

Environmental Information Disclosure (TCFD) Report

2023

China Construction Bank Corporation

Environmental Information Disclosure (TCFD) Report 2023



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Declaration

Reporting Scope

This report covers China Construction Bank Corporation and its subsidiaries.

Reporting Period

This report covers the period from 1 January 2023 to 31 December 2023. To ensure continuity in reporting, part of the contents may contain information that is beyond the above mentioned period.

Compilation Basis

This report is prepared in accordance with the *Guidance on Environmental Information Disclosure of Financial Institutions* released by the People's Bank of China, and referred to the suggestions of the *Recommendations of the Task Force on Climate-related Financial Disclosures* released by the Task Force on Climate-Related Financial Disclosures (TCFD).

Reporting Principles

This report is disclosed by the principle of truthfulness, timeliness, consistency and continuity.

Data Explanation

The data in this report mainly covers the period from 1 January 2023 to 31 December 2023. Part of the data is beyond the above mentioned period and contains the data from previous years. The data of this report mainly comes from the internal document and relevant statistical material of the Bank.

Definition Explanation

In this report, unless the context otherwise requires, the following terms shall have the meanings set out below.

"CCB", "the Bank", "China Construction Bank"	China Construction Bank Corporation	"CCB Consumer Finance"	CCB Consumer Finance Co., Ltd.
"the Group"	China Construction Bank Corporation and its subsidiaries	"CCB Financial Leasing"	CCB Financial Leasing Co., Ltd.
"CCB Asia"	China Construction Bank (Asia) Corporation Limited	"CCB Wealth Management"	CCB Wealth Management Co., Ltd.
"CCB New Zealand"	China Construction Bank (New Zealand) Limited	"CCB Futures"	CCB Futures Co., Ltd.
"CCB Property & Casualty"	CCB Property & Casualty Insurance Co., Ltd.	"CCB Life"	CCB Life Insurance Co., Ltd.
"CCB Life Asset Management"	CCB Life Insurance Asset Management Company Limited.	"CCB Investment"	CCB Financial Asset Investment Co., Ltd.
"CCB Private Equity"	CCB Private Equity Investment Management Co., Ltd.	"CCB Trust"	CCB Trust Co., Ltd.
"CCB Principal Asset Management"	CCB Principal Asset Management Co., Ltd.	"CCB Pension"	CCB Pension Management Co., Ltd.
"CCB Fintech"	CCB FinTech Co., Ltd.	"CCB Housing Rental"	CCB Housing Rental Private Fund Management Co., Ltd.
		"CCB International"	CCB International (Holdings) Limited
		"CCB Consulting"	CCB Engineering Consulting Co., Ltd.
		ESG	Environmental, Social and Governance

Forms of Release

This report is released in electronic format, which is available on the official website of the Bank (<http://www.ccb.com/cn/home/indexv3.html>).

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The Bank firmly implements decisions and deployments of the CPC Central Committee and the State Council, focuses on the "dual-carbon" goal, enhances its ability to serve the green development of the economy and society, strengthens the synergy of the "Green+" strategy, enhances our market influence of green financial products, actively manages to climate risks, deepens green operation of the Group, and strives to become not only a participant and contributor of green finance, but also a pioneer and leader.

”



——Chairman of the Bank
Zhang Jinliang



——President of the Bank
Zhang Yi

“

The Bank fully, accurately and comprehensively implements the new development concept, thoroughly carries out the cause of green finance, strives to build green finance into a new pillar of its high-quality development and a new advantage in market competition, more actively integrates into the overall green development of the economy and society, and contributes to the construction of a beautiful China.

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Corporate Introduction

China Construction Bank Corporation, headquartered in Beijing, is a leading large-scale commercial bank in China. Its predecessor, People's Construction Bank of China, was established in October 1954. It was listed on Hong Kong Stock Exchange in October 2005 (stock code: 939) and the Shanghai Stock Exchange in September 2007 (stock code: 601939). At the end of 2023, the Bank's market capitalisation approximated USD151,857million, ranked eighth among all listed banks in the world. The Group ranks second among global banks by Tier 1 capital.

The Bank provides customers with comprehensive financial services, including corporate finance business, personal finance business, treasury and asset management business and others, served 757 million personal customers and 10.82 million corporate customers. Moreover, it has subsidiaries in various sectors, including fund management, financial leasing, trust, insurance, futures, pension and investment banking. At the end of 2023, the Group had 376,871 staff members and 14,895 operating entities, including nearly 200 overseas entities which covered 31 countries and regions.



At the end of 2023, the Bank's market capitalisation approximated

USD 151,857 million

at the end of 2023

Ranked **8th**
among all listed banks in the world

The Group had
376,871
staff members

14,895

operating entities

Served personal customers

757 million

Served corporate customers

10.82 million

The Group implements the new development concept fully, accurately and comprehensively and supports the fostering of a new development pattern to promote high-quality development. It consciously practices finance activities in a politically oriented and people-centred manner and deeply engages in key areas of national economy and people's livelihood, such as FinTech, green finance, inclusive finance, pension finance, digital finance, rural revitalization, consumer finance, mega wealth management and county-level business development, so as to maximise values to stakeholders, including customers, shareholders, employees and society, assist in the construction of a "Financial Power", and create more magnificent chapters for New Finance in the path of Chinese modernisation.



Environment-related Strategic Objectives

In 2023, the Bank implemented the *Strategic Plan for Green Finance Development (2022-2025)*, the *Action Plan for Carbon Peaking and Carbon Neutrality*, and the *Environmental, Social and Governance Work Plan (2023-2025)*, focusing on the national initiative of ecological civilisation and the strategic deployment of "carbon peak and carbon neutrality". The Bank strengthened top-level design, optimised the development framework, improved the green governance structure, practised green and environmental protection operations, enriched the development of green financial products and services, and promoted high-quality and sustainable economic and social development.



Basic principles

Comprehensive coordination

To strengthen the top-level design, promote the integrated development involving the Head Office, branches and sub-branches, the front, middle and back offices, parent company and subsidiaries, domestic and overseas organisations, and carry out green credit and non-credit business in a collaborative manner, so as to generate a synergy to drive green development.

Steady and orderly progress

To achieve balanced relationship between business development and emission reduction, overall and partial correlation, as well as long-term and short-term goals, and maintain proper pace and intensity, the Bank serves for the green and low-carbon transformation of economic and social development in a powerful, orderly and effective manner.

Differentiated policies

To set up goals and tasks based on local conditions, accelerate development in key regions and sectors, to form a demonstration effect, building a new development framework for various areas based on experiences of key exemplar projects.

Innovation-driven development

To improve product and service innovation capability, strengthen technology application to close the gap between client needs and existing financial service, enhancing the quality and efficiency of green financial services.

Key objectives and tasks

The Bank will intensify efforts to develop green finance, strengthen green operation management, and help prevent and control environmental pollution and promote low-carbon economic and social transformation. Focusing on business development, green transformation, product innovation, climate risk, daily operation, green procurement and other major tasks, the Bank proposes specific development goals covering green finance management, comprehensive risk management and carbon footprint management.

To enhance the drive for green transformation of operations

Deepen the green financial business development, provide financial support for green area not less than RMB2 trillion from 2022 to 2025; strengthen the assessment and supervision mechanism to quantify the environmental benefits of green finance; enhance comprehensive financial service capacity, support regional development in green transformation, promote innovation in sustainable financial products, and strengthen external cooperation in green finance.

To properly address climate changes

Improve risk measurement tools and methodologies to strengthen environmental and climate risk management; from 2024 to 2025, based on the results of the climate risk stress test research project, arrange the climate risk stress test plan according to the priority and objective conditions; optimise and improve the client ESG rating system, and gradually implement ESG risk classification management.

To optimise carbon footprint management

Implement energy conservation and emission reduction requirements, and rationally dispose waste; from 2022 to 2026, the energy intensity and carbon emission intensity of the whole bank showing a downward trend; optimise carbon footprint data management, continue to improve the "carbon emission management platform" system, and reach 100% utilisation rate of the primary branch, secondary branch and sub-branch system by 2025, and continue to promote green procurement.

Highlights and Awards

Steadily implementing the management mechanism

In 2023, the Board of Directors of the Bank reviewed and approved the *Environmental, Social and Governance Work Plan (2023-2025)*, thoroughly analysed the current status, key issues and difficulties of ESG work, actively assessed future external development situation, laid down the overall guideline and key tasks of ESG work, and advanced orderly implementation of management work.

Vigourously promoting green finance

Green credit:

The Bank continued to increase green credit supply, enhanced the green components of the asset structure, and promoted integrated development of green finance and key areas such as rural revitalisation and inclusive finance. Supporting tools for carbon emission reduction and the special refinance for clean and efficient use of coal were properly and fully used, with priority given to supporting pollution reduction, energy conservation and carbon emission reduction in all sectors. Support for renewable energy sources and biodiversity protection was enhanced, and strong steps were taken to stop the blind development of projects with high energy consumption, high emissions and poor production capacity. As at the end of 2023, the Bank's balance of green loans exceeded RMB3.88 trillion, an equivalent of more than 170 million tonnes of carbon dioxide equivalent emission reduction; and the green credit business throughout the year approved RMB3.22 trillion, an increase of 23.4% year on year. Meanwhile, the Bank continuous efforts were made to advance the development of demonstration banks of green finance reform and innovation, climate investment and financing trials, etc., and efforts to develop innovative green products and services were reinforced.

Green bonds:

The Bank was active in green bond issuance, underwriting and investment. As at the end of 2023, the Bank issued a total of RMB84.4 billion of green bonds at home and abroad and RMB74.6 billion of overseas ESG themed bonds. In 2023, the Bank underwrote, as the lead underwriter, 76 domestic and overseas green and sustainable bonds, with a total size of RMB220 billion, an increase of 40.97% from the previous year. The balance of RMB green bond investments increased by 70.15% from the previous year and the balance of foreign currency green bond investments increased by 117.32% from the previous year.

Other green finance businesses:

The Bank leveraged the advantages of its comprehensive banking licenses to expand diversified green finance products and services. For example, CCB Principal Asset Management established the CCB New Energy Industry Fund, with the scale reaching RMB3,484 million. CCB Investment conducted debt-for-equity investment. As at the end of 2023, a total of RMB26.9 billion of green investment projects had been carried out. CCB Financial Leasing effectively met the financing and leasing demands of all types of new energy power stations and new energy vehicles. As a result, the growth of green assets exceeded the overall growth of leasing assets. CCB Consulting, together with Beijing Branch, push forward the "green building consulting + green credit" innovation trial led by pre-assessment.

Strengthening environmental and climate risk management

The Bank continued to improve the risk management system. According to the *Guidelines for Comprehensive Risk Management of Banking Financial Institutions*, the *Guidelines on Green Finance for the Banking and Insurance Industries* and other relevant regulations, the Bank formulated the *Measures for Management of Investment and Financing Business Environment, Social and Governance Risks* and used it as the top-level management policy for the ESG risk management system of the Bank. The Bank independently developed a climate risk stress testing system that suits the national conditions of China and the Bank's realities and created "30-60" carbon peak and carbon neutrality scenarios, the first of its kind in the industry. It expanded the scope of the transition risk stress testing to cover 10 carbon-intensive industries and conducted a physical risk stress test for the first time. Also, the Bank improved the functions of the corporate client ESG rating system and explored the application of ESG factors in credit rating.

Helping protect ecosystems and biodiversity

The Bank set the objectives of actively protecting biodiversity in its credit policy, enhancing financial support in biodiversity protection fields, and providing strong support to major projects for protecting important ecosystems and biodiversity. The Bank's branches actively explored the construction of policies related to biodiversity conservation. Based on the Quzhou Green Finance Reform Pilot Zone, Zhejiang Branch formulated the implementation plan of biodiversity risk management, which is important policy exploration in biodiversity risk management.

Continuing to promote green and low-carbon operation

The Bank comprehensively examined the energy consumption and carbon emission data bankwide, established a sound carbon emission management mechanism, and realised systematic and digital management of carbon emissions. The Bank conducted fullaround carbon peak and carbon neutrality energy audits, comprehensively assessed energy use efficiency and energy consumption level, and tapped into energy conservation potential. The Bank explored and advanced measurement of Scope 3 greenhouse gases and analysed and calculated the carbon emission of office paper and business travel involving the Bank's operations. The goal of green operation was steadily implemented, energy conservation and environmental protection measures were practised, and continuous efforts were made to build green operation institutions. In 2023, the Head Office and Beijing Branch were awarded "Green Creation Campaign Promotion Units". Sydney Branch, Frankfurt Branch and CCB New Zealand were certified as "Carbon Neutral" in 2023. As at the end of 2023, the Bank had a total of 228 green outlets.



Green development related honours

In 2023, the Bank's MSCI ESG rating was raised to AA, continuing to maintain the leading ESG rating among large commercial banks in the world. During the reporting period, the Bank received the following major awards related to green finance.



<p>Global Green Finance Awards - Innovation Award</p> <p>International Finance Forum (IFF)</p>	<p>Best Green Bond Underwriter</p> <p>Wind</p>	<p>Top of the ESG Comprehensive Strength Ranking</p> <p>Sohu Finance</p>	<p>Outstanding Award for Green and Sustainable Bond Issuer (Biodiversity and Belt and Road Dual Theme Banking Finance Project)-Visionary Green Loan Framework (Sydney Branch, London Branch)</p> <p>Hong Kong Quality Assurance Agency (HKQAA)</p>
<p>Outstanding Investment Institution of the China Bond Green Bond Index China Central Depository & Clearing Co., Ltd. (CCDC)</p> <p>China Central Depository & Clearing Co., Ltd. (CCDC)</p>	<p>Best ESG Practice Award for Listed Companies</p> <p>China Association for Public Companies</p>	<p>2023 The Chinese Banker's Risk Management Innovation Excellence Case of the Year</p> <p>The Chinese Banker</p>	<p>Innovation Yinghua Award "ESG Innovation Award" (CCB Principal Asset Management)</p> <p>China Fund</p>
<p>Outstanding ESG Business Contribution Institution China Central Depository & Clearing Co., Ltd. (CCDC)</p> <p>China Central Depository & Clearing Co., Ltd. (CCDC)</p>	<p>China ESG Listed Company Vanguard 100</p> <p>CCTV Finance Program Centre</p>	<p>EY Best Sustainable Practice Case in 2023</p> <p>EY</p>	<p>Excellent ESG Enterprise of 2022-2023 (CCB Asia)</p> <p>Hong Kong Economic Times</p>
<p>Banking Wealth Management "Golden Bull Award for Green Finance"</p> <p>China Securities Journal</p>	<p>Tianji Award for ESG Practices in China's Banking Industry</p> <p>Securities Times</p>	<p>Syndicated Green/Sustainable Deal of the Year by APLMA (CCB Asia)</p> <p>Asia Pacific Loan Market Association (APLMA)</p>	<p>The Asset Triple A Sustainable Finance Awards Best Green Bond - Carbon Neutrality (CCB International)</p> <p>The Asset</p>
<p>The Blue Book of Responsible Finance (2023): Excellent Case of Green Finance</p> <p>Xinhuanet, Shanghai Institution for Finance and Development</p>	<p>The only four-and-a-half-star bank in the "China Listed Banks ESG Star Ranking"</p> <p>Sohu Finance</p>		

02 / Environment-related Governance Structure



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The Bank has established a top-down environment-related governance structure with clearly defined responsibilities that fully covers all levels of Board of Directors, the Board of Supervisors and the Management, established a sound and effective environmental management mechanism, and advanced the Group's environment-related management work in an orderly manner.

