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Analysis of the Impact of Green Credit on the Profitability of Commercial Banks—The Case of ICBC

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Abstract: *Since 2007, the state has introduced a number of green finance-related policies, indicating that China's industry has gradually moved towards low-carbonisation and sustainable development. All commercial banks have actively responded to the green policies issued by the state, gradually increasing the proportion of green credit business in their business, resulting in the rapid development of green credit business in China. In such a social background, this paper will combine theoretical and empirical analyses to study the impact of banks' development of green credit business on their own profitability. First of all, the paper makes a brief introduction to the basic concept of green credit and related theories; next, the current development of green credit business in China and the relevant policies issued by the government are briefly described, and based on this, the current problems in the development of green credit are analysed; again, the sample data of Industrial and Commercial Bank of China for the period of 2008-2022 is selected, and a linear regression analysis to draw relevant conclusions.*

Keywords: *Green Credit, Commercial Banks, Profitability, Green Reputation*

1. Introduction

The rise of industrial civilisation in the 18th century brought about a series of global environmental problems, and people formulated sustainable development strategies to ensure the coordinated development of the three dimensions of man, economy and nature, and began to advocate green and civilised development. Since 2007, the state has introduced a number of green finance-related policies, indicating that China's industry has gradually moved towards decarbonisation and sustainable development. At the 18th National Congress held in 2020, the Central Government proposed for the first time the strategic goal of "carbon peaking and carbon neutrality", pointing out the general direction of China's financial institutions towards green finance in the coming decades.

2. Basic Introduction to Green Credit

2.1. The Concept and Characteristics of Green Credit

2.1.1. The Concept of Green Credit

The concept of green credit first emerged in the EU and the US. The EU issued the *Sustainable Finance Framework* in 2005, emphasizing the need to include environmental considerations in the risk assessment framework of banking institutions.[1] Subsequently, the US federal government also issued *Climate Change and Energy Security: National Action*, which regulates whether commercial banks are obliged to implement green credit, and introduced the *Framework for Climate Change and Energy Security* in 2009. The People's Bank of China (PBOC) first introduced the concept of green credit in *the Guidelines for Implementing Sustainable Development Strategies in China's Banking Sector* in 2010, emphasizing the need to establish a sound green credit system that is compatible with the concept of sustainable development.

Green credit is generally perceived as a green financial derivative in all countries. Financial institutions can use this tool to control the flow of loan funds to environmentally friendly enterprises through resource allocation, price instruments and other financial actions, so as to achieve energy saving

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and consumption reduction as well as protection of the ecological environment, and can, by restricting the flow of capital to high-pollution and high-energy-consumption enterprises, promote the transformation and upgrade of production methods and structure of enterprises, thus achieving the goal of optimizing the industrial structure and gradually moving towards sustainable economic development. However, the meaning of green credit varies slightly from country to country due to differences in the awareness of environmental risks. For example, some countries define green credit as the incorporation of environmental-related factors by commercial banks into their credit granting criteria, and is a typically non-coercive instrument.

2.1.2. Characteristics of Green Credit

Compared to traditional credit, green credit is characterized by the followings.

Firstly, there is a wide range of funding sources. Green credit funds mainly come from commercial banks' own loans, bond issuance, *etc*., and can also be raised from the issuance of green bonds, government subsidies, social donations, *etc*.

Secondly, the funds are invested in a focused manner. Commercial banks will make energy conservation and emission reduction one of the key areas for granting loans, and effectively manage and monitor the use of funds, and actively support strategic emerging industries such as environmental protection and energy conservation, clean energy and high technology as well as enterprises and projects with high growth, independent intellectual property rights and good development prospects.

Thirdly, there are flexible loan approaches. Green credit is a voluntary credit business, and banks are required to provide customers with a letter of green credit undertaking at the time of loan application, promising reasonable and effective supervision and management on the borrowers' energy conservation and environmental protection, and to provide legally binding green credit certificates as the basis for granting credit. After the project is completed and put into operation, the bank has the right to require the borrower to repay the loan early if the expected energy saving and environmental protection results are not achieved. The bank will only consider increasing the loan amount and ratio if the customer meets the expected environmental protection requirements through technical renovation and equipment upgrading.

