

Review of Green Credit Research in China

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Abstract

Since the publication of the "Green Credit Guidelines" in 2012, Chinese green credit business has gradually become standardized and institutionalized. Therefore, the research on green credit has also become the research hotspot and focus of Chinese scholars. This paper studies the development process of green credit business in China from two perspectives: macro perspective and micro perspective. Focusing on the existing research literature on green credit in my country at the macro and micro levels, this paper summarizes, sorts out and divides the literature, and analyzes the possible deficiencies of my country's existing literature research and possible future research directions at a shallower level. The research on green credit provides a theoretical basis.

Keywords

Green Credit; Development Status; Research Analysis.

1. The Connotation of Green Credit

On July 12, 2007, my country's State Environmental Protection Administration, Chinese Central Bank (People's Bank of China) and China Banking Regulatory Commission (China Banking Regulatory Commission) jointly implemented the Green Credit Policy, which is a brand-new credit policy to restrain China. "Two highs and one surplus" industries blindly increase the scale, leading to the phenomenon of overcapacity, which is a brand-new credit product developed. It promotes the sustainable development of the economy and the environment through the form of financial leverage. The difference between green credit and ordinary credit is that the approval of projects is based on environmental monitoring standards, and the green credit policy not only requires the supervision of the people, but also requires the government and banks to disclose information on the environmental and social impacts of enterprises, and complete various Information and related funds are fully disclosed, so that all parties can truly achieve equal dialogue. Since the advent of green credit, commercial banks have actively created conditions for the implementation of green credit, not only increasing the methods to control risks, but also improving operating profits and profitability.

The green credit policy takes the future development of human interests as the primary task, and expects to use long-term ecological and economic benefits and beautiful environmental conditions to feed back the development of the financial industry, thereby promoting the healthy development of the financial industry, the protection of the ecological environment, and the sustainable development of the economy and beautiful environment. The innovation of green credit business is not only the innovation of credit business, but also the extension of credit business. The important role of the ecological environment determines the accounting and decision-making of financial credit. It provides great help for enterprises to reduce energy consumption and save resources. Therefore, It has changed the current situation of environmental damage by a large number of polluting enterprises and the profit model of wasting resources, avoiding the situation that the country first destroys the environment and then remediates the environment, and then destroys the environment and then remediates the environment.

Xue Jian and Zhu Di (2020) analyzed a large number of studies and found that the existing literature on green credit mainly focuses on macro and micro levels. At the micro level, the main research is to analyze the effect of green credit policy implementation from the perspective of enterprises and commercial banks [1].

2. Research and Analysis of Green Credit in China

2.1. Macro Level

From a macroscopic point of view, most of the existing green credit research has carried out detailed research on the function mechanism, operation mechanism, main difficulties and solutions of green credit. There are also many studies that provide inspiration and experience summaries for enterprises, banks, or provinces and cities that have made remarkable achievements in developing green credit.

Li Kaifeng et al. (2020) studied the panel data of 30 provinces and cities in my country from 2005 to 2017, calculated the industrial green total factor productivity of various provinces and cities in my country through DDF function and ML index, and studied the impact mechanism and transmission mechanism of green credit on productivity [2]. Zhu Ning et al. (2020) used the green credit data of 21 Chinese banks from 2013 to 2017, and adopted a multi-directional efficiency analysis method to find that the overall efficiency of Chinese banks' green credit business is not high due to low output efficiency. There are obvious differences in the output efficiency of projects. Based on the efficiency characteristics of green credit in my country, a corresponding efficiency improvement path is designed [3]. Wu Sheng et al. (2019) further put forward relevant suggestions for improving green credit efficiency from the perspectives of industry self-discipline, information sharing and external incentives [4]. Yan Dinghua (2019) believes that promoting the development of green credit in banks needs to proceed from two aspects. First, by improving the legal system of green credit and strengthening resource conservation, environmental protection and other related legal publicity and education methods, the government needs to lead the creation of a good green credit policy environment to promote the development of green credit business of banks; second, commercial banks need to work hard to improve their professional green credit capabilities, pay attention to the allocation of credit funds for the environmental protection industry, send outstanding financial professionals, speed up the research and development of new products, and actively absorb external development of green credit business experience [5]. Li Puling (2019) research shows that green credit business can effectively guide various behavioral decisions and economic behaviors of enterprises, and actively reduce risks in various environments. In addition, green credit also upgrades corporate resources. It has promoted the transformation and optimization of the industry, and pointed out that the development of my country's green credit business requires the strong support of preferential policies, the innovative development of green credit financial products, the refinement of evaluation standards, and the strengthening of professional talent training [6]. Cao Qian (2019) found through the research on the mechanism of the green financial system: compared with foreign models of developing green credit, the development of my country's green financial system has inaccurate green financial standards, unoptimized policy systems, and insufficient motivation for sustainable development. A series of issues that provided suggestions for the sustainable development of the green financial system are then discussed in an all-round way from four aspects: policy innovation, product innovation, technological innovation and financial organization innovation [7].

Gan Yuanyong et al. (2019) summed up the experience of Shanghai Pudong Development Bank in developing green credit, and pointed out that the idea of developing green credit in my country should start from four aspects: policy guidance, credit subject social responsibility awareness, development planning and internal management mechanism [8]. Zhou Fengmin

(2019) proposed that in order to create a "Qilu model", the government should strengthen the construction of planning systems, increase financial innovation, build policy support systems and improve risk prevention and control mechanisms to accelerate the development of green credit business [9].

2.2. Micro Level

From a micro perspective, most of the existing green credit research is empirical research. On the one hand, it is the impact of green credit on commercial banks, and on the other hand, it is the impact of green credit on enterprises, such as the scale of corporate debt financing, financing costs, The impact of loan duration, innovation performance, etc.

