

# Research on Green Finance Development of Rural Commercial Bank System in Sichuan Province: Taking G County Rural Commercial Bank in Y City as an Example

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**Abstract:** Currently, China's economy is at a critical juncture transitioning from a phase of rapid growth to one of high-quality development. Green development serves as the essential prerequisite and fundamental requirement for achieving high-quality development. As the core of the financial system, commercial banks will play a leading role in advancing China's green finance development. The implementation of green finance practices by commercial banks is a key factor in promoting China's green development. This paper examines the current status of green finance development in rural commercial banks in Sichuan Province, identifies existing challenges, and proposes corresponding solutions.

**Keywords:** Rural Commercial Bank; Green Finance; Integrated Development.

## 1. Introduction

Wang Wen et al. [1] investigated the evolution of green finance from the pre-industrial era to the first half of the 21st century. The study found that the origins of green concepts date back to the Industrial Age, when the extensive use of fossil fuels such as coal led to a series of environmental issues. Subsequently, there was increased reflection on the relationship between the economy and the environment. In 1987, the World Commission on Environment and Development first introduced the concept of "sustainable development" in its report *\*Our Common Future\**. In 1992, the United Nations Environment Programme, together with several commercial banks, issued the *\*Banking Statement on Environmental Sustainability\**, which introduced the concept of "sustainable finance" for the first time. In 2003, ten major international banks signed the *\*Equator Principles\**, marking the widespread adoption of green finance principles within the financial sector.

As China's economic development shifts from pursuing rapid growth to high-quality development, the nation's emphasis on green finance has grown increasingly significant. Liu Lingjian et al. [2] employed bibliometric methods and visualization analysis techniques to examine green finance-related papers published between 2000 and 2020, revealing that academic achievements during this period primarily focused on constructing conceptual frameworks for green finance, refining standard systems, formulating environmental policies, and exploring economic development pathways. In research on the green finance system, Chen Minfeng's team [3] highlighted that green credit serves as a core developmental element, while the development of green bonds and green insurance lags behind. The banking sector provides financial support for green projects through issuing green bonds and offering green loans, with these funds utilized to promote the growth of green industries. Throughout this process, banks act as financing channels, enabling green projects to secure the necessary capital to achieve sustainable development goals.

In 2018, Sichuan Province issued the "Sichuan Provincial

Green Finance Development Plan" and launched provincial-level green finance innovation pilot projects, designating Xindu District of Chengdu, Guangyuan City, Nanchong City, Ya 'an City, and Aba Prefecture as provincial-level green finance innovation demonstration zones. In August 2023, seven departments including the Sichuan Provincial Financial Regulatory Bureau and the People's Bank of China Sichuan Branch jointly issued the "Notice on Expanding Provincial-Level Green Finance Innovation Demonstration Zones," adding Y City and Panzhihua City as new demonstration zones. By analyzing the current status of green finance development in rural commercial banks in Sichuan Province, this paper aims to provide reference recommendations for addressing existing challenges and explore future development directions.

## 2. Current Development Status and Existing Issues of Rural Commercial Banks in Sichuan Province

By the end of 2024, the rural commercial banking system in Sichuan Province had completed a comprehensive restructuring, establishing a legal entity framework spanning provincial, municipal, and county levels. At the provincial level, Sichuan Rural Commercial Bank was established and commenced operations in January 2024, with a registered capital of RMB 22 billion. The system oversees 21 municipal rural commercial banks and 149 county-level branches, operating nearly 5,000 branches and 11,000 rural financial service stations. Its deposit scale surpassed the RMB 2 trillion mark, making it the first financial institution in the province to achieve this milestone. The system demonstrated particularly outstanding performance in green finance: the balance of green loans surged from approximately RMB 30 billion in 2022 to RMB 64.4 billion in 2024, achieving an average annual growth rate of 92% over three years. Green bond balances reached RMB 18.7 billion, agricultural-related loans exceeded RMB 200 billion, and total loans to technology enterprises totaled RMB 34.1 billion, significantly supporting local economic green transformation

and rural revitalization efforts. Overall, the Sichuan Rural Commercial Bank system has evolved into a pivotal financial force serving agriculture, rural areas, farmers, small and micro enterprises, and green industries across the province, fully leveraging the advantages of its comprehensive restructuring and exceptional green finance practices.