2.2. Relevant Theoretical Analysis

2.2.1. Theories of Corporate Social Responsibility

Corporate social responsibility consists of both internal and external aspects.[7]Internal responsibility refers to a company's legal responsibility to its employees, shareholders, directors and other internal personnel, and entails proper management and maximization of the company's value. External responsibility refers to a company's responsibility to its customers, partners, the natural environment and society. It means that while maximizing profits, the company must take on social responsibility in terms of protecting the rights and interests of consumers, being courteous and honest, developing philanthropy and realizing scientific and sustainable development.

For this reason, enterprises should take the initiative to assume various social responsibilities, implement them into the strategic planning of enterprise development, and manifest them as a positive behavior in their daily operation. As an important part of the financial industry, commercial banks should take up this social responsibility and assist more enterprises to achieve green transformation through green credit and other green financial means.

2.2.2. Equator Principles (EPs)

The Equator Principles are voluntary guidelines, drafted in 2002 by several leading banks, including Algemene Bank Nederland (ABN). The EPs set the benchmark for the financial industry's judgement in assessing and managing environmental and social risks in project finance.[2] Once adopted, financial institutions must conduct their business in accordance with the environmental standards and socially responsible approach set out in the EPs, and are obliged to conduct rigorous and careful investigations into the environmental aspects of their lending. The EPs has regulated the environmental and social impacts faced in the investment and financing process and has urged the banking industry to form a relatively uniform and defined set of standards.

Within a year of the publication of the EPs, a dozen major banks worldwide had announced their adoption. By 2005, a total of 35 banks worldwide adopted the EPs, and their business accounted for 90% of the global volume of financing projects. Since then, the EPs have evolved into an industry standard and have been adopted by financial institutions around the world. By the end of 2022, 8 banks in China

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had adopted the EPs.

2.2.3. Green Reputation Effect

Corporate reputation is a unique resource that represents how an enterprise is recognized by the society and can enhance its competitiveness, while green reputation specifically refers to how the society recognize the enterprise's contribution to environmental protection. Green reputation directly affects the attitudes and behaviors of the enterprise's stakeholders. A good green reputation will increase the enterprise's visibility and competitive advantage, create revenue, and improve its overall evaluation in the industry. As an intangible asset, green reputation is characterized by slow appreciation and rapid depreciation, which force enterprises to strengthen management in order to maintain their good reputation.

Actively issuing green credit to control the flow of funds to green industries, thereby limiting the development of the high-pollution, high-energy-consumption and overcapacity industries is a reflection of commercial banks' responsibility for environmental protection. They should promote green credit and enhance public recognition so as to develop a good green reputation.

3. Current Status of Green Credit Development in China

3.1. National Policy

China's first policy on green credit was issued in 2007 when the former China Banking Regulatory Commission (CBRC; now renamed as China Banking and Insurance Regulatory Commission, CBIRC) issued guidelines on lending to protect the environment,[4] which set out requirements on banks' lending in an attempt to address the current problems of ecological degradation and energy consumption in China through financial means and to promote the transformation and upgrading of enterprises.

In 2012, the CBRC issued the *Green Credit Guidelines (CBRC [2012] No. 4)*, which further defines green credit business and provides clearer rules on the flow of financial institutions' funds and bank supervision.

In order to vigorously develop China's green financial system, the PBOC established the China Green Finance Working Group in 2014, specifically to advise on the development of green finance in China. In December of the same year, the General Office of the CBRC issued the *Key Evaluation Indicators for the Implementation of High-Pollution, High-Energy-Consumption and Overcapacity Industries in Green Credit,* which prompted banking institutions in China to establish a self-evaluation system for green credit, and provided quantitative criteria for banks to grant green credit.[8]

In August 2016, seven departments, including the PBOC, the Ministry of Finance and others jointly issued the *Guiding Opinions on Building a Green Financial System*, which is the world's first government-led policy framework for green finance, provided policy guidance on how to establish a sound institutional system and organizational system for green finance in China from the national level and laid the theoretical foundation for the long-term development of green finance.[9]

In March 2018, the PBOC issued a document on green credit statistics, requiring major banks to classify loans according to "loan amount", "loan quality" and other categories, and made statistics on the loans of environment, safety and other high-risk industries. In July of that year, the Central Bank of China developed a new Green Credit Assessment System based on the original assessment criteria. The implementation of this scheme has enabled banks to assess their green credit performance more carefully and to improve the accuracy of their assessments.

