The Practice Path of Integrated Development of Green Finance and Inclusive Finance in the "Double Carbon" Environment - and the Enlightenment of Promoting the Development of Small Cities

Ziwen Zhao

School of Finance, Inner Mongolia University of Finance and Economics, Hohhot, China
Zzw18847110867@Outlook.com

Abstract. This paper aims to outline the practical path of the integrated development of green finance and Inclusive Finance. Given that the global efforts to promote green development and sustainable transformation and the popularization and promotion of green financial products in some small and medium-sized cities are still relatively limited, the integration of Inclusive Finance and Green Finance in small and medium-sized cities shows insufficient product innovation, the high initial investment and long payback period of rural clean energy projects, and the risk management system of green finance and inclusive financial products in small and medium-sized cities is not yet perfect. On this basis, the author cites the development path of building a differentiated green inclusive financial system, establishing an integrated risk assessment mechanism, and strengthening policy guidance.This paper aims to combine green finance with inclusive financial products and inject vitality into small and medium-sized cities. It not only effectively promotes the economic development of the local region, but also realizes the unification of economic benefits and environmental benefits.

Keywords: Green Finance, Inclusive Finance, Small and Medium-Sized Cities, Integrated Development.

1 Introduction

In recent years, driven by the global response to climate change and the goal of "double carbon", green finance and inclusive finance have formed relatively complete systems respectively. However, the problem of "Inclusive Finance is not green enough and green finance is not inclusive enough" in small and medium-sized cities has become increasingly prominent. Green finance is more inclined to provide support for large enterprises and mature technologies, while Inclusive finance focuses more on cost considerations for small and medium-sized enterprises and immature projects. Green finance and inclusive finance have been advancing along a relatively independent path for a long time. How to achieve effective synergy between the two has become a realistic issue that cannot be ignored in the current financial field.

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In practice, the integration of green finance and inclusive finance faces significant difficulties. There are obstacles to promoting green financial products in small and medium-sized cities: the lack of integration of green finance and inclusive financial products, the mismatch between financing products and customer needs, and the weak capacity for sustainable investment and financing ability of small and medium-sized cities in green finance [1,2]. The integration of green finance and inclusive finance shows a decreasing trend from large cities to small cities in a spatial gradient [3].

From the perspective of practice, this paper points out the main problems existing in the current integration of green finance and Inclusive Finance in small and medium-sized cities, focusing on the lack of discussion on the implementation path and micro mechanism of small and medium-sized cities, especially the lack of system construction of differentiated financial products, the change of internal evaluation mechanism of banks and the strengthening of policy guidance. Small and medium-sized enterprises in small and medium-sized cities are large-scale, and they are the key areas to implement the "double carbon" goal and common prosperity of urban and rural areas. The differentiated system construction, integrated risk assessment, and policy guidance framework cited in this paper can provide decision-making reference for local governments' business innovation and enterprise development in small and medium-sized cities.

2 Practical Dilemma of the Integration of Green Finance and Inclusive Finance in Small and Medium-Sized Cities

2.1 Weak Green Financial Services in Small and Medium-Sized Cities

The plight of small and medium-sized cities, small and medium-sized cities and green financial services are weak. The financial system, industrial structure, and infrastructure of small and medium-sized cities determine that they not only find it difficult to obtain the popularity of green financial resources in large cities, but also face the difficulty that traditional inclusive finance cannot completely transform to green finance. From the perspective of the financial system, the sale of financial products in small and medium-sized cities is highly dependent on small and medium-sized banks, but the proportion of green credit in these banks is very low. From the perspective of industrial structure, the industrial forms of small and medium-sized cities are mostly traditional manufacturing and agricultural product processing. From the perspective of infrastructure, green finance in small and medium-sized cities is characterized by a lack of talents, an imperfect green finance industry chain, and asymmetric market information.