Board of Directors

Board of Directors and Strategy Development Committee

The Board of Directors of the Bank takes the ultimate responsibility for the formulation and implementation of the Group's environmental and climate-related strategies. It defines strategic objectives, key tasks and management priorities, establishes governance structures related to environment and climate, and reviews and decides on product innovation and development strategies and corresponding risk management policies; and it oversees and evaluates the implementation results of environmental and climate strategies, provides guidance on identification and assessment of environmental and climate risks, periodically reviews relevant targets and the progress toward fulfilling them, listens to the reports of its special committees and the Management on the management of environmental and climate-related matters, and provides guidance on disclosure of relevant information.

The Strategy Development Committee of the Board of Directors assists the Board of Directors in formulating ESG strategic goals and takes into full account ESG related factors in each strategic objective.

In 2023, a total of nine Board of Directors meetings were held, and the progress of environment-related work is as follows:

- The Board of Directors reviewed and approved the 2022 Annual Report, the 2023 Risk Appetite Statement, the Comprehensive Risk Management Report, etc. of the Bank, and according to regulatory requirements and ESG work needs, it reviewed and approved the *Environmental, Social and Governance Work Plan (2023-2025)*, analysed the current status, key issues and difficulties of ESG work of the Bank, assessed future external development situation, and laid down the overall guidelines and key tasks of ESG work.

Related Party Transaction, Social Responsibility and Consumer Protection Committee of the Board of Directors

The Related Party Transaction, Social Responsibility and Consumer Protection Committee of the Board of Directors advances the overall ESG work of the Bank, drafts relevant strategies, policies and objectives on ESG, social responsibility, and green finance, etc., and regularly supervises the progress of related work. It organises and holds seminars on environmental and climate risk management, environmental target setting and ESG information disclosure, analyses and assesses ESG development and the current status of the Bank's work, and puts forward constructive suggestions. It periodically listens to the reports on the implementation of green finance work, pays attention to the development of credit and non-credit green finance operations, and follows up on the progress of Management's work on social responsibility performance and strengthening environmental and climate data systems.

In 2023, a total of five meetings of the Related Party Transaction, Social Responsibility and Consumer Protection Committee were held, and the progress of environment-related work is as follows:

- The committee listened to and discussed matters related to the environmental target setting criterion and ESG disclosure, studied the *Guidelines for Climate Target Setting for Banks* issued in the United Nations Environment Programme Finance Initiative and the *2022 Analysis of ESG Practice Disclosure* of the Stock Exchange of Hong Kong Limited ("HKEX"), analysed the gap between the Bank's current ESG disclosure and management status and the best practices in the world, and had in-depth discussions on ESG information disclosure arrangements and other matters.
- It listened to and discussed the latest requirements of the HKEX's *Enhancement of Climate-related Disclosures Under the Environmental, Social and Governance Framework Consultation Paper*, analysed the challenges that the consultation paper will pose on the Bank's corporate governance, risk control, etc., and made work arrangements for the next step.

Risk Management Committee of the Board of Directors

The Risk Management Committee of the Board of Directors oversees the management of climate-related risks and opportunities, supervises the implementation of the environmental and climate risk reporting mechanism, and facilitates the deep integration of climate change risk elements into the overall risk management system. It studies and reviews the risk appetite statement, and promotes the integration of environmental, climate and biodiversity risks into the Group's risk appetite. It regularly listens to environmental and climate risk analysis reports, studies the situation of environmental and climate risk management and the next steps, guides the management to optimise the industry credit policies, promotes the high-quality development of green finance, and strengthens the credit control of high energy-consuming and high-emission industries. It continuously follows up on the quantification of risks of ESG-related elements, promotes the organic integration of ESG elements and client credit rating system, and improves the stress test related to climate risk.

In 2023, a total of six meetings of the Risk Management Committee were held, and the progress of environment-related work is as follows:

- The committee reviewed and approved the *Risk Appetite Statement (2023)*, included environmental, climate and biodiversity risks into the Group' risk appetite, and required the Bank to integrate ESG risk control into the full-process management, established a client ESG rating system, accelerated the construction of environmental and climate risk stress testing methodology system, and scientifically assessed the Group's capability in addressing relevant risks under the carbon peak and carbon neutrality goals.
- It listened to and discussed the *Environmental and Climate Risk Analysis Report*, studied the effectiveness and measures of the work in the filed of environmental and climate risk control, current challenges and the next-step work arrangements, paid attention to the effective measurement of environmental and climate risks and the application of corporate client ESG rating tools, and required the Bank to further enhance the environmental and climate related data foundation and continue to step up efforts to build a professional talent team.
- It listened to and discussed the *Report on the Quantification of ESG Related Factors and Risks* and studied the progress of Bank's development of the corporate client ESG rating system and climate risk stress testing.

Board of Supervisors

The Board of Supervisors oversees the performance of the Board of Directors and the Management on environmental and climate related duties, follows up on the implementation of ESG strategies and key tasks, and gives suggestions on how to strengthen top-level design, consolidate basic management, intensify risk control and improve capacity building.

In 2023, the Board of Supervisors held a total of four meetings, at which it listened to the report on the development of green finance and required the Bank to coordinate investment and financing business at the Group level, leverage the synergy between the parent company and subsidiaries, take part in the preparation and innovation of plans and standards of the green finance industry, strengthen the construction and assessment incentives of the expert teams in relevant fields, implement stricter post-loan fund management, and prevent "greenwashing". The Board of Supervisors periodically communicated with external auditors, gained the information on green credit supply, subscription of green bonds, etc., from multiple dimensions, and comprehensively followed up on risk management and environmental and climate risks response. It conducted themed surveys, focused on green industries, visited relevant enterprises, and discussed how commercial banks could better provide comprehensive financial services for green industries and contribute to transformation toward green and low-carbon development.

Management

The Management of the Bank actively implements the strategic plans of the Board of Directors, formulates and facilitates the Head Office departments, domestic and overseas branches and subsidiaries to carry out environment-related objectives and key tasks, and helps improve the Group's capacity for sustainability management.

Work Promotion Mechanism

The Bank has established a coordination and promotion mechanism for green development that covers institutions at all levels of the Group. The institutions are assigned specific responsibilities and work together to promote green development of environment-related corporate business, retail business and capital market business. To enhance the capacity for risk management, the Bank established "three lines of defence" for ESG risk management at the specialised department level, further improved the management of its own carbon footprints and continued to strengthen its capacity for information disclosure and publicity. Domestic and overseas branches, sub-branches and subsidiaries actively developed their characteristic business areas and strengths, expanded the scope of green finance services, applied the idea of green operation, strengthened their capacity for risk control, and effectively implemented green development related work and plans.



Leading Group for Carbon Peaking and Carbon Neutrality

Chairman of the Board serves as the head of the leading group, while the president of the Bank serves as the deputy head. The leading group has six working groups, namely the working group on corporate business, the working group on retail business, the working group on capital market business, the working group on risk management, the working group on disclosure and publicity, and the working group on the Group's carbon footprint management, to help realise the goals of carbon peak and carbon neutrality with financial services.



Green Finance Committee

Chaired by the president of the Bank, the Green Finance Committee advances the development of green finance across the Bank in a coordinated manner, studies and decides on major matters in the process of advancing green finance business, and plans and deploys the key directions and measures for the development of green finance of the Bank. In 2023, the committee held the annual work meeting, at which, it conveyed the major policies of the Central CPC Committee and the State Council on green finance and the guiding principles of relevant meetings, discussed management priorities relating to green finance, urged the implementation of key initiatives related to the green finance strategies, and promoted steady development of green finance business.



ESG Promotion Committee

Chaired by the president of the Bank, the ESG Promotion Committee has three working groups of environment, social responsibility, and information disclosure and investor relations, as well as 34 member departments (institutions), which, with orderly division of responsibilities, advance ESG work in a coordinated manner. In 2023, the committee held the annual work meeting, at which, it systematically summed up the achievements in ESG work in the year, studied and analysed the key issues and difficulties in the management of ESG and climate risks and opportunities, and continued to urge for the building of the Group's ESG talent team, enhanced the understanding and knowledge of ESG concept, and continuously improved ESG management level.



Risk Management and Internal Control Management Committee

The Risk Management and Internal Control Management Committee is chaired by the president of the Bank. It includes ESG related risks such as environmental and climate risks, compliance risk, operational risk and reputational risk into the comprehensive risk management system, periodically holds meetings to follow work progress, and makes arrangements for important matters.

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The Bank strictly abides by environment-related national laws and regulations and industry policies and actively participates in and supports relevant international principles and initiatives. It has formulated a series of scientific and systematic management regulations on green finance and green operation to ensure efficient operation of green business and build an eco-friendly bank.

National laws and regulations

- ◆ The Bank strictly abides by the *Energy Conservation Law of the People's Republic of China*, the *Environmental Protection Law of the People's Republic of China*, the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution Caused by Solid Waste*, etc., to standardise the management of green operation.

National and industry policies

- ◆ *Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality in Full and Faithful Implementation of the New Development Philosophy and the Integrated Reform Plan for Promoting Ecological Progress* issued by the CPC Central Committee and the State Council.
- ◆ *Action Plan for Carbon Dioxide Peaking Before 2030 and Guiding Opinions on Accelerating the Establishment of a Sound Economic System with Green, Low-carbon and Circular Development* issued by the State Council.
- ◆ *Guidelines for Establishing a Green Financial System* issued by seven ministries and commissions including the People's Bank of China and the Ministry of Finance.
- ◆ *Guidelines on Green Finance for the Banking and Insurance Industries* issued by the National Financial Regulatory Administration (former China Banking and Insurance Regulatory Commission).
- ◆ *The Implementation Plan of Computing Hubs of the National Integrated Big Data Centre Coordination and Innovation System, the Implementation Plan to Meet the Requirements of Carbon Peak and Carbon Neutrality and Promote the Green and High-Quality Development of New Infrastructure such as Data Centres and 5G*, issued by government departments such as the National Development and Reform Commission. *Action Plan for the High-quality Development of Computing Power Infrastructure*, issued by Ministry of Industry and Information Technology and other departments.

International principles and initiatives

- ◆ The Bank has been among the first banks to support the *Green Investment Principles for the Belt and Road*.
- ◆ In November 2023, the Bank officially signed the United Nations *Principles for Responsible Banking* (UN PRB) and became a member of the United Nations Environment Programme Finance Initiative.
- ◆ The Bank continues to respond to international standards such as the the United Nations Sustainable Development Goals (SDGs) and the United Nations Principles for Responsible Investment (PRI), the *Paris Agreement*, and the *Recommendations of the Task Force on Climate-related Financial Disclosures*.
- ◆ The Bank actively fulfills its responsibilities as a member of the China Council of the Sustainable Markets Initiative.

Improving the Management System for Green Finance

Enhancing policy support for green finance

The Bank states clearly in its 2023 credit policy that it continues to raise the proportion of green loans, comprehensively use products and services such as green bonds, green insurance, green industry funds, green leasing and green trust to meet enterprises' diversified financing demands, promote integrated development of green finance and key areas such as infrastructure, manufacturing sector, inclusive finance and rural revitalisation, and enhance the green background of all types of businesses. The Bank continues to optimise the green credit whitelist mechanism, steps up support for green enterprises and green projects, provides differentiated green credit policy support to quality clients in areas with significant carbon emission benefits and environmental protection benefits.

Improving the credit approval policy system

The Bank continues to optimise approval strategies and operating procedures, refines evaluation requirements, guides credit resources to tilt toward low-carbon industries, and improves the client review system to raise the quality of green credit.

Optimising approval authorisation. The Bank releases related policy about the adjustment of the authorisation to approve comprehensive financing for corporate clients, according to which it requires escalated authorisation for high-carbon business, delegates the authorisation for low-carbon business to lower levels, and provides differentiated approval and authorisation policies for green credit whitelisted clients.

Specifying evaluation requirements. In the project evaluation system, the Bank sets green finance evaluation methods, including detailed evaluation requirements on energy conservation, environmental protection, carbon peak, carbon reduction, resource conservation and recycling, environmental and climate risks, etc.; it also sets "carbon peak, carbon neutrality" impact analyses and requires conducting sensitivity analysis of the part that can be analysed quantifiably and enhancing qualitative analysis of the part that cannot be analysed quantifiably. The Bank formulated the *Operating Procedures for Evaluation of Fixed Asset Projects (2023 Edition)*, specifying that the initiation of a project evaluation should comply with relevant requirements on management of environmental and social risks and be provided with necessary environmental impact assessment documents.

Improving the review system. The Bank formulated the *Operating Procedures for Approval of Comprehensive Financing for Corporate Clients (2023 Edition)*. The policy clearly states that if a client has a major environmental or climate risk incident (including being rated as an enterprise with an environmental protection warning or an enterprise with bad environmental protection performance in the enterprise environmental credit evaluation, being involved in a lawsuit for environmental or climate reasons and it may have big adverse impact on the enterprise, being ordered by competent government departments to shut down, violating laws and regulations and the violation is difficult to be rectified, and other situations in which major environmental and climate risks and hidden dangers arise), a review of the group comprehensive financing limit and the single-account comprehensive financing limit shall be promptly initiated.

Promoting green development in key areas

The Bank defines the objectives and strategic orientation of green finance business and it states clearly in the annual credit policy that it supports the energy conservation and carbon emission reduction efforts of industries such as steel, non-ferrous, petrochemical, chemical and building materials industries, and facilitates coordination between industrial, transportation, urban and rural development and agricultural areas to improve their effectiveness in reducing pollution and carbon emissions, while enhancing support for renewable energy and resolutely stopping the blind development of projects with high energy consumption, high emissions and backward production capacity. The Bank issued the *Notice on Further Advancing Key Tasks of Financial Services for Agricultural Industrial Chain Ecosystem Scenarios*. It embeds the concept of green development into the financial service system for agricultural industrial chain ecosystem scenarios, summes up and promoted the model of services for agriculture-related industries targeting all scenarios, all types of clients groups and the full industrial chain, and actively supports the development of green and ecological agriculture.

