this context, green finance has become an indispensable tool in the process of promoting the transformation and upgrading of Chinese enterprises.

2.2. Feasibility of Enabling the Transformation and Upgrading of Enterprises Through Green Finance Development

Under the main framework of green finance, green credit only accounts for 8%~9% of the total credit scale in China, and green bonds only account for 1% of the total debt scale. The carbon finance market is still in the early stage of development, and the development potential of green finance in China is huge. Only with the development of these three aspects can green finance benefit more enterprises and expand the support of green credit and debt securities. In combination with the characteristics of The Times, it is necessary to improve the level of scientific and technological empowerment and data empowerment, improve the presence of green finance in the supply chain and ecological chain of enterprises, and enable the green development of enterprises.

After the development in recent years, China's financial institutions have steadily promoted the innovation of green financial products, and the scale of green loan business continues to improve. For example, in recent years, Zhejiang has implemented a special action to improve low-carbon and green financial services, guiding financial institutions to continue to increase credit support for green and low-carbon fields, and has achieved positive results. By the end of 2022, the balance of green loans in Zhejiang province was 2.19 trillion yuan, up 47.8% year on year.

China Bond RESEARCH and development Center of China Clearing Corporation recently released the 2023 Asset securitization Development Report, which pointed out that China's asset securitization market will issue 1.85 trillion yuan of various products in 2023, and the product structure is relatively stable. Among them, green asset-backed securities (ABS) increased exponentially. Last year, 351 green ABS products were issued in the whole market, with a scale of 243.88 billion yuan, 1.1 times that of 2022. Among them, the issuance scale of exchange ABS accounted for the highest proportion, with 52.18%, interbank green ABN (asset-backed bills) accounted for 30.34%, and green credit ABS accounted for 17.48%. Fitch Ratings said China grew green financing at a compound annual growth rate of about 30% from 2019 to the first half of 2023, with rising green ABS market share. Green ABS deals are divided by asset class, and projects supported by government subsidies from large state-owned energy companies take the lead in financing clean energy projects such as renewable energy generation. This shows that China has become the world's largest green credit market and the second largest green bond market, and has initially formed a multi-tiered and diversified green financial market system.

The diversified development of China's green credit business, the improvement of supporting policies for green finance, and the continuous reform of financial institutions have greatly lowered the threshold for enterprises to participate in green finance, and provided a strong support for the transformation and upgrading of enterprises.

3. The Mechanism of Green Finance Development that Enables Enterprise Transformation and Upgrading

3.1. Green Finance Enables Enterprises to Diversify Their Financing Modes

Restricted by factors such as small scale, high operating risk and weak guarantee ability, small and medium-sized enterprises will inevitably encounter difficulties and expensive financing in the process of low-carbon transformation and upgrading. Green finance gives full play to its function of guiding the flow of resources and promoting the sustainable development of enterprises. Through the innovative application of green finance such as green bonds, green loans, green funds, green certificates, carbon trading and green insurance, the financing mode of enterprises will be diversified and expanded to meet the needs of diversified market entities,

and build a multi-level green financial product system. From a theoretical point of view, green finance is the core element to promote high-quality economic development. As the largest and most mature part of the green finance policy system, green credit policy incentive and restraint mechanism can effectively guide the high-quality development of enterprises [3].

In June 2022, China's first pilot carbon credit evaluation system was launched in Ningbo. This is the first step for the expansion of the carbon finance market under the green finance model in China. At the same time, the post office bank Ningbo branch positive response, joint fudan university, Tsinghua university, led carbon credit evaluation standards, innovation "Green low carbon + pratt & whitney financial" concept, jointly build carbon evaluation system, using the system for green pratt & whitney financial enterprises and "Agriculture, rural areas and farmers" financing convenience and related precision services. At the same time, the green credit and green debt securities of many banks in China provide a certain financial guarantee for the low-carbon transformation and upgrading of enterprises.