2.2 Structural Dislocation of the Integration of Green Finance and Inclusive Finance

The integration structure of green finance and inclusive finance is different. The current green financial standards mainly focus on "pure green" projects and large-scale projects, and it is difficult for small and medium-sized industries in small and medium-

sized cities to enter. Green finance focuses on local energy, transportation, and other fields, and the green business model of inclusive groups is difficult to be recognized. Small and medium-sized enterprises are faced with factors such as high integration costs and weak local government supervision, so they are not active in applying for and using green financial products [1]. What is more noteworthy is that these obstacles are not evenly distributed in space, but the performance of small and medium-sized cities has been magnified - problems such as insufficient innovation of financial products, lack of integrated talents, and enterprises' inability to reasonably and actively choose green financial products have been magnified in remote small cities with declining resources, making small and medium-sized cities and rural areas weak areas to promote the integrated development of green finance and Inclusive Finance. Ligang's measurement shows that the development level of green Inclusive Finance in the eastern region continues to be ahead of that in the central and western regions and Northeast China, showing a significant spatial imbalance [4].

3 Path Construction of Integrated Development of Green Finance and Inclusive Finance

3.1 Build a Differentiated Green Inclusive Financial System

In view of the serious lack of innovation in the same model of green financial products in small and medium-sized cities, the key solution to solve the problem is to build a differentiated green inclusive financial system. At present, the green credit products provided by small and medium-sized city banks and financial institutions show a standardized trend of "standardizing the boundary of green projects and unifying the implementation process". This paper calls it the "unified supply" phenomenon, which can neither accurately push products for different industries, nor involve small and micro enterprises that lack large assets. To solve this situation, the key is to promote the transformation of green financial products from standard "unified supply" to "differentiated matching".

The core design of differentiated green inclusive finance should include three aspects. First, establish diversified and inclusive green finance recognition standards. The existing green finance standards are based on the green industry guidance catalogue, and tend to be large-scale clean energy and infrastructure projects. Small green activities operated by small and medium-sized enterprises, such as participating in green supply chain activities, were excluded from the scope of green finance projects in the early stage. In this regard, it is essential to establish a green inclusive financial evaluation standard suitable for the business model of small and medium-sized cities, and classify the specific business mode of small and medium-sized enterprises into a quantifiable financial evaluation framework [5]. Second, build a multi-level product marketing program. Subdivide according to the industry characteristics and total assets of enterprises: for small enterprises starting businesses in the early stage, develop inclusive credit products linked to green finance to reduce the dependence of enterprises on traditional collateral; For growing and developing enterprises, designing energy

efficiency credit with a combination of floating interest rate and carbon reduction degree has formed a positive incentive for enterprises to "the more carbon reduction, the higher interest rate". Develop green industrial chain financial products for local characteristic industries (such as agricultural product planting), and promote them from core enterprises to branch enterprises level by level. Third, innovation covers traditional mortgage financial products. Explore the use of energy efficiency and emission reduction assets to replace traditional collateral based on the right to carbon emissions from the ecological environment, and use scenario products such as "green credits" and "carbon emission reduction loans" to convert the green behavior data of small and medium-sized enterprises into credit assets to make up for the shortcomings of traditional financial products [6].

3.2 Establish an Integrated risk assessment mechanism

The differentiated green inclusive financial system solves the problem of enterprise loans, and the integrated risk assessment mechanism puts forward the basis for enterprise loans. Small and medium-sized enterprises in small and medium-sized cities generally lack qualified collateral. Rural clean energy projects face the inherent characteristics of high initial investment, low return rate and long return cycle. The traditional credit model with mortgage guarantee as the core and enterprise financial indicators as the sole criterion will certainly turn away from these financing needs. In order to solve this dilemma, it is necessary to promote the transformation of the bank risk assessment mechanism from "linear financial evaluation" to "two-way evaluation of the integration of financial indicators and environmental performance".

The core of the integrated risk assessment mechanism is to transform environmental benefits into important factors in the assessment system, which can be constructed from three dimensions. First, incorporate the performance of ESG into the specific evaluation criteria of the bank [7]. In addition to the traditional financial indicators, the evaluation system for environment, society and governance should be established: the environmental dimension tests the carbon emissions of enterprises, the efficiency of energy use and recovery, and the treatment mode of used products. The social dimension focuses on the handling of community relations and the protection of labor rights and interests of enterprises. The governance dimension should comprehensively evaluate the comprehensiveness of enterprises' environmental supervision and management. For rural clean energy projects, the data on carbon emission reduction, clean energy statistics and other environmental benefits can be transformed from "enterprise cost" into "credit assets". Second, establish a long-term dynamic risk assessment model. In view of the characteristics of high investment in rural clean energy in the early stage and long return time in the later stage [8], the author changed the current profitability and short-term debt repayment ability, introduced the evaluation method of project full cycle, and included the long-term green income (such as carbon trading income) into the calculation of enterprise repayment ability according to the reasonable discount rate, to match the time cycle of risk assessment with the return cycle of green project income. At the same time, establish a dynamic evaluation and adjustment mechanism - with the accumulation of operation data of clean energy projects and the continuous embodiment of environmental data, gradually adjust the