Developing relevant industry credit policies

The Bank formulated and implemented 78 industry credit policies, covering key industries such as agriculture, electricity, forestry, mining, petrochemical, transportation, materials, and construction. The Bank conducts timely reviews and updates as necessary.

Industry	Description of Relevant Policies
<p>Power industry</p> 	<p>Coordinate energy supply guarantee and the green and low-carbon transformation of energy, pay close attention to the ESG risks involved in projects in the power industry, emphasising the level of materiality of the relevant risks and their impact on credit risk, specify requirements on pollutant discharge and coal consumption in the selection criteria of thermal power projects. Firmly downsize and withdraw from projects which will be phased out per national policy. Support the coal and electricity enterprises in the "Three Upgradings" (Coal-power carbon reduction upgrading, heating system upgrading, and flexibility upgrading); pay close attention to the impact of project construction on the ecological environment and biodiversity.</p>
<p>Transportation industry</p> 	<p>Actively support the green transformation of transportation structure, focus on key green transportation projects such as urban public transport and rail transport. Support the green, low-carbon and high-quality development of the aviation industry, the development of new energy vehicle industry and the upgrading of vehicles towards electrification and clean design.</p>
<p>Green building industry</p> 	<p>Actively support the development of green building and take active measures to promote the coordinated development of green finance, green urban construction and the promotion of green building, supporting energy conservation and emission reduction in construction. Take whether the projects have met the green building criteria as essential consideration when selecting real estate projects.</p>
<p>Agriculture</p> 	<p>Actively support the green development of agriculture. Specify requirements on compliant operation, environmental protection and quality safety, and exercised the "One-Vote Veto" policy over environmental and climate risks when selecting agricultural clients. Credits will not be granted for clients and programmes with significant environmental and climate risks. Prioritise agriculture and actively support agricultural entities in carrying out carbon reduction and carbon sequestration, comprehensive utilisation of resources, as well as the construction of efficient and water saving irrigation and drainage facilities in farmland. Grant more agriculture-related credit loans for clients with good performance in agricultural energy conservation, such as those reducing the consumption of fertiliser, pesticides, water, and land.</p>
<p>Forestry</p> 	<p>Actively support the green development of forestry. Specify requirements on compliant operation, environmental protection and quality safety, and exercise the "One-Vote Veto" policy over environmental and climate risks when selecting forestry clients. Credits will not be granted for clients and programmes with significant environmental and climate risks. Prioritise forestry and grant more forestry-related credit. Support forestry management entities to carry out the construction of national reserve forests, ecological protection and restoration, and the return of cultivated land to forests and grasslands. Support key projects under the national forest operation planning, and the <i>Outline of "14th Five-Year Plan" for Forestry and Grassland Protection and Development</i>, serving to increase the forest stock volume and enhance the carbon-sink capacity.</p>
<p>Mining industry</p> 	<p>Pay close attention to the ESG risks involved in projects in the mining industry, emphasising the level of materiality of the relevant risks and their impact on credit risk. Support green, clean and intelligent mining and consider various factors like production safety, environmental protection and resource utilisation to decide whether the client or project is eligible, focus on supporting the supply of scarce and strategic new minerals that conform to green mines, energy and resource efficient, and environmentally friendly standards. Exercise the "One-Vote Veto" policy over environmental and climate risks. Credits will not be approved for clients and programmes with significant environmental and climate risks. Resolutely compress and withdraw support for non-compliant and outdated low-capacity enterprises acting against the national industrial policies, as well as those do not comply with the environmental protection and safety production standards.</p>

Industry	Description of Relevant Policies
<p>Petrochemical industry</p> 	<p>Pay close attention to the ESG risks involved in projects in the petrochemical industry, emphasising the level of materiality of the relevant risks and their impact on credit risk. Support the green, low carbon and recyclable development of the petrochemical industry and consider various factors like production safety, clean production, energy consumption level and carbon emission intensity to decide whether the client and project is eligible, supporting petrochemical and chemical high-quality enterprises in energy-saving and carbon-reduction transformation and upgrading, equipment upgrading and transformation, product upgrading, upstream and downstream integrated development and capacity layout optimisation, as well as projects with leading energy efficiency levels in the four major petrochemical industry clusters and green industrial parks. Pay close attention to the impact of enterprise production and project construction on energy consumption, carbon emission, ecological environment and biodiversity, and exercise the "One-Vote Veto" policy over environmental and climate risks. Credits will not be approved to clients and programmes with significant environmental and climate risks. Avoid getting involved in projects with high energy consumption, high emissions and low levels, as well as projects with substandard energy efficiency levels that cannot be transformed and upgraded on schedule, projects with backward production capacity that cannot be withdrawn on schedule, and projects that do not meet the requirements for capacity replacement and other requirements.</p>
<p>Iron and steel industry</p> 	<p>Support the green development and transformation and upgrading of the steel industry and consider various factors like energy efficiency and emission efficiency to decide whether the client and project was eligible. Pay close attention to the impact of project construction on the dual control of the total volume and intensity of energy consumption, carbon emission, ecological environment and biodiversity. Exercise the "One-Vote veto" policy over environmental and climate risks. Credits will not be approved for clients and programmes with significant environmental and climate risks. Resolutely withdraw support for projects against the national industrial planning and environmental policies and enterprises that are against the standards regarding environmental protection and production safety and cannot be rectified on schedule.</p>

Laying down biodiversity protection policy requirements

In its credit policy, the Bank clearly states that it actively protects biodiversity, enhances financial support in biodiversity protection fields, and guides enterprises to strengthen biodiversity protection by providing diversified products and services. The Bank provides strong supports to major projects for protecting important ecosystems, major projects for protecting biodiversity and the development of the nature reserve system with national parks as its main body and enhances support for key ecological function areas, important natural ecosystems, nature relics, natural landscape, protection of rare and endangered species and species with extremely small populations, etc., helping improve the diversity, stability and sustainability of ecosystems. The Bank is not involved in projects that endanger wildlife species under state protection and their habitats. In its credit policies for industries such as wind power generation and photovoltaic power generation, the Bank requires to strictly comply with the red line of ecological protection, the bottom line of environmental quality, the upper limit of resource utilisation and the ecological and environmental access list, etc., and pays close attention to the impact of projects constructions on the ecological environment and biodiversity, etc.

Besides, the branches of the Bank actively explore the establishment of relevant systems for biodiversity conservation. For example, Quzhou Branch in Zhejiang formulated an implementation plan for biodiversity risk management, increasing funding in biodiversity-friendly projects.

Case: Zhejiang Quzhou Branch formulated the implementation plan for biodiversity risk management

To strengthen biodiversity protection management, Zhejiang Quzhou Branch formulated the *Implementation Plan of CCB Quzhou Branch for Biodiversity Risk Management*, which is closely linked to the Quzhou Municipal Government's *Biodiversity Risk Management Guide for the Banking Industry*. Based on the 21 highly sensitive industries selected according to standards, it laid down the standard of classification of projects based on biodiversity risks from the two dimensions of regional sensitivity and industry sensitivity and divided projects into four categories, A, B, C and D. While embedding biodiversity risks classification management into the full credit process, the branch established a regular query mechanism for risk information and intensified dynamic assessment and review of biodiversity risks classification.

Improving the green finance evaluation and incentive scheme

The Bank formulated the *Green Finance Star Management Plan for Domestic Branches and Subsidiaries (2023 Edition)*, evaluating green finance business development, environmental and climate risk management, and self-social responsibility, and guided branches and subsidiaries to vigorously promote the development of green finance.

Establishing a remuneration and sustainability linked mechanism

The Bank established a performance evaluation mechanism for executive directors, supervisors representing shareholders and senior management members and directly linked the evaluation results and remuneration. According to regulatory policy requirements and the Bank's Articles of Association and annual business plan, the performance evaluation attaches great importance to sustainability and climate related factors and includes both quantitative and qualitative indicators. Specifically, the quantitative indicators include serving emerging industries and serving the construction of ecological civilisation, etc. In terms of green finance, the support of green loans for industrial development, climate related financing, etc., are evaluated, with attention paid to carbon emission rights related financing. In qualitative indicators, the Bank requires "improving the green finance service system and channelling more resources to green and low-carbon industries" and stresses contents such as the implementation of the new development philosophy and the promotion of business transformation, development and innovation.

Improving the green finance talent cultivation mechanism

The Bank formulated the *Implementation Plan for Cultivation of Green Finance Talent*. With a focus on the goals of carbon peak and carbon neutrality, the Bank continues to expand four types of personnel, namely green finance research management personnel, green finance product innovation personnel, green finance digitalisation personnel, and ESG risk management personnel, sets the overall goal of "building a professional green finance talent team that meets the high-quality development needs of green finance", and urges for establishment and improvement of the green finance talent cultivation mechanism and its supporting mechanisms.

Practicing Low-carbon, Environmental-friendly and Green Operation

Improving the green procurement system

The Bank stipulates in its internal policies such as the *Management Measures for Centralised Procurement* and the *Supplier Management Regulations* that in centralised procurement, priority shall be given to energy-saving and environment-friendly commodities, and in the supplier access and selection stage, priority shall be given to suppliers offering energy-saving and environment-friendly products. According to the government's procurement list of environment-friendly and energy-saving products and the green procurement realities of the Bank, the Bank formulated the *Green Procurement Product Catalogue*. It includes 58 product and service commodities and each is provided with a green qualification reference (e.g., the green qualification references for computer products include the environmental management system certificate, the energy-saving product certificate and the environmental label product certificate). The Catalogue requires that institutions shall review the green qualifications of suppliers and their products and actively identify and select commodities that meet green procurement standards during the process of procurement; when the procurement needs are met, priority shall be given to commodities with green qualifications and and to suppliers with more green qualifications and higher green composition, to promote high-standard green procurement.

Strengthening green operation management

Continuing to build green outlets. The Bank formulated and distributed the *Guidelines on Taking Orderly and Effective Steps to Build Green Outlets*, continued to implement internal policies such as the *Management Measures for Construction of Business Outlets*. The Bank fully integrates the concept of green development and environmental protection in the site selection, decoration material selection, design, construction, operation maintenance and day-to-day management of outlets.

Strengthening low-carbon operation management of data centres. Both Beijing Production Data Centre and Wuhan Production Data Centre formulated management regulations on energy consumption that contained such contents as management structure, energy conservation targets, energy use, statistical analysis and management of energy consumption, training & publicity and reward and punishment system, to encourage reduction of energy use intensity and raise energy use efficiency at the production data centres. Beijing Production Data Centre revised the *Management Measures of Capacity of Data Room Infrastructure* and the *Management Measures of Energy Efficiency of Data Room Infrastructure*. Operation Data Centre formulated environmental protection and energy saving requirements for newly purchased servers. Wuhan Production Data Centre formulated the *Green and Energy-saving Operation Guide for Infrastructure*, further refining the green and energy conservation requirements for data rooms.

Urging branches to optimise their policies and measures on green operation. Branches strengthen green operation management centring around green office, energy conservation, emission reduction, statistical management of energy, etc.

Institution	Green operation policy
Fujian Branch	Formulated the <i>Energy Management Institutions and Job Responsibilities</i> , the <i>Management Measures for Analysis of Energy Use Status</i> , the <i>Management Measures for Energy Conservation and Emission Reduction</i> , the <i>Measures for Management of Major Energy-using Equipment</i> , the <i>Management Measures for Green Development</i> , etc., to promote green and low-carbon office.
Shandong Branch	Issued the <i>Management Specification of Comprehensive Business Buildings of the Headquarters</i> , the <i>Quota Management Measures of Office Supplies</i> , the <i>Implementation Plan for Creating Energy-efficient Institutions</i> , the <i>Work Plan for Creating Green and Economical Cafeterias</i> , the <i>Management Measures of Business Vehicles</i> , the <i>Notice on Continuing to Standardise the Operation Management of Business Vehicles</i> , the <i>Notice on Further Strengthening the Operation Management of Business Vehicles</i> , etc., to lay a solid policy foundation for green operation.
Inner Mongolia Branch	Issued the <i>Management Measures of Energy Management Institutions and Job Responsibilities</i> , which stipulates the requirements on management of office water, electricity and business vehicles, providing guidance on standard operation of energy conservation and emission reduction.
Guangxi Branch	Issued the <i>Notice on Further Promoting Green Operation</i> and provided a specific list of priorities of green operation work for the year. Improved the <i>2023 Green Finance Evaluation Indicators and Scoring Rules</i> and evaluated carbon emission management policies.
Guizhou Branch	Drafted six policies, namely the <i>Responsibilities of Energy Management Positions</i> , the <i>Energy Statistics Management Regulations</i> , the <i>Energy Management Training Regulations</i> , the <i>Green Office Regulations</i> , the <i>Energy Use Management Regulations</i> , and the <i>Management Regulations of Major Energy-using Equipment</i> .
Yunnan Branch	Issued the <i>Notice on Standardising Carbon Emission Data and Supporting Materials</i> , further standardising the submission of energy consumption data of the branch.
Ningxia Branch	Formulated the <i>Work Plan on Refined Management</i> and the <i>Implementation Plan of Comprehensive Cost Management</i> , to comprehensively strengthen carbon emission management.
Qinghai Branch	Formulated the <i>Energy Conservation and Emission Reduction Management Regulations</i> and appointed personnel to be responsible for daily supervision and management of energy conservation and emission reduction at the branch and institutions under its jurisdiction.
Qingdao Branch	Formulated the <i>Interim Measures for Energy Conservation Management</i> and the <i>Energy Statistics Policy</i> to optimise its energy use structure and improve energy use efficiency.
Zhejiang Branch	Put forward the work guidelines of "intelligent buildings, paperless office, green travel and healthy life" in its <i>Action Plan of the Office Line to Serve the Group's Carbon Peak and Carbon Neutrality Efforts</i> , to promote green office.

