

# Research on the Development Path of Chinese Commercial Banks Based on Green Finance

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**Keywords:** *green finance, commercial banks, sustainable economic development*

**ABSTRACT.** Green finance has become an important way for commercial banks of various countries to participate in competition and achieve sustainable development. Commercial banks' development of green financial services can not only promote the transformation of China's economic structure, but also seize market opportunities and achieve their own sustainable development. This paper uses the methods of theoretical analysis and case analysis to explain the definition and development process of green finance, and introduces the current status of green finance development of commercial banks of China. We collect information and data, analyze countries with good development of green finance in the world, and summarize successful experiences of reference from our commercial banks. Finally, based on the actual situation in China, the problems existing on the development of commercial banks' green finance business are summarized, and corresponding countermeasures are proposed.

## 1. INTRODUCTION

After the era of large-scale production of machines, the contradiction between economic development and environmental protection was gradually exposed. In order to balance the two contradictions, the international community put forward the concept of green finance in the late 1990s. Green finance refers to economic activities to support environmental improvement, respond to climate change, and use resources efficiently. Chinese banks have made some achievements in green finance innovation, but compared with other countries in the world, we still have a certain gap, and China's green finance development is still in its infancy [1]. Commercial banks should actively respond to support the national green development policy strategy and innovate the development of green financial services. This will help the bank to establish a good image of the minds of the public, better respond to various problems and risks, and achieve its sustainable development. The foundation for further stable development of our economy is laid.

The concept of green finance was first proposed internationally in 1997 [2], and many new connotations have been added since then. Mark Carney (2016), Governor of the Bank of England, believes that financial markets need to transition to a low-carbon economy, and they need to break down institutional and market barriers and work hard to develop green finance into a global consensus [3]. Tang Bin (2013) believes that when commercial banks develop green finance and further fulfill their social responsibilities in the form of commercialization, they can not only open up new business areas to implement differentiated competition, but also achieve new business growth and form a brand effect. An Guojun (2016) believes that to develop green finance, we can consider setting up a green development fund and using various green financial tools such as green funds to provide sustainable driving force for the development of green finance.

## 2. Development of green finance in major countries

### 2.1. Examples of green finance in major countries

We have selected the two most representative countries in the development of green finance for analysis.

One is Germany. Germany is the first country in the world to practice green credit, and green credit is one of the tools of green finance [4]. It has been decades since implementation, and this system has gradually matured in continuous improvement. The specific performance is in the following aspects. First, the government issues and revises relevant legal systems, and provides institutional support for green finance development. All parts of the government are involved, and they have given the greatest support to environmental protection. The second is to take many measures to control the environment, such as controlling greenhouse gas emissions; treating sewage to reduce water pollution; and conducting waste separation and recycling. Third, banks develop green financial services, and companies applying renewable energy for production can get preferential treatment when applying for credit from German banks. The bank itself has a strong sense of social responsibility, leaving a good impression on the public.

The second is Japan. The Japanese government has issued a series of policies to support the development of green finance. First, create a good market environment and encourage producers to use green technology to produce clean and safe products. Promote the common growth of production and consumption, and provide a good market environment for financial intervention in the field of environmental protection [5]. Second, establish an environmental subsidy fund system. If a company promises to reduce its carbon dioxide emissions by more than 3% within three years (or 5% within five years), it can receive a part of the interest subsidy as a subsidy object. In addition, the government has introduced other preferential policies. Implement green car tax reduction system, solar power surplus electricity purchase system, green house ecological rebate system and green car purchase subsidy system. These policies have effectively promoted the development of green finance.

## 2.2. Development Enlightenment of Major Countries

First, Support from relevant government policies and laws. The government should establish a series of laws and systems based on the principle of sustainable economic development to support the development of green finance, and cooperate with banks in a friendly manner, with all sectors participating.

Second, the bank's self-management and responsibility. Banks themselves, as financial intermediaries, should clarify their social responsibilities. Follow the Equator Principles and adhere to the coexistence of environmental friendliness and economic development. At the same time, internal management of the bank shall be strengthened, and an incentive system shall be established to attract talents and improve the quality of employees.

Third, the innovative development of green financial products. Banks can develop new green finance businesses and use various tools such as funds and credit to support and subsidize green production enterprises.