According to Yan Lin, credit manager of the Credit Management Office of Hainan Branch of Agricultural Development Bank, by the end of December 2023, the bank's green credit loan balance was 7.78 billion yuan, up 2.03 billion yuan or 35.4% compared with the beginning of 2023. "Carbon neutral loan", "Ticket proceeds pledge loan", "Ecological tourism loan", "Forest right mortgage inclusive loan"... the change of concept has also driven the continuous emergence of green financial products, more and more enterprises have obtained capital "Living water".

3.2. Green Finance Enables Enterprises to Transform Their Innovation Achievements

Under the "Double-carbon" goal, green finance points out the future development direction for the research direction and landing form of enterprises' scientific and technological innovation achievements. Green finance provides targeted financial services for enterprises in the innovation direction on the road of low-carbon environmental protection transformation and upgrading, helps enterprises to compete in the green industry, and promotes the scientific and technological progress of green industry and the implementation of actual products. The transformation and implementation of enterprise innovation achievements connects the scientific and technological achievements of enterprises and the sustainable development of economy. In this aspect, the transformation of the achievements of enabling enterprises is to lay the foundation for the production, manufacturing, and sales of enterprises. At present, the conversion rate of scientific and technological achievements of Chinese enterprises is not high. On the one hand, they are due by the lack of technical level and scientific and technological talents; on the other hand, China's financial support is insufficient. The achievement of green finance enabling enterprises is of practical significance. As a derivative tool of government policies, green finance can provide more financial support and policy guidance for enterprises, help enterprises transform innovative achievements into products and services, and promote the application and promotion of innovative technologies. At the same time, the empowerment of green finance can guide enterprises to turn the direction of innovation into environmental protection and low-carbon fields, promote the subjective initiative of low-carbon transformation and upgrading, and encourage enterprises to innovate in green technology, clean energy, circular economy and other aspects, so as to achieve a win-win situation of economic growth and environmental protection. The implementation of green finance will significantly improve the "Quality" and "Quantity" of green technology innovation of enterprises by [4].

3.3. Innovation of the Business Philosophy and Goals of Green Finance Enabling Enterprises

The establishment of the goal of "Double carbon", green finance and the expansion of carbon finance market have greatly impacted the business philosophy of traditional enterprises, and promoted the operators to create the direction of establishing green and environmental protection enterprises. At the same time, the support of green finance for green industry also makes enterprise managers have new thoughts about the enterprise development goals of green development. While green finance injects funds into enterprises and improves policy support for them, enterprises will also pay more attention to the integration of the development direction with the government and financial institutions in the process of operation. While obtaining green financial support, enterprises also need to establish a green business philosophy and incorporate environmental protection and sustainable development into their business strategies. In addition, enterprises not only enjoy green financial services, but also can feel their win-win situation in both economic benefits and environmental benefits. While reducing resource consumption and emissions, improving production efficiency and product quality, enterprises can also enhance their brand image, enhance social recognition, and realize the further improvement of its enterprise value. Under the dividends brought by green finance, enterprises will actively integrate the concept of green finance, integrate environmental protection and sustainable development into the business strategy of enterprises, realize the innovation of business philosophy and goals, and make contributions to promoting the development of green economy.

4. The Development of Green Finance Enables the Specific Form of the Transformation and Upgrading of Enterprises

4.1. Enrich the Green Finance Business, and Comprehensively Cover the Transformation Needs of Enterprises

Chinese financial institutions should timely find out the challenges faced by enterprises in the process of low-carbon transformation and upgrading, appropriately expand green finance projects, and provide necessary financial assistance for enterprises in the difficult period of transformation. First of all, we should vigorously improve the scale of green credit and green debt bonds, solve the reasonable capital needs of enterprises, fully mobilize the initiative of enterprise innovation and development, promote the low-carbon transformation and upgrading of enterprises, and stimulate the potential of China's green industry development. Secondly, for large, small and Chinese enterprises of different sizes, diversified financial products and services should be provided to meet the needs of different enterprises. For example, green loans, green bonds, green trusts and other financial instruments can provide financial support for enterprises to help them carry out green technology transformation, resource conservation and implement environmental protection projects. While developing green finance business, we should also prevent the green innovation patents obtained by enterprises to cater to the policy without bringing economic benefits, but inhibiting the performance growth [5]. At the same time, although the policy improves the investment efficiency of enterprises, it also has a certain negative effect on the performance.