credit rating and repayment interest rate, forming a positive cycle of "the greener, the more favorable". Third, build a data-driven risk early warning and grading system. Integrate the carbon account data, environmental protection credit rating and other information of enterprises, establish a green risk monitoring and early warning system, and give preferential policies of risk rating to enterprises that actively implement green transformation. This mechanism can not only alleviate the reverse problem of information asynchrony between enterprises, but also shorten the time cycle of environmental risk early warning and reduce the fear of small and medium-sized banks due to their inability to judge environmental risks.

3.3 Strengthen Policy Guidance and System Guarantee

The effective operation of the differentiated product system and integrated risk control mechanism is inseparable from the systematic guarantee of the external policy environment. The financial institutions and banks in small and medium-sized cities have weak operational ability, and it is difficult to establish a long-term green inclusive financial risk system relying solely on the spontaneous force of the market. Policy guidance and institutional guarantee play a key role in helping the operation of small and medium-sized financial institutions. At present, China's green finance policy focuses on the construction of infrastructure and the introduction of diversified financial instruments. The integrated incentive policy still needs to be improved [2]. The inclusive finance policy has not taken environmental factors into account before, and both lack policy considerations for small and medium-sized cities. To strengthen policy guidance, need to combine the risk sharing of incentive tools and the consideration of ability.

First, people should improve the incentive tools of structural monetary policy, and give full play to the leading role of monetary tools such as differential deposit reserve ratio and green credit rediscount for the small-scale and high cost of green credit of financial institutions in small and medium-sized cities. Specifically, differentiated risk ratios can be set up for green inclusive financial loans issued by small and medium-sized banks to reduce their capital occupation; Green loans will be granted to eligible banks, and low-cost funds will be designated to be transported to the green inclusive areas of small and medium-sized cities; At the same time, the report on the development process of green inclusive finance business was incorporated into the macro Prudential assessment system (MPA), forming a dual combination transmission mechanism of regulatory guidance and market active promotion. Second, establish a multi-level risk sharing and credit system. The credit foundation of small and medium-sized enterprises in small and medium-sized cities is weak, and the information asymmetry and lack of credit guarantee faced by financial institutions and banks are particularly prominent. Therefore, a three-level sharing structure of "government, market, and financial institutions" should be established. At the government level, a risk compensation mechanism for green inclusive credit should be established to compensate a certain proportion of small and medium-sized enterprises that issue green credit that meets government standards. At the guarantee level, people should improve the government financing guarantee system and reduce the guarantee requirements for small and medium-sized industries that launch new differentiated green credit products; At the

tool level, people will promote the inclusion of environmental rights and interests such as carbon emissions reduction in the scope of collateral, and broaden the boundary of qualified collateral for SMEs. The main role of this system is to make up for the lack of commercial credit with public credit, let risk sharing reduce the credit concerns of small and medium-sized banks, and provide government guarantee for the large-scale promotion of green Inclusive Finance. Third, establish policy transmission channels and build long-term effective mechanisms. Policy guidance should not stay at the level of principle advocacy, but should form a complete closed loop of "incentive → dominance → landing → feedback". On the one hand, people should build an assessment and evaluation system for local governments and financial institutions incorporated into the green inclusive system, including the proportion of green inclusive loans, the number of small and medium-sized enterprises served, environmental benefits and other indicators as evaluation indicators, to turn policy incentives into the endogenous driving force of financial institutions. On the other hand, people should strengthen the long-term investment in green finance capacity building of small and medium-sized banks: build a regional green finance talent training and knowledge sharing platform, provide green credit operation guidelines and case bases for small and medium-sized cities, and promote the diffusion and adaptation of green finance reform and innovation pilot areas to small and medium-sized cities [9,10]. Only by combining institutional incentives with capacity enhancement can promote the combination of green finance and Inclusive Finance.