## 3. Development status of green finance in China

Since 2004, China has continuously issued policies to support the development of green finance. In recent years, the government's policy support for green finance has been strengthened (see Table 1).

Table 1 Policies to support the development of green finance

2014	The First China Green Finance Forum Held in Beijing Issued "Key Evaluation Indicators for Green Credit Implementation"
2015	Adopted the "Overall Plan for the Reform of the Ecological Civilization System" Proposed "Green Development" at the Fifth Plenary Session of the 18th Central Committee
2016	Issued "Guiding Opinions on Building a Green Financial System" Premier Li Keqiang called for "developing green finance" in the "Government Work Report"

2017	The State Council builds green finance reform and innovation pilot areas in Zhejiang, Jiangxi, Guangdong, Guizhou, and Xinjiang Issued "Guiding Opinions on Supporting the Development of Green Bonds"
2018	Regional green finance innovation officially launched Bank financial institutions are required to submit green credit data on a quarterly basis, and they have joined the national credit industry classification statistics of green credit
2019	Release of "Green Industry Guidance Catalogue (Annual Edition)"

Source: Sorted out based on public information

The release of the 2016 “Guiding Opinions on Building a Green Financial System” marked the official start of green credit. Commercial banks responded positively and took measures to reform and reform their banking business. For example, the Industrial and Commercial Bank of China has established an "environmental one-vote veto system", which stipulates environmental protection requirements for companies applying for loans [6]. Industries that produce heavily polluting products will not receive credit support from banks, while those that adhere to environmental friendliness and use energy-saving energy for production Not only will banks give them credit support, but they will also have certain benefits [7]. At this stage, China's commercial banks are mainly engaged in green finance with green credit, green bonds, green development funds, and carbon finance. As of the first half of 2018, China's green bond issuance volume was about US \$ 13 billion, and it has become one of the world's largest green bond issuers.

The first batch of national-level green finance reform pilot zones have developed well, so many provinces and cities are applying for the second batch of national-level green finance reform pilot zones [8]. In the future, more and more regions will develop green finance in depth. The “Belt and Road” policy is also combined with green finance. The huge financing gap in the countries along the “Belt and Road” provides great opportunities for China's commercial banks.

## 4. Problems and development paths

### 4.1. Problems

#### 4.1.1. Internal issues

Problems and development paths

1. Lack of talent to develop green finance. Green finance business involves many professional fields, the professional technology is very complex, and the development and update speed is very fast. The risk assessment and management are difficult, the professional talents are highly demanded, and the lack of a professional intermediary service institution system provides green finance business development. Talent, so the high-quality and comprehensive professional talents of green finance are scarce.

2. The sense of social responsibility is not strong enough and there is no good awareness of environmental protection. China's commercial banks do not know enough about their social responsibilities, and most banks have not worked out specific solutions and measures to raise the level of environmental awareness. Not enough attention has been paid to the development of green finance, no good awareness of environmental protection issues has been developed, and the quality of environmental protection needs to be improved. It is not uncommon for banks to frequently issue credit loans to some highly polluting enterprises.

3. Imperfect green credit operation mechanism and poor operability. For a long time, China's commercial banks have always faced a dilemma in dealing with the trilateral benefits of enterprises, society and the environment. Coupled with the management system of China's bank branch system and performance evaluation based on economic indicators, environmental performance is not taken into account Therefore, in actual operation, it cannot effectively attract the banking industry to support environmental protection projects, resulting in green credits being faced with insufficient enforcement efforts and poor practical operability during the implementation process.

4. Insufficient innovation in green finance business. The types of green credit products are relatively single. Basically, green credit is placed around collateral, and the innovation of green credit products is insufficient. Compared with large foreign commercial banks, they provide richer green credit products for individuals, households, and small and medium-sized enterprises, and carry out some degree of innovation in green credit products. China's commercial banks are not rich in green financial products and services, which is not conducive to providing customers with green financial comprehensive solutions that cover a variety of green financial products.