In 2021, the PBOC again revised the *Performance Evaluation Measures for Commercial Banks*, and added the percentage of green credit as a quantitative indicator and as an assessment criterion for banks' business performance.[12] Following the release of the revision, green financial assessment scores were incorporated into the PBOC's macro-prudential management tools and the evaluation system for green credit was gradually established.

In December 2022, the National Development and Reform Commission and the Ministry of Science and Technology jointly issued the *Implementation Plan on Further Improving the Market-Oriented Green Technology Innovation System (2023-2025)*, which proposes that fiscal and financial support for green technologies will be increased by encouraging the rating of green innovative technologies and giving tax incentives to innovative enterprises and individuals. The *Plan* will provide new recognition criteria for green lending by banks in China and promote their innovation in green lending products.

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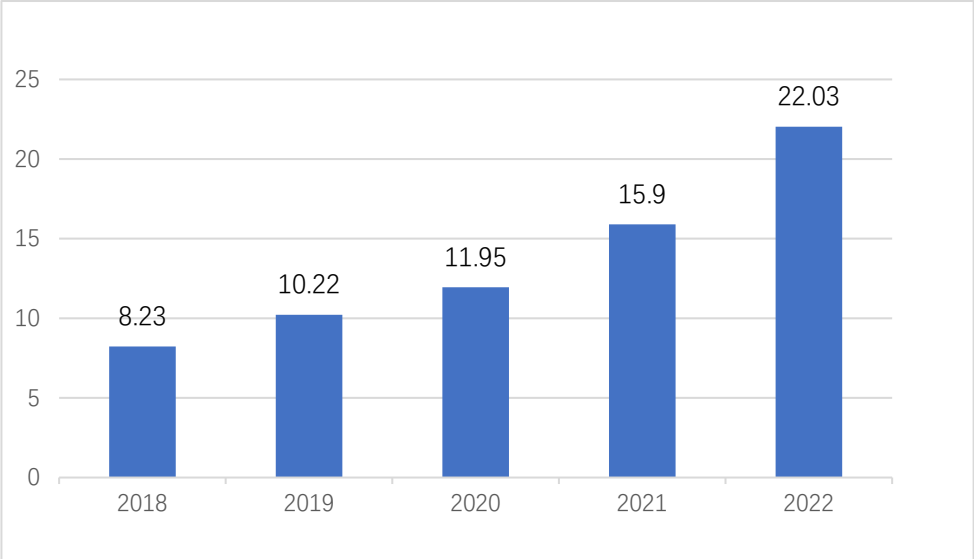
3.2. Scale of Development

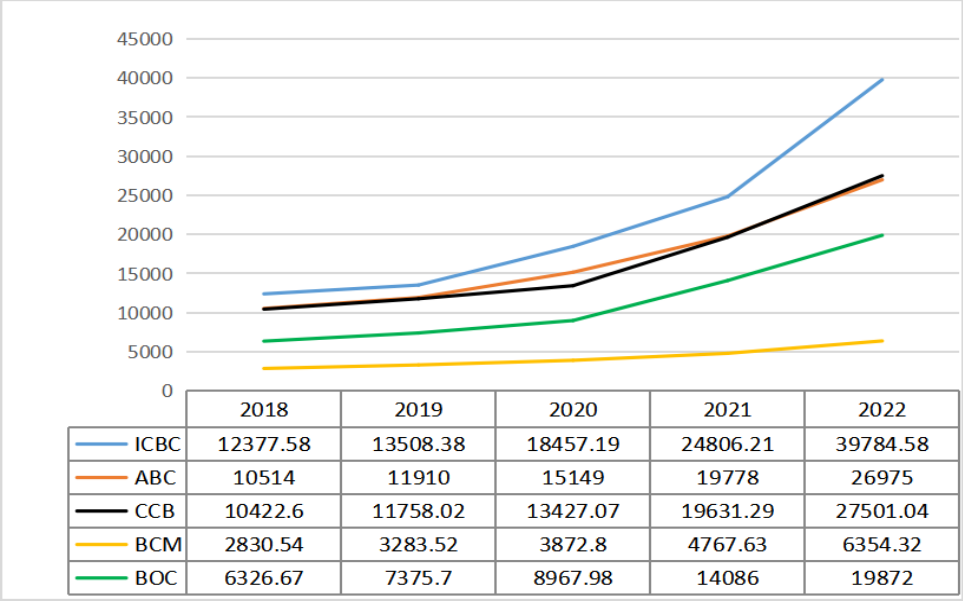
Since 2007, when the Chinese government started to promote green finance, more and more listed commercial banks have launched related projects, resulting in a tendency for green credit balances to rise year-on-year. Besides, more and more capital has been gradually withdrawn from the high-pollution, high-energy-consumption and overcapacity enterprises.