2.2.1. Research on Commercial Banks

Based on the research of commercial banks, most studies show that green credit business will promote the operation and development of banks. Tao Qian (2016) used the green credit and other related balances disclosed by 16 commercial banks to calculate the cost effect, and obtained the cost of green credit policy in the short term. The effect has a positive correlation with the profitability of Chinese banks [10]. Liu Limin et al. (2017) applied the panel data modeling analysis of more than ten typical listed commercial banks from 2010 to 2015 and concluded that green credit and bank profitability have a positive effect, and the scale of green credit business and the total scale of bank loans have the same positive effect [11]. Gong Yuxia (2018) designed a dynamic panel model and selected the data of 15 commercial banks from 2008 to 2016 as the research object, and the final results confirmed that the implementation of green credit has a significant positive correlation with the profitability of commercial banks [12]. Gao Xiaoyan (2020) calculated the comprehensive operational performance scores of large commercial banks, joint-stock commercial banks and city commercial banks through principal component analysis, and concluded that green credit can improve the operational performance of the commercial banking industry as a whole, and has a significant impact on the operational performance of different types of commercial banks. There is a great difference in the impact of this effect, and there is a hysteresis in this effect [13]. Zhang Lin et al. (2020) believe that the issuance of green credit has a positive impact on the return on interest-earning assets of commercial banks, and the financial performance of banks will also be enhanced due to the increase in the return on interest-earning assets [14].

However, a small number of scholars in China believe that the green credit business of commercial banks is not conducive to the operation and development of banks in reality. Ma Yufei et al. (2015) found through research that banks with green credit or commercial banks that join the "Equator Principles" will adversely affect their operating efficiency in the short term by increasing their own costs, but if they are in the medium and long term, they will generate brand effect which helped to improve the competitive advantage of enterprises and get faster development [15]. By building a dynamic game model, Wang Xiaoning (2017) found that the main targets of bank loans are industries with high pollution and high energy consumption, because these industries are more profitable, and commercial banks may not necessarily give loans to environmentally friendly industries, that is to say, the development of green credit business unsmooth will be detrimental to the bank's business development [16].

2.2.2. Research on Corporate Financing

From the research on corporate financing, there are mainly two studies with different conclusions. One is that most scholars believe that green credit can promote the development of green enterprises and inhibit the development of high-energy-consuming and heavy-polluting enterprises. Lian Lili (2015) also used the data of Chinese listed companies from 2000 to 2014 to prove that green credit can effectively reduce the financing cost of green enterprises and inhibit the development of high-polluting and high-energy-consuming enterprises [17]. Su Dongwei et al. (2018) found that the green credit policy has a very obvious financing penalty

effect, which hinders the interest-bearing debt financing business and long-term debt financing business of high-polluting enterprises, and the new investment will also be affected, showing an accelerated downward trend [18]. Chen Qi et al. (2019) also used the data of heavily polluted A-share listed companies from 2007 to 2016 to obtain similar results [19]. Liu Qiang et al. (2020) used A-share listed companies from 2007 to 2017 as a sample and used a double-difference research method to prove that the implementation of the "Green Credit Guidelines" can significantly improve innovation efficiency and innovation output, thereby reducing corporate loan financing costs, and for state-owned and financial institutions. The innovation output and efficiency improvement of heavily polluting enterprises in underdeveloped areas are more significant [20]. Qian Shuitu et al. (2019) used the grey correlation model to empirically analyze the correlation between Chinese industrial structure optimization and green credit. The study found that the correlation degree was ranked by the highest in the tertiary industry, the second in the secondary industry and the lowest in the primary industry, and then selected the correlation between China's industrial structure optimization and green credit. By analyzing the inter-provincial panel data from 2004 to 2017, the author found that green credit will optimize the industrial structure to a certain extent, but the effect is affected by many aspects [21]. Another is that a small number of scholars believe that the effect of green credit policy is not obvious enough and needs to be further improved. Zhang Ying (2018) analyzed the panel data of China's A-share listed companies from 2003 to 2016, and used the double difference model to find that the effect of green credit policy was not obvious enough, and the impact on the credit financing cost of high-energy-consuming and high-polluting enterprises was still limited. Cheaper credit funds can still be obtained, mainly because high-polluting and high-energy-consuming enterprises are generally enterprises with heavy assets in the industry and short-term stable profits or local pillar enterprises. In order to maintain stable interests, commercial banks will still invest in these enterprises. A large amount of credit funds [22].

3. Conclusion and Outlook

By sorting and classifying the existing literature in China, it is found that the research on green credit in my country is basically carried out at a later time. The existing literature analyzed from a macro perspective involves the mechanism of action, transmission path, and existing problems of green credit. The solutions are described relatively completely, but few literatures have carried out research on the points of policy recommendations, such as research on green credit product innovation, green credit system innovation research, etc. The future research direction can be closer to this aspect.

Regarding the study of green credit on commercial banks, the research content mainly focuses on the impact of green credit on the business performance and business risks of various banks, but there are few studies on other aspects such as the implementation of green credit by commercial banks to fulfill social responsibilities. Existing research content mainly focuses on corporate debt financing, and rarely studies from other perspectives, such as the impact of green credit on corporate business credit.

For the study of green credit on the corporate sector, most of the existing literature studies the impact of green credit on corporate debt financing. Few studies have studied other aspects such as commercial credit, and the research methods are too simple. It is known that Judging from the situation, a single research method usually has some drawbacks. More research methods should be innovated, and a variety of research methods should be combined to complement each other's strengths and weaknesses.

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