04 / Environment-related Risks and Opportunities

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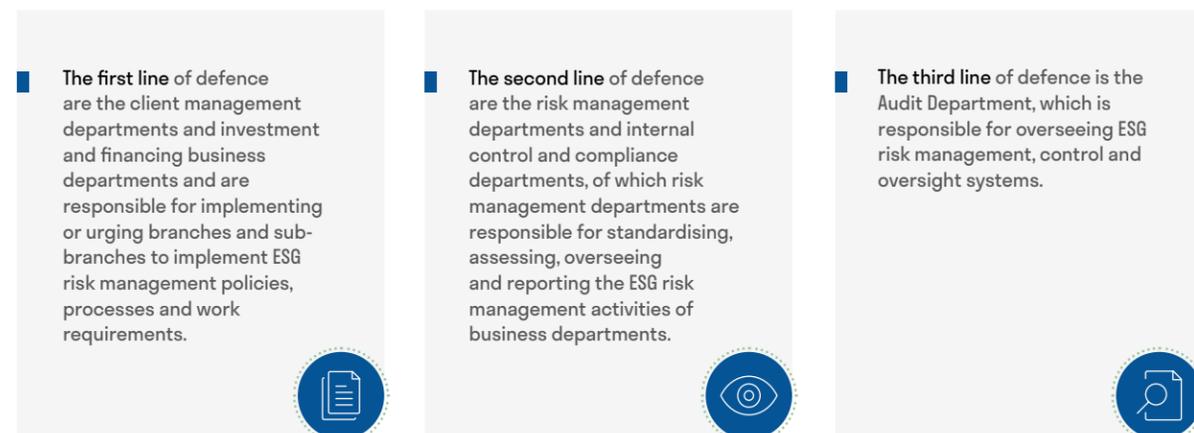
The Bank further improves the environmental risk and opportunity management system, strengthens identification, assessment, monitoring and response to environmental and climate risks, and actively seizes relevant development opportunities. The Bank conducts environment and climate related due diligence, studies in depth the environmental impact of its business activities, integrates relevant risk management mechanisms, processes and measures into the full-process management of investment and financing business, effectively addressing environmental and climate risks.

Environmental Risk Management System

The Bank continues to consolidate management of environmental and climate risks in investment and financing activities, has included it into the comprehensive risk management system, and has established a risk control system that covers the full process of investment and financing business. Meanwhile, it includes environmental and climate risks into the Group risk appetite statement and the Group comprehensive risk management report, lays down qualitative requirements and quantitative indicators for relevant risks, assesses the statuses of relevant risks, and has the Board of Directors review them periodically and the Management implement them.

The Bank continues to strengthen the development of the environment- and climate-related risk management system. According to the *Guidelines for Comprehensive Risk Management of Banking Financial Institutions*, the *Guidelines on Green Finance for the Banking and Insurance Industries* and other relevant regulations, the Bank formulated the *Measures of China Construction Bank for Management of Environment, Social and Governance Risks in Investment and Financing Business* (hereinafter referred to as the "ESG Risk Management Measures") as the top-level management policy for ESG risk management system in the investment and financing business of the Bank. The *ESG Risk Management Measures* covers the investment and financing businesses of the whole Group including corporate credit business, retail credit business¹, financial market business, financial institutional business, investment banking business, etc.

The Bank establishes "three lines of defence" for ESG risk management at the specialised department level and specified that the Credit Management Department of the Head Office shall take the lead in the ESG risk management of the whole Bank, take timely and effective mitigation measures against relevant risks in investment and financing business, deepen information communication and sharing and coordination of risk management, strengthen joint prevention and control, and prevent diffusion of risks.



¹ Refers to personal business loan.

Environmental Risk Due Diligence

The Bank attaches great importance to the impact of environment-related risk factors on credit risk in investment and financing activities and has included climate risk in investment and financing activities factors into the full process management involving business due diligence, credit approval, post-investment tracking, disposal of non-performing assets, etc., covering key links such as pre-loan, in-process and post-loan management. The Bank stipulates in the *ESG Risk Management Measures* that when handling investment and financing business and conducting due diligence, branches and sub-branches shall investigate clients' ESG risk statuses comprehensively, deeply and meticulously.

Due Diligence Process

Basic principles

In due diligence, the business handling institution of the Bank shall take into full account the client's industry, region, environmental impact and other factors. Various methods shall be comprehensively used to analyse and determine the possible impact on the Bank's asset security or other aspects, and in the investment and financing business process, the assessment shall focus on the risk areas of environment-related factors.

Regarding identified environment-related risks, the Bank shall promote the implementation of risk management measures and response plans based on the nature and severity of the risks. Credit approval departments and investment departments shall carry out reasonable differentiated credit approval strategies and investment strategies, e.g., setting limit standards for environmental indicators, adjusting credit schemes, raising the proportion of capital fund, suspending extension of new credit, reducing existing business, requiring remediation of violations, signing special commitment letters, etc. Credit extension to or investment in clients with gross violations or major risks or potential dangers concerning the environment is strictly restricted.

Execution

Credit business

Client access

- **Assessing the degree of environmental and climate risks of clients and implementing the "one-vote veto" mechanism.** The Bank pays attention to the possible impact of enterprises' production, operation and project construction on the environment as well as the completeness and effectiveness of their environmental protection measures. The Bank pays close attention to industries with potential environmental risks and mainly assesses the occupation of particular resources such as national forests, flood control lakes and dams by PV projects, and the coal consumption of thermal power projects. The Bank does not issue loans to projects without environmental impact assessment opinion paper. Regarding clients and projects that do not meet national policies or regulatory requirements or environmental protection standards, or have environmental and climate violations and have not completed relevant remediation, or have other major environmental and climate risks, credit initiation processing or approval will be denied and existing business will be reduced or exited from; regarding those projects which have completed relevant remediation, the Bank requires institutions to comprehensively assess the severity and possibility of recurrence of the environmental violations and the overall impact of relevant penalties on enterprises' operations, for those with serious problems, bad influence, repeated violations or problems that cannot be rectified, the Bank requires reducing or withdrawing from relevant business.
- **Improving credit application information.** The Bank improves the application materials for the full processes involving comprehensive credit granting, project evaluation and credit approval to display information related to environmental factors such as carbon emissions, including carbon peak in regions, whether the industry belongs to the key areas for promotion and control of carbon peak and carbon neutrality, major environmental benefits, contribution to carbon emission reduction, and other relevant information.
- **Optimising project evaluation contents.** The Bank adds green finance evaluation contents to guide business handling institutions to pay attention to the energy conservation, emission reduction, pollution control, etc., of projects. It optimises the main indicator parameters for project evaluation and reflects analysis and evaluation results in the evaluation report to make the project evaluation more targeted, standard and scientific, providing a decision-making basis for project selection and credit strategies.

In-loan review

The Bank implements differentiated credit approval strategies based on the level of environmental and climate risks of clients. The Bank does not issue loans to clients who have serious violations or major risk hazards. The Bank includes carbon peak and carbon neutrality related key projects into the applicable scope of green channels to improve the approval efficiency for such projects and give priority to them in business processing, evaluation and approval.

Post-loan management

In the post-loan inspection, the Bank adds the contents of environmental and climate risks, strengthens verification and follow-up management of risk early-warnings, and checks early-warning signals in a timely manner. If a client has a major change in environmental and climate risks, the Bank will initiate a group comprehensive financing or single-account comprehensive financing review in a timely manner. Regarding clients with major environmental, social and climate risks, the Bank strictly controls credit exposures and worked faster to defuse risks.

Bond underwriting business

The Bank requires bond underwriting business clients to abide by its environmental risk management process requirements for corporate clients. In terms of client and project selection and business access, etc., the Bank strictly reviews the environmental performance such as energy efficiency, greenhouse gas emissions and pollutant discharge. During client and project selection, the Bank conducts stage-by-stage review for environmental risk intensive clients such as steel and coal enterprises. In the business access stage, the client's environmental risk control system and management level, production and operation and pollution permits obtained, production process and energy efficiency utilisation level in the industry environmental risk related factors such as regulatory authorities' environmental safety violations and rectification records, are taken as important contents of due diligence.

Investment business

In financial market investment business, the Bank continues to optimise business philosophy and integrated ESG factors into its annual business strategy. When making investment decisions, the Bank pays close attention to the issuers' equity structures and corporate governance and give priority to supporting quality issuers with a better ESG performances, aims to direct resources towards key areas and high-quality issuers that contributes to the green and sustainable development of the real economy, and actively serves national strategies. In daily management, the Bank continues to pay attention to the negative public opinion regarding issuers within the investment portfolio, and regularly tracks changes in external ESG evaluations of issuers within the portfolio.

Committing to "Responsibility + Value" Investment, the Bank has established the "responsible investment system of RMB credit bond investment portfolio" to build a basic framework that covers strategy making, transaction execution, post-investment management and basic research. It comprehensively considers various indicators and includes issuers' ESG related performance such as external ESG ratings and public opinion as important reference for investment decision-making. With these efforts, the average value of the ESG rating of issuers within the portfolio has consistently exceeded the market average.



Corporate client ESG rating tools

The Bank continues to optimise the functions of the corporate client ESG rating system, adds a comparative analysis module of client ESG performance and a comparison module of ESG risk features in key business areas, and expands the functions of the ESG rating system to strengthen the capacity for assessing the environmental, social and governance risks of corporate clients. With the quality of clients' ESG related data being further raised, the Bank realised automated ESG rating of 1.01 million clients who meet assessment conditions.

Meanwhile, the Bank actively explores reflection and application of ESG factors in credit rating. It has integrated ESG factors into the client credit rating system and applied the system across the Bank, which promotes effective application of ESG factors in terms of client access, credit policy making, credit approval, classification of credit assets by risk, calculation of regulatory capital and performance evaluation.

The Bank realised automated ESG rating of

1.01 million

clients who meet assessment conditions



Trigger Factors and Risk Escalation Process

The Bank requires to embed the due diligence of environment and ESG related matters and risk factors into the management process of investment and financing business or projects as a regular review mechanism. The Bank periodically reviews the classification of clients by ESG risks, escalates, lowers or keeps unchanged clients' risk levels based on the review results, and takes corresponding risk management measures.

Classification standard

The Bank formulated and issued the *ESG Risk Management Measures*, according to which, based on ESG risk identification factors, clients are classified by ESG risks into, from high to low, "five types in four colours", namely green (normal), blue (special mention), yellow I (observation), yellow II (remediation), and red (withdrawal).



Besides, clients (or projects) are comprehensively evaluated based on factors such as their comprehensive ESG management capacity, the severity and frequency of negative ESG incidents, the remediation results, the industries or regions in which investments are made, and are divided into remediation, observation and special mention types based on the nature and severity of negative ESG incidents.

The Bank requires its branches and sub-branches to review the classification of clients by ESG risks at least once a year. Clients that are classified into red or yellow shall be evaluated at least quarterly. A review of the classification shall be initiated in a timely manner in the event of a change in relevant environmental protection laws and regulations, industrial policies, industry access policies, etc., or in the client's own environment and other aspects of the situation.

Trigger factors

Factors that trigger risk escalation management in the due diligence process include negative public opinion, major impact of sector/business nature on the environment, systemic risk in the governance structure, important changes in ESG and environmental and climate risk performance, etc. If situations that trigger risk escalation occur, the business handling institution of the Bank will initiate a review of the ESG risk classification of clients in a timely manner. Specifically, such situations include:

- The client has been mentioned in a notice of criticism circulated by competent government agencies such as financial regulatory administrations, reform and development commissions, ecology and environment bureaus, food and drug administrations and bureaus of commodity prices, or has been punished or included into blacklists or lists of key monitoring targets by the foregoing departments over the past three months, or is required to assume responsibility according to a court decision or verdict.
- The client has experienced an ESG incident with significant impact over the past three months, e.g., media public opinion, group incident, adjustment in regional or industrial environmental standards, etc.
- The client has experienced an important governance change, e.g., asset restructuring, major equity changes, frequent changes at the senior management level, major changes in the articles of association of the listed company, etc.
- The ESG evaluation results of the client by a qualified, independent third-party or relevant competent government agency have changed.
- The classification results by ESG risks need to be adjusted according to the requirements of regulatory inspections or internal or external audits, or there is a significant change in the ESG risk rating results of the client.
- The client's classification results by ESG risks have become invalid, or the period of validity of the classification results is about to expire, or the classification results need to be evaluated or reviewed during the period of validity.

Risk escalation management

Clients whose ESG risk levels are escalated, e.g., to red or yellow, are included into list management and the classification is reviewed on a quarterly basis. Meanwhile, corresponding escalated risk management measures are taken. Regarding credit clients and investment projects involving major ESG risks, the Bank requires such clients to submit an ESG risk report and establishes statements and undertaking clauses on strengthening ESG risk management as well as remedy clauses when clients breach contracts on ESG risk management. Regarding clients who have major risks or hidden dangers, business can be suspended according to contract terms till fund appropriation is terminated.

For sectors with relatively high environmental and climate risks such as steel, cement, coal mining and thermal power, the Bank implements the risk escalation management process and concentrates the approval authority of loans to new projects in the Head Office. The Bank includes projects that meet green credit standards into "green channels" that adopt differentiated processes to improve business handling efficiency.

In 2023, the Bank conducted routine and enhanced social, environmental and climate risk reviews in the due diligence of investment and financing business. The areas being reviewed include:

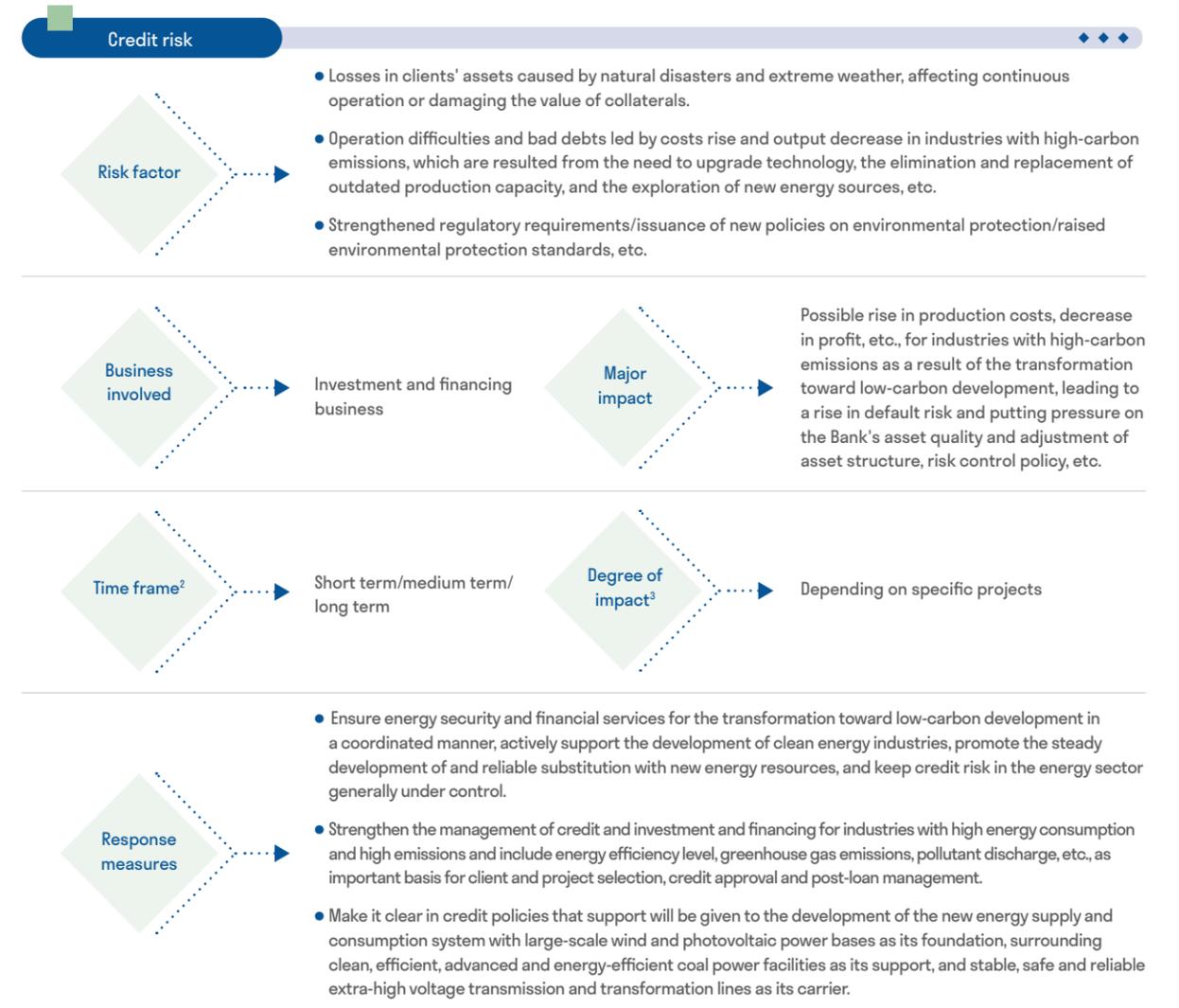
- The client's actual energy efficiency level, comprehensive energy consumption, energy mix, emissions of greenhouse gases and major pollutants, implementation of clean production, ultra-low emission transformation, etc., and environmental credit evaluation results.
- The impact of the client's production and operation on the ecological environment, biodiversity, etc., and the major measures taken by the client to reduce greenhouse gas emissions, prevent and control pollution, protect the ecological environment and biodiversity, etc.
- The carbon emission quota verification, trading and settlement agreement fulfillment information of the client who has been included into national and/or local carbon trading markets.
- Whether the client involves any public opinion on ecological environmental protection, social impact, biodiversity, etc.
- Problems, penalties and corrections found by ecological and environmental protection inspectorates, ecological and environmental departments, etc.

Identification of and Response to Environmental Risks and Opportunities

The Bank actively identifies environmental and climate risks and opportunities from multiple dimensions, integrates climate risk factors into its traditional risk analysis framework, thoroughly studies the overall impact of environmental and climate risk factors on business models, operation strategies, financial position, etc., and works out targeted measures to ensure stable and sustainable business development.

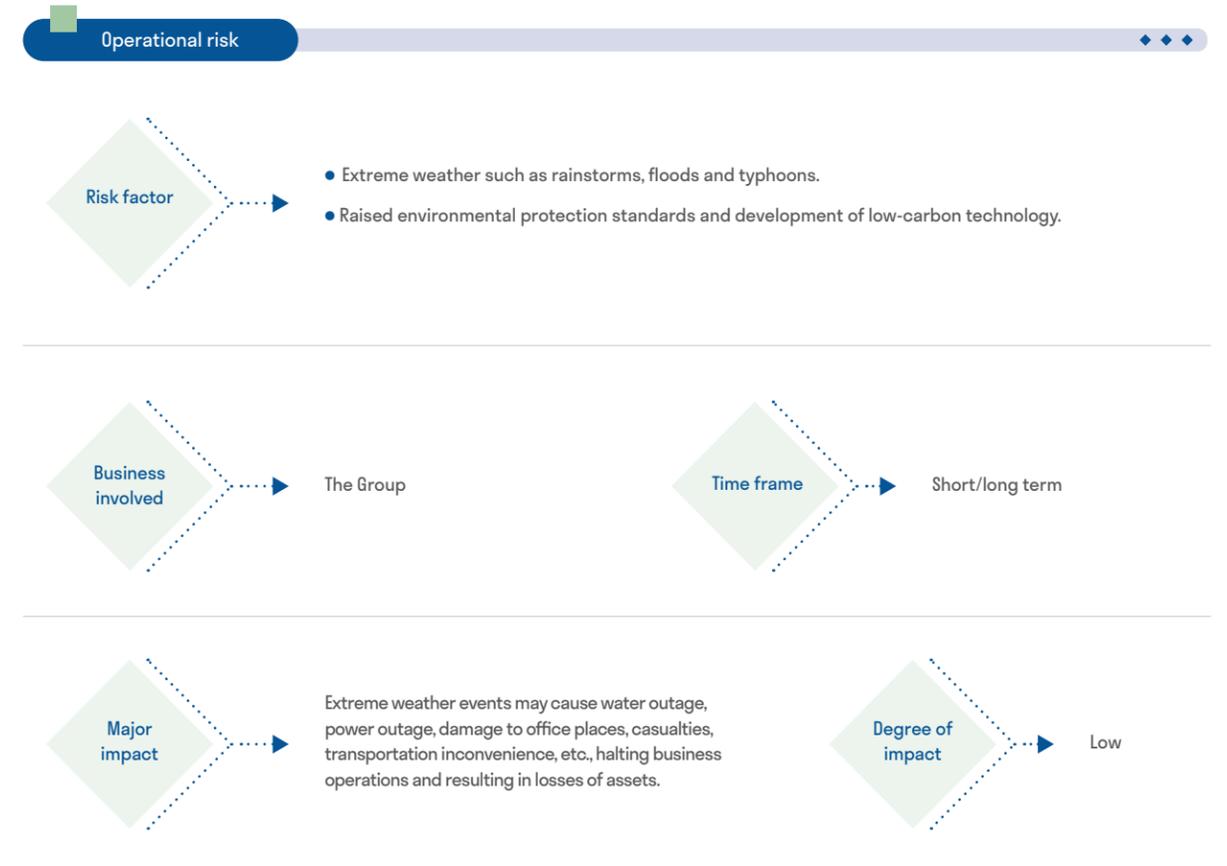
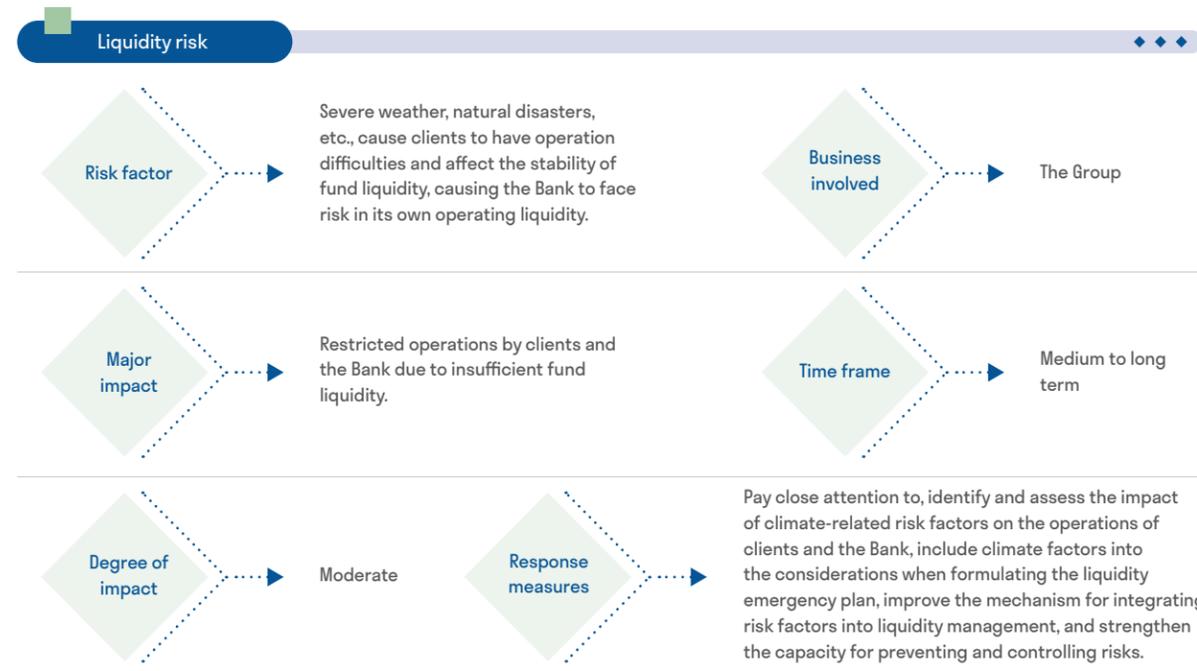
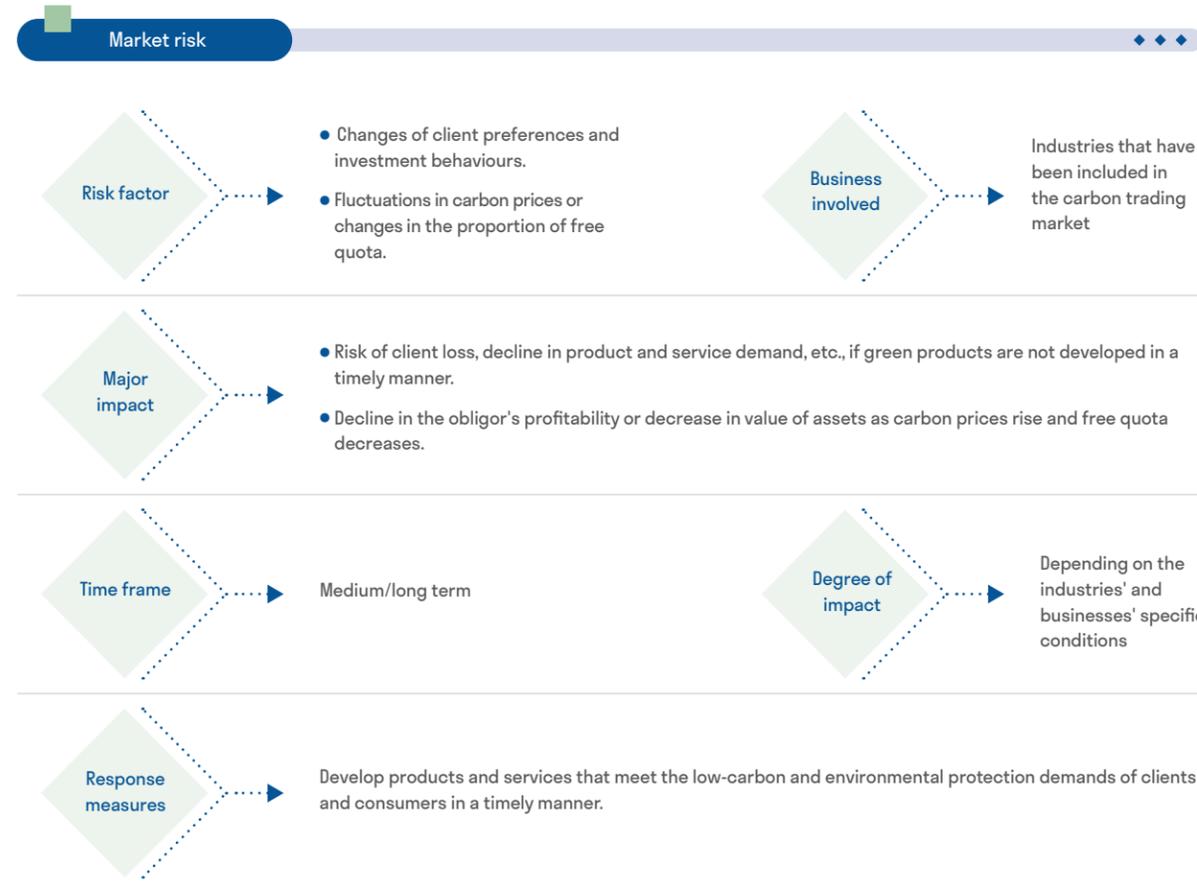
Risk Identification and Response

The examples of main environmental and climate risks identified by the Bank and corresponding measures include:

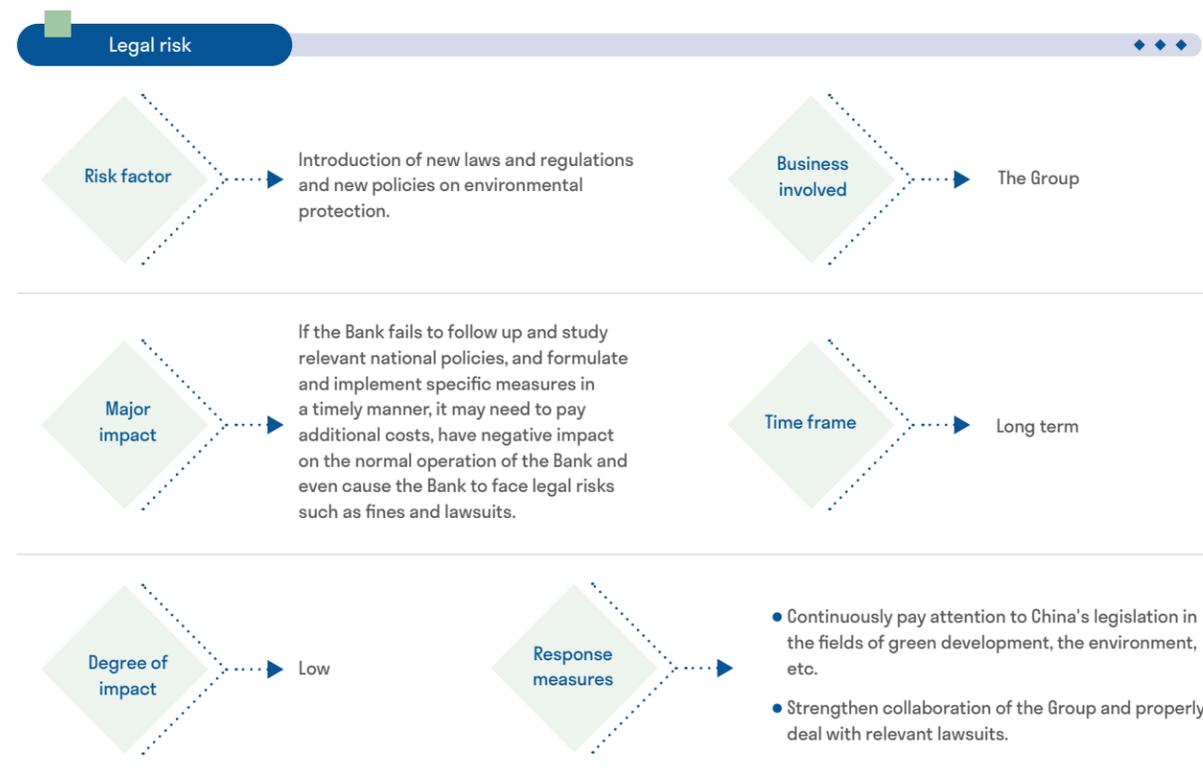
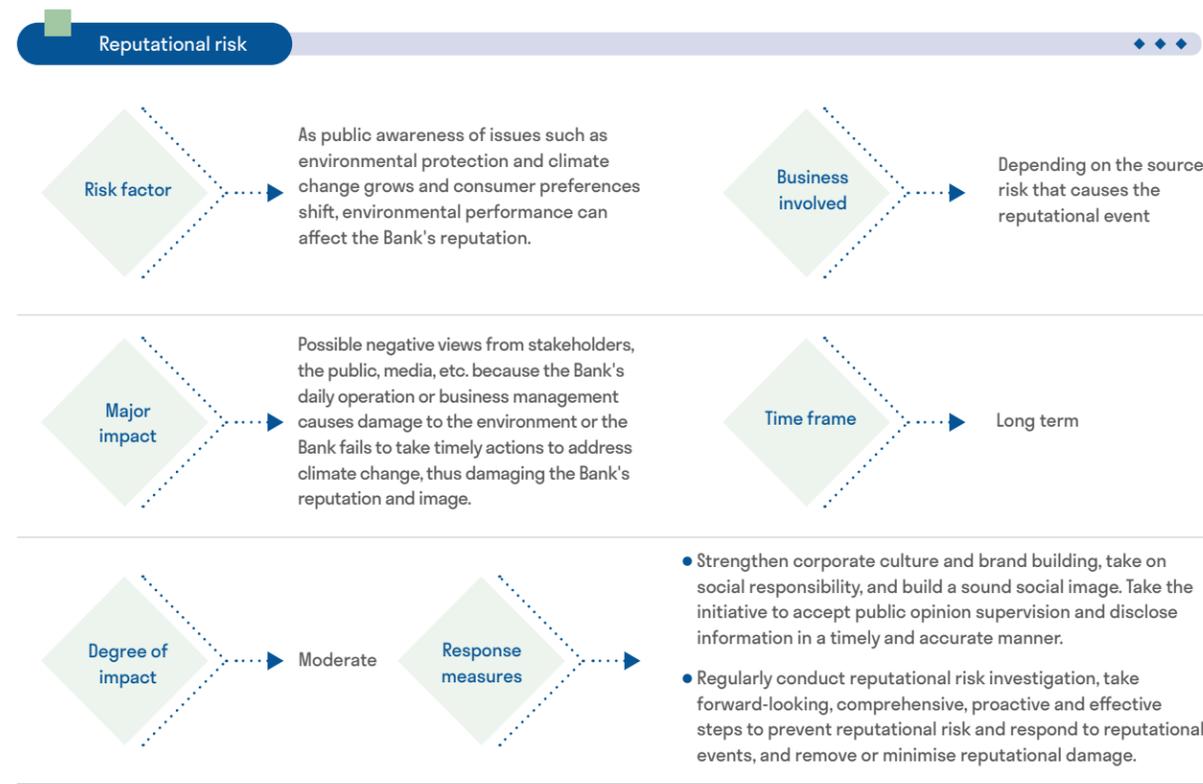


²Time frame: short term (1-3 years), medium term (3-5 years), long term (5-10 years).

³Degree of impact: high, moderate, low.



- Revise the operational risk management policy and further improve the operational risk management system framework to align them with new regulatory policies. Improve the full-process business continuity management and responsibility system, develop business emergency response plans, and specify the management requirements for unexpected extreme weather events such as emergency organisation, preparations for emergency, implementation of emergency measures, key points of emergency handling and post-disaster resumption of work and production. Improve the information reporting process, formulate mechanisms for handling different disaster situations, and strengthen Group-wide collaboration for addressing risks.
- Select business buildings that meet national technical standards and requirements for preventing natural disasters, make proper preparations for prevention and response, protect the lives and property of the employees and clients, and make sure that assets such as important equipment and cash are properly transferred, protected and dealt with.
- Based on the architecture design of "three centres at two locations", achieve 100% coverage of remote disaster recovery construction for important IT systems, and continuously update and iterate to ensure that the disaster recovery capabilities are always ready and effective.
- Regularly organise emergency drills and conduct emergency drills for natural disasters such as freezing rain and snow, floods, etc., based on climate change, to improve the emergency response mechanism and strengthen the emergency response capacity.
- Continuously pay attention to environmental protection standards, conduct in-depth research and apply advanced energy-saving and emission reduction technologies, take multiple measures to reduce energy consumption, improve server room utilisation and management efficiency, and accelerate the construction of green data centres.



Enhancing risk response level

Conducting regular audits to ensure compliant and steady business development. The Audit Department of the Bank conducts special audits of green credit business every year. In 2023, the Bank audited the green credit business of 37 branches, with a focus on implementation of relevant policies, compliance in operation, environmental risk management, etc. Meanwhile, based on China's national policy orientation and the Bank's internal policy arrangements, the Bank studied the factors affecting high-quality development of its green credit business. Besides, the Bank audited the investment banking business of four branches, with a focus on bond underwriting business, the operation and development quality and efficiency of green bonds, etc., and identified weaknesses in their operation management.

Improving early warning and emergency mechanisms and strengthening prevention and control of and response to physical risks. The Bank implements internal regulations such as the *Contingency Plan for Natural Disasters*, the *Response Mechanism for Safety Emergencies by Incident Level*, the *Regulations for Safety Early Warning Work*, etc., gives safety early-warnings in a timely manner, and makes proper preparations for prevention and response work. With those efforts, the Bank protects the lives and property of clients and employees as well as steady business operation, and properly transfers, protects and dealt with assets such as important equipment and cash. During the reporting period, the Bank issued two safety early-warnings and notices and over 60 safety reminders. Beijing Production Data Centre and Wuhan Production Data Centre formulated contingency plans for natural disasters, specifying measures for responding to extreme weather such as floods, waterlogging, cold, windstorm and high temperature, as well as the frequency of and requirements on inspections of machine rooms, key areas, equipment and facilities to ensure safe operation.

Organising special training to strengthen employees' risk management capability. The Bank conducted special training on climate risk stress testing methods and practices and organised personnel of relevant management departments of the Head Office, heads of risk management departments of subsidiaries and key business personnel to attend the training. The training focused on the scenario design, logic framework, measurement method, etc., of climate risk stress testing of the Bank and aimed to strengthen employees' expertise and practice capability in risk management.

Identifying and Seizing Opportunities

Against the backdrop of global climate change and transition, the Bank actively captures and seizes multiple opportunities, strengthened its capabilities for risk prevention and control, and further promotes sustainable development. The examples of environment- and climate-related opportunities identified by the Bank are as follows:

Type of opportunity	Description of opportunity
Expanding green products and services	The Bank actively follows the trends of green development and the transformation toward low-carbon development and vigorously develops green financial products and services. While consolidating businesses such as green credit and green bonds, it further expands diversified products and services such as green funds, green wealth management, green consulting and green supply chain to build a comprehensive financial development system across a broad range of fields, to enhance market competitiveness and meet different product demands of clients.
Providing finance services for transformation	The Bank presses ahead with ensuring secure and stable supply of energy resources and supporting green and the transformation toward low-carbon development in a well-coordinated manner and makes it a priority of its provision of financial services during the 14th Five-year Plan to help realise energy security and the goals of carbon peak and carbon neutrality. It supports traditional energy industries to upgrade their technologies, seizes new energy development opportunities, and actively guides the flow of assets to improve asset structure.
Building green data centres	The Bank accelerates the application of green technology, takes energy conservation and emission reduction measures to build industry-leading green data centres.
Reducing operating costs	By taking energy conservation and emission reduction measures, upgrading equipment and technology to reduce energy use and emissions, enhancing employees' environmental protection awareness, etc., the Bank further improves energy utilisation, lowers consumption of energy resources, and reduces operating costs.
Enhancing corporate reputation	The Bank strengthens green operation management and develops green finance business on all fronts. While practicing green and low-carbon actions, the Bank fully leverages its strengths to support the transition to a low-carbon economy and society, establishing a positive image among the public, clients, investors and other stakeholders and enhancing its social reputation.

Quantitative Analysis of Environmental Risks

The Bank independently develops a climate risk stress testing system that suits the national conditions of China and the Bank's realities, continuously expands stress test coverage, conducts physical risk stress testing for the first time, and takes further steps to make the quantitative analysis of climate risks more scientific, systematic and practical.

Climate risk scenario design

In 2023, the Bank developed climate risk stress test scenarios that suit the national conditions of China and fully connect to the internationally accepted Central Banks and Supervisors Network for Greening the Financial System (NGFS). Four scenarios were designed, namely 1.5°C scenario, 2°C scenario, current policy scenario and carbon peak and carbon neutrality goals scenario, which integrated various factors including China's economy, energy and carbon emissions, climate and environmental policies, global climate governance, etc.

The carbon peak and carbon neutrality goals scenario developed by the Bank is the first of its kind in the industry. It integrates the "1 + N" policy system and relevant policies under the carbon peak and carbon neutrality goals and has formed a set of indicator systems with quantitative indicators as the mainstay, which can help provide decision-making reference for managing and addressing climate risks of the Bank.

Transition risk stress testing

Testing range and method

In 2023, the scope of industries of the transition risk stress test of the Bank was expanded to cover 10 carbon-intensive industries, including eight major carbon-intensive industries, namely thermal power, steel, chemical, aviation (including airports), petrochemical, building materials, nonferrous metals and papermaking, and two carbon-intensive upstream and downstream industries, namely coal and road transport.

The Bank keeps optimising transition risk stress test methods. On the basis of carbon emission rights prices, the Bank fully includes factors such as output, price, cost of raw materials, energy, fixed asset investment, asset stranding, etc., of different carbon emission reduction paths into the driving factors of transition risks. The transmission path of transition pressure from the policy end to the enterprise end and its rules for measurement of financial statements are clarified.

Testing results

The base period of the transition risk stress test is the end of 2022 and the test period is from 2023 to 2060.

The test results show that if effective measures are not taken and climate change is not addressed proactively, under the four set scenarios, the loan repayment capacity of the clients in the 10 carbon-intensive industries all see declines of varying degrees, a rise in probability of default, and a downgrade in rating. The aviation, thermal power, steel, and petrochemical industries are impacted most under the carbon peak and carbon neutrality goals scenario.

In the medium to long term, the impacts on the Bank's capital adequacy ratio decline under all the scenarios. Under the 1.5°C scenario, the 2°C scenario, the current policy scenario and the carbon peak and carbon neutrality goals scenario, the capital adequacy ratio declines by 4.15, 3.11, 1.61 and 1.65 percentage points in 2030 from the base period respectively, and by 5.21, 5.03, 3.44 and 4.93 percentage points in 2060 from the base period respectively. Under the carbon peak and carbon neutrality goals scenario, the capital adequacy ratio declines markedly after 2033 due to a significant increase in policy pressure.

Climate physical risk stress testing

The Bank actively expands the depth and breadth of climate risk stress testing and conducted physical risk stress testing for the first time in 2023.

Testing range and method

Based on meteorological observation data of China, disaster loss data, the coupled model intercomparison programme in phase 6 (CMIP6) and NGFS scenario data, for the three major disasters of floods, typhoons and droughts which occur relatively frequently in China and cause large losses, the Bank designed physical risk stress scenarios down to the prefecture-level city and linked to the transition risk stress scenarios, and constructed disaster loss curves by region and by type of hazard-bearing body, to quantitatively analyse the impact of the relevant disasters on the value of the Bank's real estate collaterals and loans to agricultural clients.

Testing results

The base period of the physical risk stress testing is the end of 2022.

Real estate collaterals: The test results show that under the existing policy scenario and the carbon peak and carbon neutrality goals scenario, and due to the joint impact of floods and typhoons, the coverage ratio of real estate collaterals to financing exposures of the Bank declines by 7.91 and 6.78 percentage points from the base period respectively. However, after conversion using risk-weighted assets (RWA), the final impact on the Bank's capital adequacy ratio is very small. In terms of disaster type, compared to typhoon, flood disaster has more significant adverse impact on the value of real estate collaterals.

Agricultural loans: The test results show that with the combined effect of floods, typhoons, and droughts, under the existing policy scenario and the carbon peak and carbon neutrality goals scenario, the loan repayment capacity of all agricultural clients of the Bank declines at varying degrees and their probability of default rises. However, because relevant risk exposures are small, their impact on the Bank's capital adequacy ratio is very limited. In terms of disaster type, drought is the primary disaster type causing yield reduction and rating downgrading of agricultural clients.



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The Bank leverages its strengths in fintech and comprehensive banking license to continuously expand green finance business, build a green finance system that covers diversified products and services such as green credit, green bonds, green leasing, green trust, green funds and green insurance, and support transformation toward green and the low-carbon development of the economy and society.

Green Credit and Its Environmental Impacts

The Bank continuously increases supply of green credit to promote industrial upgrading and help improve the ecological environment. As at the end of 2023, the balance of green loans of the Bank posted RMB3.88 trillion, an increase of RMB1.13 trillion or 41.19% from the previous year, and its proportion in total loans rose by more than 3 percentage points from the previous year. The green loans were mainly used to support key areas such as clean energy, energy conservation and environmental protection, and green transport. Meanwhile, the Bank further optimises the whitelist mechanism for green credit and enhances support for green enterprises and projects. In 2023, the Bank issued a total of RMB1.05 trillion of green loans to clients on the whitelist.

At the end of 2023

Green loans balance

RMB **3.88** trillion

An increase of

RMB **1.13** trillion

from the previous year

Increased by

41.19%

Issued a total of

RMB **1.05** trillion

of green loans to clients on the whitelist in 2023



The environmental impact of green credit

In accordance with the reporting rules and calculation guidelines for energy conservation and emission reduction of the National Financial Regulatory Administration (former China Banking and Insurance Regulatory Commission) titled *Notice on Green Financing Statistical System* (Banking and Insurance Regulatory Letter [2020] No. 739), and based on the approval documents and feasibility study reports of green credit projects, the Bank calculates the environmental impact of green credits. The statistical caliber is the *T115 Green Financing Statistical Table* of the National Financial Regulatory Administration.



Green Bond Investment and Financing

The Bank sets development objectives for green bond business, actively promotes issuance of green bonds and ESG themed bonds, steadily expands the underwriting scale of green bonds, explores the ways for enriching green bond investment and trading, and facilitates all-round development of the green bond business.