## 2.1. Current Development Status and Existing Issues of Sichuan Rural Commercial Banks

**Table 1.** Product List of Sichuan Rural Commercial Bank

kind	name	function	Application Field
Policy Product	Sichuan Carbon Rapid Repair Subsidy	Carbon emission reduction bill rediscounting	Clean Energy, Energy Conservation and Environmental Protection
	green gold loan	Policy-oriented specialty products	Green industry
	Green Pass	green note financing	Green Supply Chain
Innovative credit products	carbon account linked loan	Research on Linking Interest Rates with Carbon Emission Reduction Performance	High-carbon industry transformation
	carbon footprint linked loan	Link loan terms to carbon footprint	Manufacturing, Agriculture
	"Ecological Loan"	Supporting ecological conservation and restoration	Ecological Environment Industry
	low carbon loan	Support energy-saving and carbon reduction projects	Industrial energy conservation
	Green Innovation Loan	Supporting green technology innovation	green science and technology
Comprehensive Product for Rural Revitalization	Rural Revitalization Seed Industry Loan	Supporting the revitalization of the seed industry	modern agriculture
	Tianfu Granary Loan	Supporting the development of high-standard farmland	food safety
	Special Loan for High-standard Farmland Construction	Agricultural infrastructure construction	Agricultural Infrastructure

By the end of 2024, Sichuan Province's rural commercial banking system had completed comprehensive restructuring, establishing a three-tier legal governance structure at provincial, municipal, and county levels. At the provincial level, the Sichuan Rural Commercial Bank Consortium was established with a registered capital of 22 billion yuan, officially commencing operations in January 2024. The consortium manages 21 municipal-level rural commercial banks and 149 county-level rural commercial banks, operating nearly 5,000 branches and 11,000 comprehensive rural financial service stations. Its deposit balance surpassed the 2 trillion yuan threshold, making it the first financial institution in Sichuan Province to achieve this milestone.

The green finance sector has demonstrated particularly robust growth momentum. The outstanding balance of green

loans surged from approximately 30 billion yuan in 2022 to 64.4 billion yuan in 2024, achieving an average annual growth rate of 92% over the past three years. Meanwhile, green bond outstanding balances reached 18.7 billion yuan, agricultural-related loans exceeded 200 billion yuan, and loans to technology enterprises totaled 34.1 billion yuan, effectively supporting local economic green transformation and rural revitalization efforts.

Overall, thanks to its comprehensive restructuring achievements and outstanding green finance practices, the Sichuan Rural Commercial Bank System has evolved into a pivotal financial force serving the province's agriculture, rural areas, farmers, small and micro enterprises, and green industries.

### 2.1.1. Incomplete Information Disclosure Mechanism

The information disclosure mechanism of rural commercial banks still has shortcomings, which are mainly manifested in the following aspects:

1. Inadequate information disclosure. Only the inclusion of green credit in the bank's development strategy was disclosed, without specifying the projects and amounts of green credit disbursements. Typically, only brief project introductions are provided to the public, with subsequent project progress disclosures being insufficient.

2. The disclosure standards lack uniformity. In green finance information disclosure practices, agricultural commercial banks not only fail to adopt standardized annual disclosure indicators, but the specific metrics disclosed by banks across Sichuan Province also exhibit significant annual variations. Although a few banks have published environmental information disclosure reports, the disclosure standards across different periods remain markedly inconsistent.

3. Limited channels for information disclosure. Although Chengdu Rural Commercial Bank maintains an independent official website for information disclosure, all rural commercial banks in Sichuan Province publish financial data through the official website of Sichuan Rural Credit Cooperatives. The disclosed information primarily includes annual financial statements and major transaction records of each bank, occasionally supplemented with environmental disclosure reports. The public can only access green credit balances as relevant data for green finance. Due to inadequate information disclosure mechanisms, horizontal comparative analysis of the current status and quality of green finance development among rural commercial banks in Sichuan Province remains significantly challenging.

### 2.1.2. Limited Coverage of Green Financial Products

1. The forms of green financial products remain relatively limited. The variety of green financial products offered by rural commercial banks in Sichuan Province is restricted, primarily focusing on green credit. In reality, green financial products cover a broad spectrum, including green credit, green bonds, green stocks, green funds, green insurance, and other financial instruments. This mirrors the development trajectory of China's green finance—where green credit holds a dominant position in the national green financial system. However, the advancement of green credit still faces numerous challenges, such as difficulties in defining green projects, a limited range of green credit products, low efficiency in green services, and insufficient levels of environmental information disclosure and environmental risk management capabilities [4].