4 Conclusion

Taking small and medium-sized cities as the research goal, this paper focuses on the practical dilemma and breakthrough ways of the integration development of green finance and Inclusive Finance. Based on sorting out the dual dilemma of weak green financial services and structural dislocation of green and universal integration in small and medium-sized cities, this paper summarizes three collaborative ways of building a differentiated green and inclusive financial system, establishing an integrated risk assessment mechanism, and strengthening policy guidance and institutional protection, and looks forward to the prospects and constraints of integrated development. Through the research, this paper draws the following main conclusions.

First, small and medium-sized cities are at the weak end of the integration of green finance and Inclusive Finance. The financial system of small and medium-sized cities is highly dependent on small and medium-sized banks, but the proportion of green credit of small and medium-sized banks is very low; The industrial structure is dominated by traditional manufacturing and agricultural product processing, and the financial support for green transformation is insufficient. At the infrastructure level, the problems of talent shortage and information asymmetry are prominent. At the same time, green finance and inclusive finance present structural dislocation in small and medium-sized cities. Now the standard tends to be "pure green" projects and large enterprises. The triple mechanism of access exclusion, conditional exclusion and exclusion blocks the inclusive group from green financing. This dilemma has been

structurally amplified in the spatial dimension, and some empirical studies have summarized it as "the end dilemma in the decline of regional gradient".

Second, to solve the dilemma of green and universal integration in small and medium-sized cities, need to build a system, mechanisms and policy guidance. At the system level, should establish inclusive identification standards and amulti-level product matrix, innovate light mortgage financing tools, and realize the transformation from "standardized supply" to "differentiated adaptation". At the mechanism level, it is necessary to incorporate non-financial information such as ESG performance and environmental performance into the bank risk assessment system, establish a long-term dynamic evaluation and data-driven risk early warning mechanism, and promote the transformation of risk control logic from "one-dimensional financial evaluation" to "two-dimensional integrated evaluation". At the policy level, should comprehensively use structural monetary policy tools,sharing system and an assessment closed-loop mechanism to provide external guarantee for small and medium-sized banks' financial support, risk mitigation and capacity-building. The three responded to the three core issues of "what can be loaned", "what can be loaned," and "Why are willing to lend" in the integration of green and universal in small and medium-sized cities.

Third, the deep integration of green finance and Inclusive Finance in small and medium-sized cities has the expected effect of economic, social and governance, but it also faces practical constraints. At the economic level, differentiated products and two-dimensional risk control are expected to guide the flow of capital from high-carbon fields to low-carbon fields, giving birth to small and medium-sized enterprise clusters with green competitiveness as the core. At the social level, light mortgage financing tools and policy risk can reduce the threshold for marginalized groups to enter the green financing market and promote the fairness of green transformation. At the governance level, the integrated risk control and closed-loop incentive mechanism will force the construction of a public data platform, transforming environmental objectives from administrative pressure to endogenous market power. However, the realization of the above outlook still faces some practical constraints, such as insufficient investment in data infrastructure, difficult sectoral coordination, and a long capacity-building cycle for small and medium-sized financial institutions. The differences in industrial structure across regions also require that the integration scheme seek a balance between top-level design and local adaptation. This means that the deep integration of green finance and Inclusive Finance in small and medium-sized cities is not a short-term battle, but a long-term exploration that requires institutional resilience and multi-party coordination.

The marginal contribution of this paper is to expand the research perspective of the integration of green finance and Inclusive Finance from the macro level and large cities to small and medium-sized cities, which has been neglected for a long time, build a systematic analysis framework of "differentiated product system - integrated risk assessment mechanism - policy guidance guarantee", and provide an operable path reference for the policy design and business innovation of local governments and financial institutions. At the same time, this paper also has some limitations: limited by the availability of micro data at the level of small and medium-sized cities, it failed to quantify the effect of the integration scheme; The differentiated integration path for different types of resource-based, manufacturing and agricultural small and medium-

sized cities has not been fully developed. The follow-up research can be further deepened in the above direction to provide more accurate empirical support for the integrated development of green finance and Inclusive Finance in small and medium-sized cities.

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