Objectives of green bond business

Issuance of green bonds

Based on the actual situation such as regulatory requirements and market demand, the Bank will dynamically adjust the issuance targets of thematic bonds such as green finance bonds and sustainability bonds, continue to increase investment and make active efforts in the field of green and sustainability, and strive to achieve double-digit annual growth rates of domestic and foreign green and sustainability bonds from 2024 to 2026.

Underwriting of green bonds

The Bank actively underwrites innovative bond types in ESG fields such as green bonds, carbon neutrality bonds, sustainability linked bonds, and transition bonds.

Investment in green bonds

The Bank specifies that the increase in the proportion of green bond holdings shall not be lower than that of green loans across the Bank. After taking into account the high base effect and the uncertainty of market supply, the Bank set the growth target of no less than 15% in green bond holdings for 2024.

Development of green bond business

Issuance of green bonds

The Bank actively issues green bonds and ESG themed bonds⁴ and steps up support for green projects.

As at the end of 2023

Issued a total of
RMB 74.6 billion

of ESG themed bonds overseas

Issued a total of
RMB 84.4 billion

of green bonds at home and abroad

- In March 2023, the Bank issued RMB10 billion of green financial bonds at home. All of the proceedings from the issuance are used in the green industry projects specified in the Green Bond Endorsed Projects Catalogue (2021 Edition).
- In May 2023, the Bank issued "Biodiversity" and "Belt and Road" dual-themed green bonds overseas and raised a total of USD780 million equivalent of funds. Programmes for protecting natural forest, rivers, lakes and wetlands, turning marginal farmland into forest, etc., and assets such as clean energy in major provinces along the Belt and Road were selected, meeting relevant standards set out in the Green Bond Principles of the International Capital Market Association (ICMA).
- In November 2023, the Bank issued green bonds themed on addressing climate change overseas, with total issue sizes of USD1.1 billion and EUR300 million. The selected clean transportation projects have remarkable greenhouse gas emission reduction effect.

⁴ESG themed bonds include green bonds, social bonds transition bonds and sustainability linked bonds.

Underwriting of green bonds

In 2023, the Bank participated in 76 green bond underwriting projects at home and abroad, with an issue size up to an equivalent of RMB219,978 million. Specifically, the Bank took part in 36 underwriting projects of debt financing instruments for green non-financial enterprises, with an issue size up to RMB29,143 million. The Bank implemented several "first" projects on the interbank market. For example, it underwrote the first "green + use-type technological innovation" perpetual medium-term notes in China for Huaneng Lancang River Hydropower Inc.; it underwrote the first "green + technological innovation" dual-labelled REITs on the market for Shanghai Energy Technology Development Co., Ltd. with a size of RMB2.1 billion; and it underwrote "green + rural revitalisation" dual-labelled panda bonds for China Everbright Greentech Limited.

Besides, the Bank urges subsidiaries to actively participate in green bond projects. In 2023, CCB International took the lead in completing 17 green and sustainability bond projects, helping issuers raise funds equivalent to about USD6.2 billion.

2023

The Bank participated in

76

green bond underwriting projects at home and abroad

With an issue size up to an equivalent of

RMB 219,978 million

Investment in green bonds

The Bank adheres to the market-based investment principle, actively subscribes for green bonds issued by quality issuers, and channels more resources to issuers with outstanding ESG performance. In 2023, the Bank carried out a total of more than 550 green bond investments and transactions. As at the end of 2023, the balance of RMB green bond investments increased by 70.15% from the prior year-end; the balance of foreign currency green bond investments increased by 117.32% from the prior year-end and the average external ESG rating of issuers in the bond investment portfolio of the Bank remained better than the market average.

Meanwhile, the Bank guides its subsidiaries to increase investment in green bonds. As at the end of 2023, CCB Pension's balance of green bond investments recorded RMB3,331 million, an increase of about 41% over the beginning of the year. CCB Principal Asset Management invested, via bond investment channels, a cumulative total of more than RMB2 billion in green corporate bonds, medium term notes, corporate bonds, financial bonds, asset-backed securities, exchangeable bonds, etc. Its proportion of investments in green bonds, emerging industry bonds, etc. in credit bonds was higher than the average level of the market. In 2023, CCB Trust invested in 39 green bonds, with a total amount of RMB1,594 million.

Development of Other Green Finance Businesses

Green fund

The Bank continues to enhance support for green funds. As at the end of 2023, the Bank contributed RMB8 billion to the National Green Development Fund, of which RMB1.8 billion was already paid in. CCB Principal Asset Management, with a focus on the seven major strategic emerging industries, got involved in nearly 20 relevant industry themed products. The scale of the CCB New Energy Industry Fund grew rapidly from RMB200 million in its early days of establishment in 2020 to RMB3,484 million at the end of 2023. On the basis of developing ESG models and establishing green finance related policies, CCB Principal Asset Management issued Undertakings for Collective Investment in Transferable Securities (UCITS) funds. In 2023, CCB Investment set up two green theme funds and completed capital increase in the Baowu Green Carbon Private Investment Fund and the Jianyuan Haixin Equity Investment Fund.

Green investment

The Bank conducts M&A product lines through "stock, bond, loan and consulting" to actively serve the M&A, reorganisation, industry integration and asset revitalisation of green and low-carbon enterprises. In 2023, the Bank participated in nearly RMB100 billion of M&A and reorganisation transactions in green fields and provided more than RMB12 billion of financing support to clients in green fields.

Subsidiaries continue to expand diversified green investment businesses.

- CCB Investment conducts debt-for-equity swap investment. As at the end of 2023, a cumulative total of RMB26.9 billion of green investment projects were carried out, covering key areas of green industries such as wind power, photovoltaic, hydropower, nuclear power, environmental protection and new energy vehicles.
- As at the end of 2023, CCB Principal Asset Management, through equity investment, invested more than RMB25 billion in areas such as clean energy, energy conservation and environmental protection, clean production, eco-friendly upgrading infrastructure, ecological and green services, etc.
- CCB Life integrates ESG standards into its credit rating and risk management processes and gives priority to investing in projects that are environmentally friendly or have remarkable carbon emission reduction performance when choosing from projects with the same qualifications. As at the end of 2023, the balance of green investments of the Bank amounted to RMB17.1 billion, an increase of 28.6% from the end of 2022 and a compound annual growth rate over the past three years of 16%. The CCB Life's subsidiary, CCB Life Asset Management, registered and created seven green debt investment plans.
- CCB Trust's green equity business scale reached RMB3,356 million in 2023, an increase of 33% year on year, and the new injections by its green project investment and financing business exceeded RMB5 billion.
- CCB Private Equity focuses on new energy vehicles, new energy, energy conservation and environmental protection, synthetic biology, industrial internet, etc., when making investments. As at the end of 2023, its green investment business posted RMB2,221 million.

Green assets custody service

The scale of the green custody products of the Bank continue to expand, covering several major investment varieties on the market. As at the end of 2023, the Bank had a total of 171 green custody products and the assets under custody of the Bank reached RMB139.4 billion. The varieties of the products included publicly offered funds, quasi-REITs, wealth management products, private equity funds, etc. Of those products, there were 54 new green custody products, with a total scale of RMB22 billion. They included the first offshore wind power quasi-REIT on the market, "SPIC - Guangdong Company New Energy Infrastructure Investment Carbon Neutrality Green Asset Backed Plan (Quasi-REITs)", one of the largest clean energy quasi-REITs on the market in terms of issue size, etc.

Green consumption

The Bank keeps enriching green consumption related products and services, expanding green consumption scenarios, and exploring the application of personal consumption loans in the field of green consumption scenarios. It continuously develops the credit card instalment business for new energy vehicle purchases and applies technology to improve the efficiency of connecting to manufacturers' systems, realising two-way client expansion and efficient approval and loan granting in the whole process. So far, the Bank has developed cooperation with 15 new energy vehicle manufacturers including Tesla, Li Auto and NIO. In 2023, the Bank granted RMB30.5 billion of instalment loans for new energy vehicle purchases, an increase of 113% year on year, RMB19.3 billion of new loans were granted; by the end of 2023, the balance of loans reached RMB38.8 billion. CCB Consumer Finance creates a green consumption zone in the instalment mall of the CCB Consumer Finance app to provide convenient services for consumers to buy green products and services with online loans.

Relying on individual client carbon accounts, expanding emission reduction scenarios and linking customers' low-carbon trajectories, the Bank promotes the popularity of carbon accounts across the entire platform matrix, including CCB Mobile Banking, "CCB Lifestyle" App, UnionPay Personal Carbon Account Zone, and WeChat official account, and increases the rights and benefits of users, covering a wide range of categories, such as payment privileges, catering and takeaway, cycling and travelling, supermarket shopping coupons, releasing the sustainable consumption potential of users.



Green wealth management

CCB Wealth Management intensively promotes the allocation of green assets. As at the end of 2023, its balance of green assets totalled RMB17,748 million, mainly including bonds, non-standard assets and stock assets; and it had seven ongoing green related wealth management products including carbon peak and carbon neutrality products and ESG products, with total AUM of RMB5,724 million.

Green insurance

CCB Property & Casualty continues to engage deeply in green insurance. As at the end of 2023, its green insurance business coverage amounted to RMB36.8 billion, up 26% year on year. CCB Life strengthens risk protection for green industries and enterprises and green traveller. In its mechanism for management of product rate fluctuations, it developed the "green enterprise" factor for the attributes of particular client groups, effectively reducing the insurance protection cost for "green industries and enterprises". As at the end of 2023, CCB Life provided an insured amount of RMB2.15 billion of green insurance to low-carbon enterprises, emerging energy-efficient enterprises, etc.

Green leasing

By fully leveraging the function of leasing in integrating the financial industry with other industries and its "personalised, custom, differentiated and universal" features, CCB Financial Leasing effectively meets the financing and leasing demands of new energy power stations such as distributed photovoltaic, centralised photovoltaic and wind power and new energy vehicles. As a result, the growth of green assets exceeded the overall growth of leasing assets. In 2023, RMB15,679 million of green leasing was provided, accounting for 61.55% of general leasing business; in general leasing business, the balance of green leasing assets recorded RMB47,263 million and took up 55.15%, both continuing to register a growth. Leasing for green energy resources such as wind power and photovoltaic increased by RMB8,102 million, and financial support was provided through custom-made comprehensive service solutions to the first offshore wind power project with ultra-large stand-alone capacity in China. Leasing for green vehicles increased by RMB1,364 million, and the first service order for a new-energy logistics vehicle manufacturer of the company was implemented.

Green futures

CCB Futures vigorously develops brokerage business for green futures varieties, expands business in upstream and downstream industrial chains of green futures, and provides risk management services to green enterprises. As at the end of 2023, its balance of margins occupied by brokerage transactions for green futures amounted to RMB5,067 million, an increase of 160% from the previous year.

Green pension

CCB Pension states in its annual investment guide for credit risk business that it would vigorously develop green finance, continue to raise the proportion of green business, enhance support for key areas, actively contribute to biodiversity protection, and improve the inspection and approval efficiency of green finance projects. CCB Pension continuously develops green finance related non-standard projects and explores business opportunities in clean energy power generation, capacity optimisation, eco-friendly upgrading of production lines, etc. Meanwhile, it intensifies marketing to regional key clients, asset management institutions and branches. As at the end of 2023, CCB Pension's balance of green business reached RMB4,741 million, an increase of about 41% over the beginning of the year.

Green consulting

CCB Consulting leverages its advantages in engineering consulting business to provide project planning and approval support for green industry projects. In 2023, its contract amount of green business projects totalled RMB55.33 million, up 39.1% year on year. The projects involve areas such as new energy, environmental protection, waste disposal, ecological conservation, green buildings, renovation of old urban residential compounds, eco-friendly upgrading of infrastructure, etc. As vice chair unit of the China Association of Building Energy Efficiency, CCB Consulting has the qualifications for appraising near-zero energy buildings. In recent years, it has further expanded green building consulting services. Currently, its business scope covers services throughout the full green building consulting process in fields such as green residential buildings, green public buildings, prefabricated buildings, energy-efficient and eco-friendly upgrading of existing buildings, green industrial buildings and ultra-low energy-consuming buildings.

Building a characteristic "green finance + consulting" service model. CCB Consulting advanced the "green building consulting + green credit" innovation trial led by pre-assessment together with Beijing Branch and established a collaboration mechanism with the Science-Technology and Industrialisation Development Centre of the Ministry of Housing and Urban-Rural Development. From the launch of the trial in 2022 to the end of 2023, it launched five projects and helped recognise RMB2.56 billion of green credit.



Green housing

The Bank actively implements the labelling system for green personal new housing loans, guides incremental loans to support green building projects. CCB Housing Rental formulated the *ESG Action Plan of CCB Housing Rental Private Fund Management Co., Ltd.*, specifying green and environmental protection requirements for long-term rental apartment projects in links such as project design, decoration renovation and operation management and stating that it would give priority to using green and low-carbon building materials, green home appliances and renewable energy system and create a safe, healthy and comfortable living environment.

Case: CCB Principal Asset Management improves risk management based on its independently developed ESG assessment system

After joining the UN PRI in July 2021, CCB Principal Asset Management has continuously promoted full integration of ESG concepts into its corporate strategies, organisational structure, risk management and investment research practices. In 2023, CCB Principal Asset Management paid closer attention to ESG in its investment philosophy, established an independent ESG assessment system that suited the national conditions of China and had local industry characteristics, and conducted qualitative and quantitative assessments of investment targets by using individual stock and industry models. It built a full-process ESG investment framework to manage ESG risks through integration strategies, positive screening, negative list elimination, thematic approach, etc., and increased return on ESG investment. It also established a duty performance management system, gave full play to the professionalism of institutional investors, and actively exercised shareholders' ownership.