2. The scale of green credit remains limited. The total volume of green credit provided by rural commercial banks in Sichuan Province is relatively small, with annual green credit amounts primarily ranging from hundreds of millions to billions of yuan. Significant disparities exist among these banks in their green credit allocation strategies. Taking Chengdu Rural Commercial Bank as an example, its green credit disbursements in 2023 reached approximately RMB 37 billion, far exceeding those of other rural commercial banks in Sichuan Province. This indicates that the green development philosophy of Sichuan's rural commercial banks still requires further refinement, while also highlighting their substantial potential in advancing green finance.

**Table 2.** Green Credit Status of Each Branch of Sichuan Rural Commercial Bank

Bank name	Total green credit in 2023 (unit: billion)	Total green credit in 2022 (unit: billion)	Year-on-year growth rate
C Rural Commercial Bank	370	239	54%
L Rural Commercial Bank	4	3	33.33%
MS Rural Commercial Bank	21.17	9.53	122.24%
MY Rural Commercial Bank	9.39	1.88	399%
N Rural Commercial Bank	14.66	10.16	44.29%
P Rural Commercial Bank	16.85	8.72	93.23%
Y Rural Commercial Bank	11.45	0.37	2994.59%
Z Rural Commercial Bank	5.88	1.34	338.81%

### 2.1.3. Incomplete Loan Supervision Mechanism

Rural commercial banks in Sichuan Province face multiple challenges, including inadequate loan supervision mechanisms and insufficient risk management measures.

1. The loan approval process has deficiencies. During the review stage, approvers often focus solely on the completeness of application materials while neglecting their authenticity and validity, which may lead to loan recovery risks.

2. Weak post-loan management. Under performance pressure, credit officers of agricultural commercial banks are eager to secure the next potential borrower after loan disbursement, resulting in insufficient communication with borrowers who have already obtained loan quotas. This leads to significant deficiencies in understanding capital flow conditions, borrowers' current repayment willingness, and repayment capacity.

3. Conservative risk management strategy. Due to limited financial resources and low risk tolerance, rural commercial banks often encourage their client managers to apply for new loans from the same institution when borrowers face principal repayment defaults. This practice aims to partially repay existing debts with new funds, thereby avoiding total loan losses [5]. Annual reports from rural commercial banks in 18 prefecture-level cities and 3 autonomous prefectures in Sichuan Province show that 6 banks and their directors,

supervisors, and senior executives have been penalized by regulatory authorities, including local branches of the China Banking Regulatory Commission (CBIRC) and judicial agencies. Half of these penalties were related to loan-related violations, including misappropriation of forestry loan funds, inaccurate risk classification, and poor post-loan management leading to credit fund diversion.

## 2.2. Current Status of Green Finance Development in Rural Commercial Banks of G County, Y City

As a pivotal green industry base in Sichuan Province, City Y has established a comprehensive green industrial ecosystem centered on tea cultivation, bamboo processing, renewable energy development, and eco-friendly chemical manufacturing. The rural commercial bank system in G County of City Y has demonstrated rapid growth in green loan portfolios: In 2023, these banks extended RMB 1.145 billion in green loans, prioritizing support for green industries within the Chengdu-Chongqing economic zone. By year-end, 27 green industry entities had secured total loans amounting to RMB 1.341 billion, with RMB 289 million allocated to rural infrastructure projects. As of March 2024, agricultural-related loans reached RMB 18.688 billion, including RMB 2.904 billion specifically designated for the "Tianfu Grain Depot" construction project, providing critical funding for agricultural green transformation.

**Table 3.** County G, City Y Current Situation of Green Industry System Construction in Rural Commercial Banks

Green Industrial System	Utilizing the most advanced technology
Tea industry	As one of the "China Top 100 Tea Counties" and one of the "Top Ten National Demonstration Counties for Tea-Land Tourism Integration", County G boasts 330,000 mu of ecological tea gardens and has nurtured two national leading tea enterprises. The tea industry has become the pillar industry of the county's green economy.
Bamboo industry	In 2022, the local processing capacity exceeded 500,000 tons of bamboo raw materials, with the total output value of the bamboo industry surpassing 1.7 billion yuan, and an ecological circular economy model of 'base + processing + sales' was established.
New Energy and Green Chemical Industry	Relying on the Fuxi Industrial Park and Qingfu Industrial Park within G County Economic Development Zone, the focus will be on developing green industries such as power battery components and photovoltaic energy storage to promote industrial green transformation.