#### *4.1.2. External issues*

1. The legal and institutional systems related to green finance are not yet complete, and government support is not strong enough. Although the government will subsidize part of the special appropriation and discount interest to loan projects, there are still many irregularities in the actual implementation process. In addition, there are too many prohibitive legal contract clauses in the specific process of credit implementation in China. Therefore, the development of green finance has been relatively slow. With the development of green credit over the past year, the original three laws: "People's Bank of China Law", "Commercial Banking Law" and "Banking Supervision and Management Law" have increasingly reflected the support and protection of green credit policies. The more insufficient it is, the law needs to be constantly improved and improved to conform to the speed and trend of the times.

2. Insufficient information disclosure and no information sharing. The environmental violation information released by some local environmental protection departments in China is often not targeted and time-effective enough. It can meet the specific needs of banks in reviewing credit applications. At present, China's environmental protection information is relatively fragmented, the information system is not perfect, and it lacks the corresponding unified management mechanism and professional management personnel, which has restricted the development of green finance to a certain extent. The adequacy and transparency of a company's environmental information has an important impact on bank credit decisions. In fact, some high-pollution and high-energy-consumption companies have a negative attitude towards environmental information disclosure. On the one hand, the disclosure of environmental information will increase the disclosure cost of the enterprise, and on the other hand, they are afraid that financing will be blocked due to pollution in the production process. Therefore, companies cannot hide relevant information, which results in insufficient information disclosure [9]. The adequacy and transparency of the company's environmental information has an important impact on bank credit decisions.

3. The supervision and restraint mechanism is not perfect. The government lacks effective penalties for companies that produce illegally. There is no clear policy limit or industry standard for high-polluting and high-energy-consuming industries [10]. This has led to some polluting companies still being protected by local governments. can obtain illegal loans from banks for production. The exercise of government power lacks effective disclosure, it has little effect on corporate deterrence, it is difficult for the monitoring mechanism to play a full role, and the power supervision system is not yet complete, affecting the power operation monitoring system to exert its maximum effectiveness. The personnel of various government departments do not fully understand the power, and the lack of supervision and restraint on the exercise of government personnel's power can easily lead to the phenomenon of collusion between officials and businessmen and corruption.

## **4.2. Development paths**

### *4.2.1. Government, society and other macro levels*

1. Establish a guarantee system for green finance, increase publicity and support for green finance, and create a good atmosphere for green finance innovation. First of all, let the government departments do a good job of propagating green ideas, and let financial decision makers and practitioners establish a solid sense of responsibility for environmental protection. Second, let the insiders of the financial sector clearly understand the advantages of green finance, and let the

financial industry practitioners understand and practice green finance. Establish a good credit support system and a good external support network for green finance, including legal, environmental protection departments, the CBRC, and some local government agencies. Establish an auxiliary network that provides specialized talents, technology, information, and knowledge experience. Facilities and technical support. Establish and improve systems and policies to encourage enterprises and banks to carry out green financial innovation, not only to encourage verbal publicity, but also to provide substantial rewards to motivate the public. Among them, there must be not only punishment measures and accountability, but also a policy of rewarding banks that have achieved significant results.

2. Standardize corporate environmental information disclosure and improve corporate credit information sharing mechanisms. Whether a company's environmental information disclosure is perfect or not will directly affect the credit decision of a commercial bank to a large extent. The government must establish a sound accounting standard for environmental protection, so that companies can follow rules in environmental information disclosure, and prevent acts such as concealing information and reporting false information. It is also necessary to urge the company to regularly release reports including environmental information to the public, so that the company's environmental protection behaviour is monitored by a wide range of people in the society, and what is done well will be recognized by the public and the corporate image will be improved; Will be accused, prompting companies to correct as soon as possible.

3. Adjust industrial policies and encourage the development of green industries. The government can incorporate the idea of sustainable development in the industrial layout and industrial structure optimization and adjustment. We must accelerate the adjustment of industrial structure and technological transformation, encourage the development of high-tech green industries, use modern science and technology as much as possible in the development and utilization of resources, and promote the replacement and transformation of "high-energy Consumption, high pollution" traditional industries, so as to achieve the purpose of optimizing the industrial structure, and promote the entire industrial layout to shift to resource-saving and quality-efficient. The steps of industrial structure adjustment should be carried out in various aspects including regions, industries, scale and speed of development. The government must have an overall rational plan and a vision of ambitious development.