4.2. Improve the Regulatory System of Green Finance, and Rationally Plan the Development Path of Green Industry

At present, China's green finance market is faced with problems such as different standards and incomplete laws and regulations, and the financial regulatory system needs to be updated and improved urgently. In the construction of green finance regulatory system, the service of China's green finance enabling green industry should strictly prevent the internal emptiness

caused by the rapid development. In terms of policy, plan the development path of green industry in detail, and reasonably grasp the trend of green enterprises. In terms of policy, policy documents should be actively issued to support financial institutions to innovate and develop green credit, green bonds and green financial products, explore the establishment of market-oriented and diversified ecological protection compensation mechanism, and establish a green financial evaluation system compatible with the incentive of carbon peak and carbon neutral target. We should strengthen communication between the government, the market and financial institutions, clarify the demands of all parties, break down information barriers, and reasonably promote the sustainable development of China's green finance and green industries. First of all, it is necessary to speed up the establishment of green industry identification and rating system and carbon asset management system, strengthen the government's financial support for green finance, establish an incentive mechanism for financial institutions to participate in green finance, coordinate finance, industry, environment and other resources, and improve the supporting policy system of green finance. Secondly, on the basis of increasing the green credit supply and improving the green coverage rate, we should constantly optimize and innovate the green financial products and service system, and build a multi-level green financial product system to meet the needs of diversified market subjects.

4.3. Expand the Carbon Financial Market and Help Enterprises Save Energy and Reduce Emissions

Under the framework of green finance, the concept of carbon finance has been highly valued in China's green industry. The establishment and expansion of the carbon financial market has laid a solid foundation for Chinese enterprises to transform into the carbon trading market, and also injected vitality into the development of green industry. The development of carbon finance will greatly reduce the cost of energy conservation and emission reduction and meet the needs of enterprises. In the system structure of carbon financial market, the market provides enterprises with carbon market tools such as carbon trading, carbon quota and carbon tax, to help enterprises achieve the goals of energy conservation and emission reduction, reduce the cost of carbon emission, and promote the transformation of enterprises to low-carbon development. On the other hand, given the Chinese carbon financial market open late, China should vigorously promote the carbon financial business investment consulting, credit rating, certification and other business, the introduction of diversified market main body involved in the carbon financial market, to meet many enterprises into carbon financial trading market demand, so as to fully stimulate the vitality of the carbon financial market.

5. Conclusion and Discussion

In general, promoting the transformation and upgrading of enterprises is not only a need to expand employment and improve people's livelihood, but also an important measure to promote high-quality social and economic development. Under the goal of "Double-carbon", green finance is an essential tool in the process of low-carbon transformation and upgrading of enterprises. As the lifeblood of economic development, the sustainable development of enterprises under the goal of the new era is the sustainable economic growth. Therefore, China should give full play to the role of policy derivatives of green finance, promote the development of green industry, empower the low-carbon transformation and upgrading of enterprises, and help the integrated development of industrial chain and ecological chain.

Acknowledgments

This study was supported by 2023 Anhui University of Finance and Economics Undergraduate Research and Innovation Fund Project (XSKY23100).

References

- [1] Lin Hui, Li Tangrong. Green development, financial Support and corporate Value -- Based on the empirical test of ESG of listed companies [J]. Discussion on modern Economy, 2023, (02): 28-44.
- [2] Gao Jinjie, Zhang Weiwei. The impact of green finance on business performance -- Based on the empirical test of the regulatory effect model and the mediation effect model [J]. Journal of Shanghai Business School, 2022,23 (04): 86-108.
- [3] Hu Tianyang, Tu Zhengge. Green finance and high-quality development of enterprises: incentive effect and inhibition effect [J]. Finance and Economics Science, 2022, (04): 133-148.
- [4] You Li group. Green finance and enterprise green technology innovation -- Based on the empirical evidence of the green finance reform and innovation pilot Zone [J]. Finance and Economy, 2022, (10): 73-83.
- [5] Chen Zhigang, Gong Yifei. Analysis of the influence of green finance on enterprise performance [J]. Economic and Management Review, 2022,38 (05): 72-85.