By the end of 2024, the green credit allocation system of Rural Commercial Bank System in G County, Y City had adopted a "three-pronged approach" development model. The focus was primarily on specialized agricultural sectors: Over 60% of loans were allocated to green agriculture fields such as tea cultivation and bamboo plantation development, with priority given to supporting leading enterprises in driving ecological farming practices among farmers. Infrastructure construction served as a complementary component, with loans covering rural roads and green storage facilities accounting for approximately 25% to enhance the green industry support framework. Emerging industries including new energy sectors and green chemical manufacturing received about 15% of credit quotas, effectively facilitating industrial structure upgrading.

### 2.2.1. Specialty Product System

To meet the regional demand for green industries, the Rural Commercial Bank System of G County in City Y has established a "four-category core product" system:

**Table 4.** Four Core Product Systems of Rural Commercial Bank in G County, Y City

product type	service object	typical case
Green Organic Agriculture Loan	Ecological agricultural enterprises, such as tea and bamboo cultivation enterprises	A tea enterprise in G County, Y City secured an ecological environment industry loan of 6.05 million yuan
green building loan	Production of green building materials, low-carbon construction projects	Loan for Green Storage Facility Construction Project in G County, Y City
Green Warehousing Facilities Project Loan	Agricultural Product Cold Chain and Low-Carbon Storage Enterprises	Bamboo Industry Raw Material Storage Base Loan
Comprehensive Green Financial Products	Small and micro enterprises, as well as individual businesses	Small-scale green credit loans aimed at tea farmers

In 2025, the Rural Commercial Bank of G County in City Y launched the city's first agricultural transformation financial loan—the Green Farmer Loan—supplemented by end-to-end carbon accounting technical support provided by a specialized technology company, marking a shift in product innovation from scale-oriented to low-carbon-oriented approaches.

### 2.2.2. Highlights of Mechanism Innovation

The environmental veto mechanism incorporates environmental and social risks into the overall credit management process, implementing a one-vote veto loan approval mechanism for enterprises that fail to meet environmental protection standards or pose ecological risks. In 2024, a total of three loan applications for high-pollution and high-energy-consumption projects were rejected, with a cumulative amount exceeding 5 million RMB.

**Green Credit Online Approval Green Channel.** 99% of green loans adopt an online approval model, adhering to the principles of specialized handling for special cases, rapid resolution for urgent cases, single-site visit requirement, and same-day approval completion. The approval efficiency is 300% higher than that of traditional loans.

A three-tier collaborative service mechanism establishes a coordinated service system spanning from Sichuan Rural Commercial Bank to Y City Rural Commercial Bank and then to G County Rural Commercial Bank. Provincial-level institutions provide policy and technical support, municipal-level institutions coordinate resource allocation, while county-level institutions deliver on-site services, forming a top-down coordinated and rapid-response service model.

### 2.2.3. Risk Management System

The rural commercial bank system in G County, Y City has established a three-tier green financial risk management framework.

From the initial assessment phase, a third-party institution was commissioned to conduct an environmental risk assessment, with a focus on potential risks such as climate change and ecological protection; to process monitoring, a dynamic green loan monitoring mechanism was established

to track enterprises' environmental compliance and loan utilization efficiency on a monthly basis; finally, for post-event management, an emergency response plan for green loan risks was developed, and timely risk mitigation measures were implemented for enterprises facing ecological risks.

It is precisely through this rigorous risk management system that numerous potential risks have been effectively mitigated. A typical case involves a tea enterprise in G County, City Y. The company initially obtained a 6.05 million yuan ecological environment industry loan from the G County Rural Commercial Bank and subsequently applied for a 2 million yuan working capital loan in the first half of 2024. In-depth investigations identified three major risk factors: climate change risks, extreme weather events such as record-breaking heatwaves and heavy rains caused a 15% decline in tea production and a deterioration in product quality; operational risks stemming from excessive reliance on offline wholesale channels as its sole sales channel, leaving the company highly vulnerable to market fluctuations; and financial risks manifested by a debt ratio of 65%, far exceeding the industry average of 40%. Based on comprehensive risk assessments, the G County Rural Commercial Bank ultimately rejected the loan application, a vivid demonstration of its commitment to the green finance philosophy prioritizing ecological conservation and robust risk management.