In this paper, a graph of the changes in the total green credit balance of China's major financial institutions in both domestic and foreign currencies as shown in Figure 1 was formed according to the data from the *Statistical Report on the Investment of Loans by Financial Institutions* published by the PBOC over the years. The graph shows that the total green credit balance in China shows a continuous increase, with the total balance climbing from 8.23 trillion CNY in 2018 to 22.03 trillion CNY in 2022, an increase of nearly three times.



Data Source: People's Bank of China

Figure 1: Green Credit Balances in Domestic and Foreign Currencies of Major Financial Institutions in China, 2018-2022. (Unit: 1 Trillion CNY)



	2018	2019	2020	2021	2022
ICBC	12377.58	13508.38	18457.19	24806.21	39784.58
ABC	10514	11910	15149	19778	26975
CCB	10422.6	11758.02	13427.07	19631.29	27501.04
BCM	2830.54	3283.52	3872.8	4767.63	6354.32
BOC	6326.67	7375.7	8967.98	14086	19872

Data Source: The Annual Reports and Social Responsibility Reports of the Banks

Figure 2: Green Credit Balances of the 5 Major Banks, 2018-2022. (Unit: 0.1 Trillion CNY)

In Figure 2, analyzing the 2018-2022 data of China's five major banks, the Industrial and Commercial Bank of China (ICBC) is the largest and fastest growing bank in terms of green credit, increasing from

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1,237.758 billion CNY to 3,978.458 billion CNY (an increase of 3.2 times). In terms of growth rate, Bank of China grew from 632.667 billion CNY in 2018 to 1,987.2 billion CNY in 2022 (an increase of 3.1 times). The remaining three banks had also increased their green credit size by more than 2 times in just 5 years.

In addition to the five major banks, national equity banks are also rapidly expanding their green credit scale. At the end of the third quarter of 2022, Industrial Bank's green loan balance exceeded 500 billion CNY, at 571.133 billion CNY. The green loan balances of China CITIC Bank, Minsheng Bank and Ping An Bank were 313.238 billion CNY, 162.932 billion CNY and 104.960 billion CNY respectively, with year-on-year growths of 56.71%, 51.82% and 51.82%, respectively.

4. Existing Problems in the Development of Green Credit

4.1. Unsound Institutional System

Firstly, a unified certification mechanism for green projects has not yet been established in China. At this stage, the PBOC, the CBIRC and individual commercial banks have different measurement calibers for green credit performance statistics, so huge differences exist in the data published for same projects under different regulations.[11] In particular, some small and medium-sized banks base their assessment of green credit projects mainly on self-assessment, which makes it difficult to ensure the fairness and accuracy of the assessment results. In addition, only some banks in China have accepted the EPs, while the large state-owned banks have not adopted them. The EPs, as an internationally recognized credit guideline, have been adopted by nearly 200 financial institutions in more than 30 countries around the world, and the low adoption of the EPs in China has made it difficult for China to align with international standards on green credit evaluation indicators.

Secondly, there is a lack of legislation on green credit in China. Although China has developed a green finance development plan and published a series of regulatory requirements in the *Green Credit Guidelines* and *the Guidelines on Special Financing for Encouraging Energy Efficiency*, the lack of effective incentives and penalties for supervision has prevented the full and complete implementation of green credit. Due to the lack of related regulations, banks rely more on *the Law Environmental Protection Law of the People's Republic of China* for their judgement on whether to grant loans to enterprises, resulting in less precision in the granting of green credit.

Finally, there is a certain conflict between the indicators of bank performance evaluation and the construction of green credit system in China.[6] The evaluation of commercial banks in China has always been based on traditional economic indicators, so banks will continue to pursue profit maximization as the main goal in granting loans. Compared to the traditional high-pollution, high-energy-consumption and overcapacity industries, new green industries such as clean energy and new materials characterized by high uncertainty, short creation time and fierce competition would bring credit risks to commercial banks.