#### 4.2.2. *Bank itself*

1. Establish effective information communication and incentive mechanisms. Improve the incentive mechanism in the bank to motivate employees to work. The most important thing in the incentive process is to give employees a sense of pride and satisfaction, to ensure the fairness and effectiveness of the evaluation system and compensation system, and to convince employees that the bank cares about their interests. In this way, employees will dedicate more efforts to help banks achieve their goals. .Improve the scientific and reasonable communication system, make communication based on evidence, and include performance evaluation, and eventually become a habit, to avoid the phenomenon of disconnected work and mutual pushes caused by untimely or unsmooth communication in various internal links. It is necessary to build a variety of communication channels, including the establishment of mailboxes, employee forums, SMS platforms, and service networks, etc., with appropriate modifications and improvements to continuously improve the communication effect. In the process of establishing a long-term effective communication mechanism, it is necessary to regularly summarize the effects produced by the communication mechanism, and to check and evaluate the effectiveness of its communication effects. Improvements are lacking on the basis of the original, and optimization continues. It is necessary to solicit the opinions of all employees, encourage employees to communicate and innovate, expand communication channels, and enrich communication methods.

2. Establish a talent training and management mechanism. Commercial banks should speed up the training of green finance talents. They can consider working with the environmental protection community to train talents, and they can also try to establish a mechanism to invite environmental

protection professionals to assist financial decision-making. On the other hand, strengthen international cooperation, exchange with top educational institutions, cultivate a group of high-quality green finance talents, and provide resources for the development of green finance. Pay attention to the comprehensive training of talent quality and strength, adhere to the principle of combining theory and practice for rotation training, and focus on training innovative spirit and practical ability. Through the establishment of a sound personnel system and various incentive measures, standardize the selection and training of talents, and promote the training of talents in various departments through assessments, and create a policy environment and a living and working environment that are conducive to fair competition among outstanding talents.

3. Strengthen awareness of social responsibility and environmental protection. Domestic commercial banks should uphold the concept of sustainable development, attach great importance to environmental protection, consider green finance as their development opportunity, and incorporate environmental issues into their development strategies. In addition to accepting relevant national agreements or initiatives, efforts should be made to implement more demanding international norms and good practices, such as the United Nations Environment Programme financial operations, the United Nations Principles for Responsible Investment, and the Equator Principles. Domestic commercial banks must start with themselves and learn from banks in developed countries to set overall bank emission reduction targets, reduce greenhouse gas emissions and energy consumption in their daily operations, and reduce the negative impact the bank may have on the environment. Specific measures include improving energy use. Efficiency, use of renewable or clean energy, development of green and energy-efficient buildings, encourage employees to take public transportation to reduce private car trips, etc.

4. Innovate and develop a variety of low-carbon financial products. Commercial banks should proactively strengthen the innovation of green financial products, improve the business innovation capability and development scale of green finance, and actively enrich and innovate green financial services. In terms of corporate customer business, commercial banks may consider trying to provide them with a variety of green financial products, including green credit, green leasing, and green development funds, as well as related investment and financing advisory services. Market share; For personal retail customer business, commercial banks may consider actively trying to develop products such as green financial wealth management and green consumer credit. On the one hand, it can allow banks to invest more in green projects, and on the other hand, they can also invest for ordinary individuals. Provide channels for green investment and green consumption

## 5. Conclusion

Compared with the implementation of green finance in foreign countries, the development of green finance in China is relatively slow. Although banks are constantly trying to explore, there are still considerable influencing factors in the actual operation process. China should be based on specific national conditions. Specific analysis, establish a green financial system that fully meets China's national conditions. Based on the study of green finance at home and abroad, a combination of theory and empirical method is used to analyse the problems encountered in the implementation of green finance in China, analyse the reasons that affect the development of green finance in China's commercial banks, and point out green finance. The bank's own strength alone is difficult to develop, and it requires the joint efforts and supervision of the government, financial institutions, environmental protection bureaus, educational institutions, non-governmental organizations and other social departments and the general public to advance the viewpoint. Based on the current state of green finance in China's commercial banks, suggestions for green finance in China are proposed. Including the government and society's macro-level support recommendations, and commercial banks' own micro-level management measures.

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