### 2.2.4. Deep Integration of Industry and Finance

The Rural Commercial Bank of G County has developed a service model centered on the tea industry, establishing a bridge connecting leading enterprises, farmers, and financial institutions. The bank prioritizes support for four major tea enterprises, having extended loans totaling over 200 million yuan. These investments have facilitated the establishment of 100,000 mu (approximately 6,667 hectares) of standardized ecological tea gardens, benefiting more than 23,000 farming households. To assist tea growers, the bank introduced small-amount credit products with maximum single-loan amounts of 500,000 yuan, disbursing 120 million yuan in loans between 2023 and 2024 to help over 500 tea farmers expand their cultivation scale. Additionally, the bank allocated 30 million yuan in loans to support tea enterprises in building low-carbon processing facilities and green storage systems, driving the transition of the tea industry from traditional planting models to environmentally sustainable processing methods.

### 2.2.5. Green Credit Allocation Structure

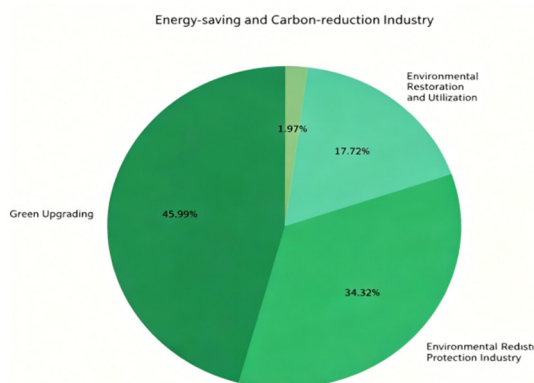
The credit resources are primarily concentrated in two key sectors: green infrastructure upgrades and ecological conservation and restoration, accounting for 80.30% of the total, demonstrating a highly concentrated allocation pattern. The distribution aligns closely with local industries: ecological tea plantations, bamboo cultivation, and cold chain logistics are all closely linked to G County's dominant agricultural sectors, reflecting a localized development strategy of green finance integrated with rural revitalization. Currently, the scale of green credit remains relatively small at approximately 240 million yuan. Compared to the provincial rural commercial banks' green loan balance of 64.4 billion yuan, this county-level financial institution's limited scale has nevertheless established the foundational framework of a county-level rural commercial bank.

The data reveals significant gaps in support for energy-saving and carbon reduction industries, with their share

accounting for merely 1.98%—a figure reflecting low credit penetration rates in sectors like industrial energy conservation, renewable energy, and energy efficiency improvements. The environmental protection sector requires urgent reinforcement, as pollution control and waste recycling account for 17.72% of total funding, yet financing demands for rural non-point source pollution management and small-scale environmental projects remain inadequately addressed. Green certification standards may also exhibit limitations, with common sectors such as clean energy, green transportation, and green buildings absent from statistical tables—a gap likely attributable to insufficient local project database development and certification capabilities.

**Table 5.** Distribution Structure of Green Credit of Rural Commercial Banks in G County, Y City

Investment Sector	Balance (10,000 yuan)	Proportion	Purpose of Funds
Infrastructure Green Upgrade	11,021.00	45.99%	Green warehousing facilities
Ecological Protection, Restoration and Utilization	8,225.00	34.31%	Construction of Ecological Tea Garden and Bamboo Forest Cultivation
Environmental Protection Industry	4,246.12	17.72%	Pollution control, comprehensive utilization of waste
Energy Conservation and Environmental Protection Industry	473.00	1.98%	transformation of energy-saving technology
<b>Total</b>	<b>23,965.12</b>	<b>100%</b>	-



**Figure 1.** Pie chart of green credit distribution in County G

Data reveals that ecological agriculture and environmental protection dominate the overall investment structure, with ecological tea gardens and bamboo plantation cultivation projects accounting for over 17% of total investments. This demonstrates strategic emphasis on green and sustainable land use practices. Meanwhile, energy conservation and carbon reduction initiatives represent a relatively smaller proportion, reflecting current development priorities while highlighting potential growth opportunities in low-carbon technology applications.