4.2. Insufficient Product Innovation

China's green credit started late. Despite its rapid development in recent years, there is still a large gap with the world's advanced level. Especially in terms of product innovation, China has not yet formed a perfect green credit product system. At present, most of the green financial products launched by banks have no essential content and are simply transformations of traditional loan process. Based on a single product structure without novelty, some of the products even present a serious disconnection between product concept and function, making it difficult to use in practice. Moreover, with the exception of Industrial Bank, all other banks in China have adopted a set approach to credit financing, and offer no tailored products and solutions to the specific circumstances and needs of different enterprises. Most banks take green credit more as a must-do task, and are unwilling to and would not invest substantial financial and human resources in its development and research, resulting in a vicious circle in which green credit has little effect on the performance of commercial banks, and banks are even more unwilling to invest in it.[5] Therefore, commercial banks should note the role of green credit and continue to broaden the breadth and depth of green financial services, so as to adapt to the needs of market players in all aspects as soon as possible.[3] Meanwhile, the government should introduce corresponding policies to encourage banks to innovate their products.

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4.3. Inadequate Information Disclosure Mechanism

Since the Government began to promote green credit in 2007, it has not established a corresponding monitoring system and an effective restraining mechanism. At present, there is no uniform specification for the disclosure of environmental protection information of enterprises in China, and the degree of disclosure of environmental protection information varies from enterprise to enterprise, which brings difficulties in the evaluation of information, and also creates information asymmetry in the process of bank lending, which brings great difficulties to bank lending. At the same time, the disclosure of green credit information by China's commercial banks is not timely and comprehensive enough, and lacks persuasive power. The government has not set specific standards and quantitative parameters as indicators when implementing green credit policy, and there is no supervision and management department to impose regulatory penalties, so banks do not have the willingness and motivation to change their strategies. At the same time, government departments, environmental protection departments and financial institutions should also build a mechanism for information sharing, so that banks can have a comprehensive understanding of the company's relevant information, and can estimate the company's risk, in order to better make the right judgement.

5. Empirical Analysis

5.1. Data Sources and Variable Selection

5.1.1. Variable Selection

The following variables were selected for regression analysis in this paper:

(1) Explained Variable. In this paper, the return on total assets is an indicator selected to represent the profitability of a commercial bank. It describes the ratio of after-tax earnings for the year to the average total assets of the commercial bank and reflects the efficiency of profitability of the banks' assets.

(2) Explanatory Variable. The ratio of green credit balance (GLR) reflects the size of a bank's green credit balance.[13] Therefore, in this paper, it was selected as a quantitative indicator to measure the development level of a commercial bank's green credit business.

(3) Control Variables. The profitability of a commercial bank is also closely related to its own riskiness and the size of its assets. The non-performing loan ratio (NPLR) is the ratio of non-performing loans to total loans and reflects the quality of a bank's loans.[10] The capital adequacy ratio (CCAR) is the total capital divided by risk-weighted assets, and reflects the bank's resilience to risk; the higher the CCAR, the more resilient the bank is. These two indicators reflect the bank's own asset quality and management capabilities; the better he management, the better the asset quality, and the bank's profitability will rise. Bank size is the natural logarithm of a bank's total assets. An increase in the size of a bank will generate economies of scale, which will help the bank to reduce its operating costs and thus enhance its own profitability.

5.1.2. Data Sources

This paper selects the relevant data of Industrial and Commercial Bank of China Limited from 2009 to 2022 for the study, and uses the data of six listed commercial banks from 2009 to 2019 for comparison, including 4 state-owned banks (Agricultural Bank of China, Bank of China, China Construction Bank and Bank of Communication) and 2 joint-stock banks (China Merchants Bank and Industrial Bank).

The data in this paper were obtained from each bank's annual reports and historical social responsibility reports.

5.2. Model Setting

Considering that the profitability of a bank is affected by various factors, the following regression model is constructed:

$$ROE_t = \alpha + \beta GLR_t + \gamma_1 NPLR_t + \gamma_2 IA_t + \gamma_3 CCAR_t + \varepsilon_t$$

Where ROEt denotes the return on total assets of each bank in year t, β_i is the regression coefficient of the explanatory variable, γ_i is the regression coefficient of the control variable and ε_t is the random error term.

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5.3. Unit Root Test

Table 1: Results of ADF Test.

	Differential Order	t	p	Critical value		
				1%	5%	10%
ROE	0	-4.574	0	-3.501	-2.892	-2.583
GLR	0	-3.179	0.021	-3.501	-2.892	-2.583
NPLR	0	-4.444	0	-3.502	-2.893	-2.583
CCAR	0	-4.189	0.001	-3.501	-2.892	-2.583
IA	0	-9.862	0	-3.502	-2.893	-2.583

When conducting regression analysis, the stationariness of the panel data directly affects the results. In order to avoid pseudo-regression, the ADF unit root test was conducted on the data with SPSS software. According to the test results in Table 1, it can be seen that all variables are significant at 1% except for the variable GLR, which is also significant at 5%. This shows that the variables to be regressed for analysis are all stationary and can be regressed for analysis.

5.4. Regression Analysis

Table 2: Results of Linear Regression Analysis for ICBC Variables.

	Standardization Factor	**t**	**p**
	Beta		
Constants	-	-0.194	0.851
GLR	-0.48	-1.447	0.182
NPLR	-0.645	-3.381	0.008**
CCAR	-0.246	-0.32	0.756
IA	0.262	0.444	0.668

(Note 1): ** indicates significant correlation at the 0.01 level.

This paper used SPSS software to carry out linear regression on the data of industrial and commercial banks, and the results are shown in Table 2. Among them, the coefficient of NPL ratio is -0.645, $p<0.01$, indicating that the NPL ratio has a significant negative impact on the bank's profitability, and the lower the NPL ratio, the lower the risk, the stronger the profitability.The two variables of CCAR and IA do not have a significant impact on profitability. And the regression coefficient of GLR is -0.48, which indicates that the higher percentage of green credit business of ICBC will reduce the bank's own business performance. The P=0.182 for the percentage of green credit business is greater than 0.05, which indicates that the green credit business of ICBC has a non-significant effect on the bank's profitability.

Table 3: Results of Linear Regression Analysis.

	Standardization Factor	**t**	**p**
	Beta		
Constants	-	4.331	0.000**
GLR	-0.271	-2.971	0.004**
NPLR	-0.519	-4.595	0.000**
CCAR	-0.197	-1.432	0.156
IA	0.118	0.743	0.46

(Note 1): * indicates significant correlation at the 0.05 level and ** indicates significant correlation at the 0.01 level.

Table 3 shows the results of the linear regression analysis for the other banks. Except for GLR, the regression results for the other variables are similar to those of ICBC. The regression coefficients of GLR for other banks are also negative, but their p-values are less than 0.01, indicating that the issuance of green credit cannot enhance their business performance at present, and would cause counter-effects.

There are 3 main reasons for this phenomenon. Firstly, ICBC is relatively large in total size than other banks and has a wide range of businesses, and green credit business accounts for a relatively small proportion, which hardly has a huge impact on its profitability directly. However, other banks have a higher proportion of green credit, so green credit has a significant impact on their profitability. The banks' own lack of attention to green credit and the single nature of green credit products also prevented it from bringing positive benefits. Secondly, the lack of information sharing mechanism between banks and enterprises has resulted in information asymmetry. This makes it costlier for banks to examine the

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enterprises' qualifications, finances and other relevant information when granting loans, and the information obtained may still be incomplete, inaccurate and biased, which greatly increases the cost for banks to grant green credit. Thirdly, the characteristics of green credit lead to a certain lag in its impact on the profitability of banks. On the one hand, most of the green industries in China are emerging industries in the formative stage with less stable returns. Banks' investment in green industries is still in a situation of high investment and low return, and it will take some development time to increase banks' profitability. On the other hand, the implementation of green credit will enhance the bank's social reputation, environmental protection concepts, etc., but this impact is not directly on the profitability of the effect, need to go through a series of complex transmission mechanism, so there is a certain lag.

6. Recommendations

6.1. Increase Publicity to Create A Green Reputation Effect

Banks in China are facing highly complex domestic and foreign market environments. Across the world, the concept of green finance, such as green credit and green bonds, has long been known and become a new development trend and the main direction for financial transformation in various countries. In order to keep up with the general environment and to be in line with international standards, commercial banks in China have to transform towards green finance. However, this is new in China with relatively low public acceptance. Therefore, banks will inevitably lose a certain number of domestic customers when they implement green credit business.