The pie chart provides an intuitive visualization of fund allocation across sectors. Infrastructure green upgrades and ecological restoration projects account for 80.3% of total

funding, highlighting the county-level green finance dual-track strategy that prioritizes both infrastructure quality enhancement and ecological foundation consolidation. In contrast, energy-saving and carbon reduction loans constitute less than 2%, indicating that technological transformation projects remain in their nascent stages. This necessitates strengthened policy guidance and collaborative efforts among banks, governments, and enterprises. Such structural imbalances reflect practical constraints in county-level green transition: despite abundant ecological resources, limited technical capabilities and concentrated funding demands for high-maturity, low-risk engineering projects hinder sustainable credit support cycles. Energy conservation initiatives—being capital-light, long-cycle technology-driven

projects—face challenges including limited collateral options, difficulty in quantifying benefits, and absence of professional evaluation mechanisms, making it challenging to establish sustainable credit support mechanisms.

Therefore, establishing an integrated mechanism that combines resources, technology, and financing is crucial. Innovative approaches to green asset securitization should be developed, leveraging high-quality collateral such as ecological tea gardens and bamboo forests. Collaborations with universities should be established to create county-level low-carbon technology evaluation centers, addressing challenges in quantifying economic benefits. Simultaneously, a risk compensation pool should be set up to provide 30% loss coverage for energy-saving retrofit loans, thereby enhancing banks' lending incentives and improving corporate financing accessibility. As of April 2026, County G has successfully piloted its first bamboo forest carbon sink expected revenue rights pledge loan totaling 12 million yuan, while completing the construction of the low-carbon technology evaluation center. The first batch of 30 million yuan in risk compensation funds has been allocated to support technological upgrades for 17 small and medium-sized tea enterprises. Future efforts will focus on advancing the linkage mechanism between green credit and ESG assessments, as well as strengthening end-to-end closed-loop management systems.

## 2.3. Issues at the Rural Commercial Bank of G County, Y City

### 2.3.1. Insufficient Depth of Product Innovation

Although the current financial system has introduced over twenty green financial products, their product structure still exhibits significant homogeneity. Most products remain concentrated in traditional green credit sectors, while emerging niche markets such as carbon trading and green insurance lack sufficient product diversity and coverage. Existing product designs often fail to adequately integrate regional industrial characteristics and development needs, resulting in disconnection from local economic structures. Furthermore, the current product framework demonstrates insufficient flexibility and precision in meeting the differentiated financial demands of specific groups like small and micro enterprises and rural households, making it challenging to fully address their practical needs during the green transition process.

### 2.3.2. Risk Management Capabilities Need to be Strengthened.

In addressing the challenges faced in green finance development, the inadequacy of risk assessment technologies has emerged as a prominent issue. Specifically, existing

evaluation frameworks and methodologies prove insufficient in managing emerging risks such as climate change and ecological transition. These frameworks lack advanced technical expertise and comprehensive, reliable data support, resulting in limited capacity to identify, quantify, and predict complex risks. Meanwhile, risk-sharing mechanisms remain underdeveloped, failing to establish an effective collaborative risk-sharing system involving multiple stakeholders including governments, banks, and insurance institutions. Under current frameworks, financial risks associated with green projects are excessively concentrated within the banking system, lacking proper risk-sharing and transfer mechanisms. This not only increases operational pressures and potential losses for banks but may also undermine the long-term resilience of green financial markets.

### **2.3.3. Lagging Talent Team Development**

**The Lag in Talent Development** In the rapidly evolving green finance sector, the shortage of specialized professionals has become a critical bottleneck hindering industry advancement and expansion. Existing practitioners generally exhibit incomplete knowledge structures and significant capability gaps, particularly in core competencies such as carbon accounting, carbon asset management, and environmental and social risk assessment, where both understanding and practical experience are lacking. This poses challenges for enterprises in addressing increasingly complex green project evaluation and risk management requirements. Concurrently, the industry's talent development system urgently requires comprehensive upgrading. Currently, the green finance sector lacks a systematic training mechanism that covers all domains, establishes a clear hierarchical structure, and adopts unified standards. This results in deficiencies in the relevance, effectiveness, and foresight of talent development, making it difficult to meet the urgent demand for high-caliber interdisciplinary professionals driven by the industry's rapid evolution and scale expansion.