Banks should actively promote and showcase the specifics of their green credit business, including the types and features of products, to enhance public awareness of green credit. Positive publicity can build a positive social image for the bank and give it a green reputation, which has a huge impact on the bank's stakeholders, increases the bank's exposure and attracts more quality customers and investors, thus enhancing the bank's profitability.

Besides, enhancing green reputation will create a virtuous circle. In view of the slow growing and fast depreciating of green reputation, banks will strengthen their management and business capabilities in order to maintain their green reputation, thus taking on more social responsibility and improving their green credit.

6.2. Optimize Green Credit Products.

Currently, banks have a single structure of green credit products, and, without innovation and substance, only launched new products reworked from traditional loan models, which has led to the negative impact of higher proportion of green credit business on the performance of commercial banks. Therefore, under the current background and trend of green transformation of the industry, banks in China should carry out more in-depth research and understanding of the investment and financing needs in the financial market, create diversified green credit products, and enhance their competitiveness.

Banks can innovate their financial products from these two aspects: (1) Broaden the way and types of guarantee. At present, banks' green credit loans are mostly guaranteed with mortgage. The traditional guarantee way of using real estate and other collateral as credit assets is not only inconsistent with the concept of green credit, but also increases the difficulty of secured borrowing for small and medium-sized green enterprises. Banks can innovate new ways of green credit guarantee based on risk management. The use of carbon assets as a line of credit can also be promoted to help more enterprises gain access to financing. (2) Integrate information technology into green credit. Although banks have started to use new financial technologies such as blockchain, big data and cloud computing to provide technical support for their products, financial technology has not been integrated with green credit and has not been fully exploited in product innovation and information collection. In the future development, banks should give full play to the advantages of financial technology and design diversified green credit products as a way to improve their core competitiveness.

Moreover, the state should introduce relevant policies to encourage commercial banks to carry out green credit business and provide policy support for their green credit business.

6.3. Improve The Information Disclosure and Regulatory System.

Establish a unified certification mechanism. The People's Bank of China, China Banking Regulatory

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Commission and other relevant departments should issue unified and specific implementation guidelines, which can adopt the international indicator SPTs for assessing green credits, or draw on the internationally mature Equator Principles to categorise projects and adopt different levels of assessment and review.Besides, the relevant authorities have an obligation to help and supervise banks and enterprises to understand and implement policies related to green credit, so that the policies can be better implemented.

Establish a sound system of laws and regulations. The environmental protection department should formulate unified laws and regulations, increase the legal provisions related to green credit, and increase the penalties for the high-pollution, high-energy-consumption, and overcapacity enterprises, so as to discourage banks from granting loans to such enterprises and promote the development of green credit business. In addition, laws and regulations on the operation rules of banks' green finance business should be constructed with banks and other relevant financial institutions as the objects, so as to clarify the responsibilities and obligations to be borne by banks, and to precisely identify and punish the responsible parties when problems occur.

Establish information sharing channels. At present, information asymmetry between banks and enterprises is a major obstacle to the accurate granting of green credit. Environmental protection departments should improve the environmental information disclosure system, and regulators and commercial banks should strengthen communication with environmental protection departments to achieve sharing of environmental information and provide strong environmental information support for banks' credit decisions. In addition, the information sharing mechanism between financial institutions (incl. commercial banks) and government environmental protection departments should be continuously improved so that the information related to green finance collected by the departments can be applied to commercial banks' credit decisions in a timely and accurate manner.

7. Conclusions

The panel data of ICBC between 2009 and 2022 was enrolled for the linear regression analysis on how the issuance of green credit affects the bank's profitability through SPSS software. It is found that the issuance of green credit poses negative but insignificant impacts on the bank's profitability. The main reasons include that the green credit in China is at an early stage of development, and accounts for a small proportion of all bank business; green credit products are of a single category; and relevant laws, information disclosure measures and regulatory mechanisms are not perfect. All these lead to the negative impact on the bank's business performance. To address this situation, corresponding suggestions are provided in the paper that banks should innovate green credit product categories and provide differentiated services for different enterprises; the publicity of green credit should be increased to build up a green reputation effect; the government should introduce corresponding laws and regulations to provide policy protection for the construction of a perfect information disclosure mechanism, supervision and management mechanism.

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