## **3. Development Recommendations**

### **3.1. Optimization of Information Disclosure Methods**

#### **3.1.1. Strengthening the Completeness of Information Disclosure Content**

By further refining the regulations and requirements for green credit information disclosure, banking institutions are not only required to disclose their overall green credit allocation scale but must also provide detailed information on each specific green project—including but not limited to the project name, industry sector, actual disbursement amount and timing, current implementation phase, and quantifiable environmental benefits generated. These measures will enable the public, investors, and regulatory authorities to gain a more comprehensive and in-depth understanding of banks' practical investments and phased achievements in green finance and sustainable development. Additionally, banks should establish a mechanism for regularly publishing specialized environmental performance reports that systematically present data, implementation actions, and outcomes across key areas such as energy conservation, emissions reduction, pollution control, ecological restoration, and environmental risk identification and management, thereby continuously enhancing transparency and credibility

in fulfilling their environmental responsibilities.

#### **3.1.2. Establishment of Unified Information Disclosure Standards**

Develop guidelines for green financial information disclosure and explore incorporating environmental information disclosure into banks' green finance evaluation systems. By combining preferential policy support with performance incentives, enhance banks' proactive engagement in environmental information disclosure [6]. Regulatory authorities or industry associations should lead the formulation of standardized guidelines for green financial information disclosure by rural commercial banks in Sichuan Province, specifying content requirements, format specifications, and timelines to ensure compliance consistency. Establish an evaluation mechanism to regularly assess the quality and effectiveness of green financial information disclosure, commend and reward outstanding banks, and provide targeted guidance to institutions with inadequate disclosures.

#### **3.1.3. Strengthening the Systematic Construction of Environmental Information Disclosure**

Establishing a scientific, comprehensive, systematic, and effective institutional coordination mechanism not only significantly enhances enterprises' intrinsic initiative and external transparency in environmental information disclosure, effectively improving the timeliness, accuracy, and practical reference value of various environmental data, but also encourages financial institutions to establish and refine regular, standardized green credit reporting systems. This continuously optimizes the entire green credit assessment and management process, substantially enhancing overall efficiency and result precision. Meanwhile, this mechanism provides environmental authorities with more comprehensive, systematic, and continuous environmental data support, strengthens the scientific basis and empirical foundation for policy formulation and adjustment, and effectively promotes the formation of a new environmental governance framework characterized by multi-stakeholder collaboration, data sharing, streamlined processes, and efficient management among enterprises, financial institutions, and regulatory bodies.

### **3.2. Optimization of Information Disclosure Methods**

#### **3.2.1. Business Process Optimization**

To more effectively promote green finance concepts and enhance their inclusiveness, we will achieve this goal through systematic simplification of service processes and optimization of application requirements. Key measures include: In the green loan application process, we have streamlined the original 15 mandatory documents to 8 core materials, significantly reducing time and effort required for corporate documentation preparation. Simultaneously, we are committed to shortening approval cycles by compressing online loan review times from the original 3 working days to 1 working day, ensuring efficient processing for urgent projects that can submit applications and complete approvals on the same day. Additionally, to expand service coverage, we plan to establish 5 specialized green financial service stations in major tea-producing regions. Each station will be staffed with experienced dedicated account managers to provide comprehensive one-stop financial consultation and business support for enterprises and farmers, thereby substantially

improving the accessibility and convenience of green financial services.

### **3.2.2. Understanding Rural Green Needs**

As a vital component of the financial system, rural commercial banks play a pivotal role in advancing green finance development. Leveraging their geographical proximity to rural communities and grassroots service capabilities, these institutions gain deeper insights into local green needs while providing financial support for rural green initiatives. Through innovative green financial products—including green bonds, green funds, green insurance, green leasing, and green asset securitization—they have expanded the product portfolio of the green finance market to meet diverse market demands. Such innovative offerings not only attract more investors to participate in green finance but also deliver comprehensive funding support for various green projects.

### **3.2.3. Strengthening Stakeholder Collaboration**

Rural commercial banks should deepen collaboration with financial institutions, government agencies, enterprises, and diverse social sectors to jointly advance the development of green financial markets. By thoroughly understanding the specific needs and characteristics of green projects, banks can provide customized green credit services. Expanding the promotion of green credit will effectively enhance public awareness and acceptance of such financial products. Regularly hosting green finance forums and releasing industry reports can significantly improve clients' understanding and trust in green credit solutions. Streamlining the application and approval process for green credit will further boost operational efficiency.

## **3.3. Improving the Loan Mechanism**

### **3.3.1. Optimizing the Loan Approval Process**

To fully implement the risk management mechanism for guarantee cooperation, rural commercial banks must strengthen the qualification review of their credit specialists. Prior to disbursing loans, comprehensive loan investigations and risk assessments must be conducted to thoroughly evaluate enterprises' cash flow conditions and current operational status, while rigorously verifying the authenticity of client application materials. In rural credit operations, banks should fully leverage existing primary debt repayment channels while actively exploring innovative lending models such as property rights integration and forest rights pledges—these models, derived from rural system reform achievements, effectively mitigate credit risks. Concurrently, senior management decision-makers should refine leadership evaluation mechanisms for rural commercial banks, moving beyond mere performance assessments to establish diversified evaluation systems and career advancement pathways. A multi-dimensional, hierarchically linked performance management framework can effectively mitigate excessive financial leverage risks and ensure sustainable development for rural commercial banks.

### **3.3.2. Actively Explore Risk-sharing and Compensation Mechanisms**

By strategically utilizing government fiscal compensation funds, credit enhancement mechanisms, national rural credit guarantee institutions, agricultural industry chain internal guarantee funds, agricultural guarantees, government risk compensation programs, and corporate guarantees, a multi-

department collaborative risk-sharing system will be established. This initiative will strengthen government-led capital compensation and risk mitigation measures while progressively improving credit reporting functions, thereby unlocking agricultural production potential and expanding secondary repayment channels for agricultural enterprises. Through scientifically determining credit limits for all participants in the agricultural supply chain, challenges such as complex operational structures, weak risk resilience, and high management difficulties can be effectively addressed. Enhanced risk management measures will be implemented. Leveraging advanced financial technologies like big data and artificial intelligence, the green credit approval process will be automated and optimized to improve operational efficiency and service quality.

### **3.3.3. Strengthen Post-loan Management**

By actively leveraging emerging technologies such as next-generation artificial intelligence, the Internet of Things, and big data analytics, commercial banks can comprehensively enhance risk management standards in post-loan operations. Generative large-scale models can serve as foundational platforms for intelligent credit services, enabling efficient analysis of customer credit profiles through comprehensive data processing and relational logic evaluation. Through optimized generative models, banks can overcome the limitations of traditional risk control frameworks in handling massive variables, establishing integrated risk management systems that ultimately replace conventional intelligent risk models [7].

## **4. Conclusion**

In advancing green finance development, Sichuan Rural Commercial Bank has achieved initial phased results, injecting positive financial vitality into the region's green economic transformation. However, under current development conditions, the bank still faces multiple internal and external challenges while also seizing new opportunities presented by policies and market dynamics. To ensure the long-term, stable, and sustainable growth of green finance, Sichuan Rural Commercial Bank urgently needs to implement a series of systematic measures. These include further optimizing and adjusting the asset structure of green loans to better align with local green industry development needs; actively promoting innovation and research in green financial products to meet diverse market financing demands; comprehensively enhancing specialized service capabilities and efficiency for green industries and projects; and establishing a robust, end-to-end green finance risk management system to effectively mitigate related risks. Additionally, the bank must establish a comprehensive, transparent, and standardized environmental and social information disclosure mechanism while actively embracing public oversight. Throughout this process, local governments, financial regulators, and societal stakeholders should collaborate to strengthen support in policy guidance, regulatory coordination, resource allocation, and public awareness campaigns, collectively fostering a favorable ecosystem for green finance development. This will vigorously drive the comprehensive, in-depth, and thriving advancement of Sichuan Rural Commercial Bank's green finance operations. As a vital component of Sichuan's rural commercial banking system, the G County Rural Commercial Bank in City Y has demonstrated explorations and practices

in green finance. Its development trajectory, challenges, and achievements align closely with the broader trends and shared characteristics of rural commercial banks across the province, reflecting a positive pattern of regional synergy and holistic advancement.

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