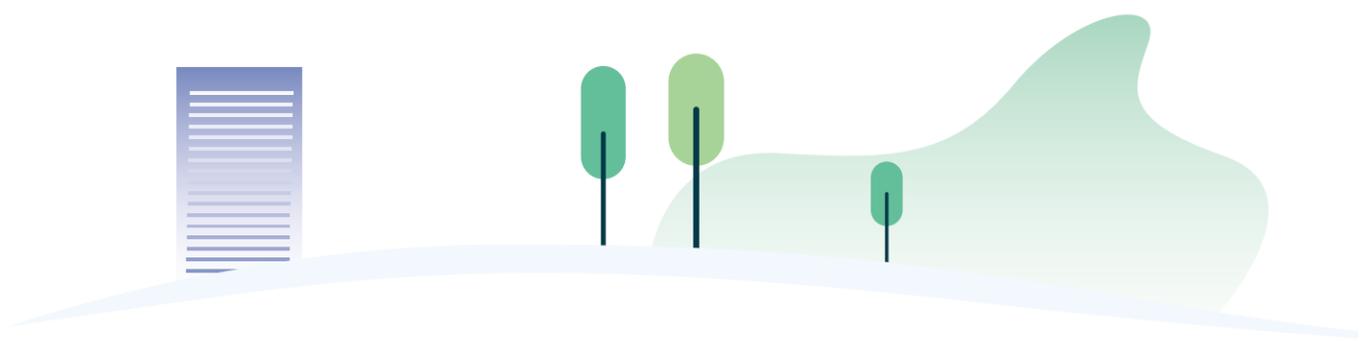
In terms of environmental and climate risk management, based on its independently developed ESG assessment system, CCB Principal Asset Management quantified and identified environmental risks and assessed their impact on business. Meanwhile, it included risk assessment into strategic planning and business process, established a risk monitoring and early-warning mechanism, and took measures to reduce climate risks of portfolios, e.g., adjusting the investment orientation to match the development direction of green finance, paying attention to clean energy, green technology, traditional carbon-intensive industries' transformation toward low-carbon development, etc. If a target company has environmental and climate risks that are not in line with CCB Principal Asset Management's investment philosophy, CCB Principal Asset Management will take duty performance management measures such as periodical reviews, exercise of shareholders' ownership, adjustment of investment portfolios to reduce the environmental and climate risks of investment portfolios. If an agreement is not reached in relevant communication, CCB Principal Asset Management will further take escalated measures such as reducing shareholding, withdrawing capital and selling off bonds.

Measurement of Environmental Impact and Risks

The data of environmental benefits of the investing and financing activities of the Bank are mainly from project approval documents, feasibility study reports, environmental impact reports, etc. If relevant data are not provided in such documents, they are calculated by using the formula of the environmental impact of green credit provided in the new version of the *Guidelines for Calculating Energy Saving and Emission Reduction for Green Credit Projects* issued by the National Financial Regulatory Administration (former China Banking and Insurance Regulatory Commission) in May 2020.

The Bank calculates the annual energy-saving and emission reduction resulting from green credits based on the total investment amount and energy-saving and emission reduction data of the project entered by the relationship manager in the business system, in combination with the loan balance within the Bank. This calculation is performed by using the formula provided in the aforementioned guidelines to determine the annual energy-saving and emission reduction generated by green credits.

$$\text{Annual energy conservations and emission reductions formed by loans} = \frac{\text{Balance of loans granted by the Bank to the project}}{\text{Total investment in the project}} \times \text{Annual energy conservations and emission reductions after the project is completed}$$



Typical Cases of Green Finance

Typical cases of green credit business

Supporting a large new energy base project to help turn the desert into an oasis and dunes into a photovoltaic "blue ocean"

Inner Mongolia Branch supported the development of the Ordos North Central New Energy Base project in the Kubuqi Desert, the first ten million KW-level new energy base project under construction in China. It approved RMB1.5 billion of fixed asset loans to the 1 million KW pilot work of the project and was the first to issue loans. As at the end of 2023, RMB617 million of loans were issued. The total installed capacity in the Kubuqi wind and PV power base is over 16 million KW. After the whole project is completed, it is expected to supply about 40 billion kWh of electricity to the Beijing-Tianjin-Hebei region annually, and clean energy accounts for more than 50%, equivalent to saving about six million tonnes of standard coal and reducing carbon dioxide emissions by 16 million tonnes. It will also help turn the desert into an oasis and dunes into a photovoltaic "blue ocean".

Supporting the development of the world's largest wind power project in ultra-high-altitude areas

Nyingchi Branch and Naqu Branch in Xizang organised an internal syndicate to support the building of the Xizang Naqu Omatingga Wind Farm, the world's largest wind power project in ultra-high-altitude areas. The syndicate issued RMB120 million of loans to the project and provided comprehensive financial services. The project is located in Naqu Town, Seni District, Naqu City, at an elevation between 4,500m and 4,750m. With a total investment of RMB545 million, the project has built 25 wind turbines with a stand-alone capacity of 4MW, with a total installed capacity of 100.8MW, annual on-grid energy of 188,376,000kWh and annual utilisation time of 1,869 hours. As the first 100MW-level wind power project in the Xizang Autonomous Region, the project can output 200 million kWh of clean energy annually, meet the electricity demand of 230,000 people in a year, and reduce carbon dioxide emissions by 200,000 tonnes. At present, the project has achieved grid-connected power generation, which is of great significance to improve the energy structure in northern Xizang, ensuring heat supply and safe power supply in winter and promoting rural revitalisation and economic and social development.

Supporting the construction of the world's first photovoltaic demonstration base in ultra-high-altitude areas

Sichuan Branch actively supported investment in and development of new energy resources. It helped a large central state-owned new energy investment and development company successfully build the world's first photovoltaic demonstration base in ultra-high-altitude areas in the Dinggong Grassland at an elevation of over 4,000m. By thoroughly analysing photovoltaic policies and accurately assessing the indicators and power generation prospects of the project, Sichuan Branch efficiently completed the loan approval process and became one of the first banks to provide fixed asset loan support to the project, which provided solid fund support for the smooth implementation of the project and strongly promoted the development of local green industries.

Financial support for the construction of the largest highland wind power project in China

Yunnan Branch supported the construction of the SPIC's Qujing Fuyuan West Wind Power Project, one of the key construction projects in Yunnan Province to build a "green energy brand". The project, with an installed capacity of 800 MW and an annual feed-in tariff of 2.06 billion kWh, is the largest plateau wind power base in China, and is also the largest project in Yunnan Province in terms of installed capacity in the new energy sector. Yunnan Branch has set up an exclusive service team, implemented credit tilting policy for new energy enterprises, optimised the credit process, given priority to guarantee the loan scale, provided preferential loan interest rates, and granted a total credit of RMB5.002 billion to Fuyuan West Wind Power Project, with RMB1.905 billion already invested. At present, the 135 wind turbines of Fuyuan West Wind Power Project are all connected to the grid and generate electricity, which can reduce carbon dioxide emission by 1.732 million tonnes and sulphur dioxide by 1,171.8 tonnes annually, and illuminate more than 1.2 million families.



Supporting the "green energy + ecological and environmental management demonstration project" of Yunnan Province

Yunnan Branch continued to increase credit injection into key new energy power generation projects and supported SPIC Yunnan International Power Investment Co., Ltd. in developing the Dongchuan District Ecological Management and Photovoltaic Restoration Project. It approved a front-end loan of RMB339 million with a term of six months for the project, as well as a basic construction loan of approximately RMB900 million with a term of 16 years. So far, it has successfully issued RMB339 million, ensuring the smooth implementation of "green energy + ecological and environmental management demonstration project". With a focus on water and soil conservation, the project uses leading water harvesting and irrigation technology as well as crop cultivation and breeding that are good for soil remediation to promote conservation through photovoltaic projects and integrates photovoltaic power generation projects with the ecological restoration of stony desertification areas. According to the plan, the total installed capacity of the project is 280MW and the project is composed of five major systematic projects, namely rainwater harvesting with photovoltaic panels, water storage cellars, trickle irrigation in dry season, zoned green planting and green power generation. After the project is completed, its annual on-grid energy is expected to be about 463 million kWh, saving about 145,800 tonnes of standard coal and reducing emissions of air pollutants by more than 900 tonnes every year.



 Providing services for the new energy transformation and upgrading of Gansu Province

Gansu Branch actively supported Gansu-based enterprises developing new energy. Centring around the generation, transmission, transformation, distribution, use and storage of new energy resources, the branch strengthened financial services in engineering construction, equipment manufacturing, and operation & maintenance services, etc. In 2023, to help CR Power Wind Energy (Guazhou) Co., Ltd. advance its Anbei First Wind Far Zone C 100,000 KW Engineering Project, Gansu Branch organised a professional team to conduct field survey and developed financial service solutions based on the characteristics of the project. It issued RMB377 million of green loans to the company as soon as possible, effectively ensuring the smooth implementation of the wind power project. Meanwhile, Gansu Branch actively supported the LS Group, a leading player in the equipment manufacturing industry in Gansu Province, to carry out its transition to and upgrading for using new energy, and helped it build a 45-tonne ultra-high temperature chloride purification and production pilot-plant. So far, the main body of the plant has been installed. The ultra-high temperature chloride produced by the plant is expected to raise power generation efficiency significantly by over 50%.

 Supporting the development of green energy projects of CECEP

The Bank provided green credit support to China Energy Conservation and Environmental Protection Group (CECEP), which involves seven projects, namely the Yangjiang Nanpeng Island Wind Farm, the Dunhuang Linuo 50MW Photovoltaic Power Generation Project, the Fudan Changxing Comprehensive 70MW Photovoltaic Smart Agriculture Demonstration Project, the Ningcheng County 20MW Combined Facility Agriculture Distributed Photovoltaic Power Generation Project, and it issued a cumulative total of about RMB1.5 billion of loans. Projects can provide 792.986GWh of clean electricity, save about 630,000 tonnes of standard coal, and reduce about 600,000 tonnes of carbon dioxide emissions every year, effectively promoting the development of green energy resources.

 Promoting the sustainability, green and environmental protection syndicated loan for sludge reduction facilities in Wellington

CCB New Zealand, as the only "green and environmental protection liaison bank" appointed by the government in New Zealand, successfully promoted the sustainability, green and environmental protection syndicated loan for sludge reduction facilities in Wellington, a national major project, with a scale of NZD400 million, which is one of the three international projects approved by the New Zealand government to adopt the financing model for infrastructure construction. The project has been implemented. It will reduce 80% of sludge yield in the city of Wellington every year, promoting recycling of water resources and environmental sustainability.



 Lead underwriting the financing for a ground photovoltaic power generation project in Nasukarasuyama, Japan

Tokyo Branch took the lead in organising syndicated loans for projects invested by Chinese-funded enterprises in Japan. It provided the financing demand for SPIC Shanghai Electric Power Japan Co., Ltd. regarding photovoltaic power generation projects and underwrote, as the sole lead underwriter, the financing for its ground photovoltaic power generation project in Nasukarasuyama, Japan. In 2023, all loans of the project, totalling JPY15.3 billion, were issued, and the Bank contributed JPY10.6 billion. The project generates 70,407,200 kWh of electricity per year, reducing carbon emissions by 58,578.79 tonnes.



 Taking the lead in a new energy asset package financing project in Australia

Sydney Branch, as one of the leading banks of relevant syndicate, completed the asset package financing of Neoen, an European renewable energy giants, in Australia and contributed a financing share of AUD50 million. Sydney Branch continues to enhance its ability to participate in the full-cycle service of renewable energy project financing and asset package financing. The new energy asset package contained four wind power stations, three photovoltaic power stations, and one battery energy storage project. The installed capacity of operation projects accounted for three fourths of the total installed capacity. Projects provide Australia with 1.296GWh of clean electricity per year, effectively driving green energy development.



 Supporting the ecological management of the Wanfeng Lake to help turn lucid waters and lush mountains into invaluable assets

The Bank supported the ecological management of Wanfeng Lake and the landing of fishermen, which is located in the junction of five counties (cities) of Guizhou Province, Guangxi Zhuang Autonomous Region and Yunnan Province. The Bank provided RMB130 million of credit loan support to the "Qianfangyouyu" project through the "leading enterprise + financial cooperative + farmer household" to support fishermen to start businesses onshore and transform fish farming from traditional cage farming to a high-tech land-based ecosystem. The Bank extended RMB200 million of credit to the "Guangdong-Hong Kong-Macao Greater Bay Area 'Vegetable Basket' Distribution Centre Project" of the Qianxinan Buyi and Miao Autonomous Prefecture to assist enterprises in upgrading cold chain and warehousing facilities and empower the "company + vegetable base + distribution centre + cooperative + farmer household" industrial chain operation model. The project helped increase the incomes of more than 8,000 fishermen and new urban residents. The Bank provided RMB3 million of credit funds to Qianguidian Wanfeng Lake Fishery Co., Ltd. to develop the industry integrating fishing and tourism and issued RMB499 million of loans to leading enterprises around the Wanfeng Lake, helping create jobs for farmers and increase their incomes.



 Creating a model of green finance services for building of "sponge cities"

Against the backdrop of Chongqing's efforts for work faster to build itself into a "sponge city", Chongqing Branch, based on its business expansion in a certain industrial park, explored the financing demand of its "sponge city" sub-project and issued RMB174 million of loans for its roof greening, rainwater regulation and storage facilities, runoff antifouling, etc. The branch spared no effort to build a model of supporting new urbanisation with green finance. The sub-project was successfully included into the green project library of Chongqing Development and Reform Commission in March 2023, fully demonstrating its excellent economic and social benefits.

 Providing green loans to support the development of a green supply chain financing platform

The Bank provided green finance services for China Everbright Environment Group Limited, issuing about RMB9 billion of green loans to establish a green supply chain financing platform. The Bank coordinated the Group's domestic financing needs through the management company at client's group headquarters and promoted issuance of supply chain loans. So far, RMB500 million stock in loans has formed and the move has played a positive role in boosting the development of green industries.

 Supporting sustainability linked syndicated loans

CCB Asia, as the appointed lead bookkeeping underwriter and sustainability loan consultant, provided a USD1.2 billion sustainability linked syndicated loan to China Solar Energy Investment Co., Ltd. and set sustainable development performance targets closely related to the client's business development and daily operation for the syndicated loan as well as corresponding spread adjustment plan. The loan won the Syndicated Green and Sustainability Deal of the Year 2023 of the Asia Pacific Loan Market Association (APLMA).

 Winning the bid for the qualification as the leading bank of the syndicate for a SPIC nuclear power project

The Bank actively participated in the financing for the SPIC Guangdong Lianjiang Nuclear Power Project Phase I and won the bid for the qualification as the leading bank of the syndicate for the project. The total investment of the project is RMB38,889 million and the total financing is RMB27,222 million. Meanwhile, the Bank served as the syndicated loan agent bank and settlement agent bank and obtained a share of RMB7.2 billion in the syndicate. Through those efforts, it fully supported the major national strategic project.



Typical cases of green bond business



Issuing green bonds themed addressing climate change overseas

In November 2023, Hong Kong Branch, DIFC Branch and Luxembourg Branch successfully issued green bonds themed addressing climate change overseas. The bonds issued include three-year USD fixed rate bonds, USD floating rate bonds and EUR fixed rate bonds, and the final issue size totalled USD1.1 billion and EUR300 million. All of the bonds have obtained third-party certifications issued by Ernst & Young and Hong Kong Quality Assurance Agency (HKQAA) and will be synchronously listed on the stock exchanges in Hong Kong, Dubai and Luxembourg. The clean transportation projects selected in the issuance have remarkable greenhouse gas emission reduction effect and of great significance in helping to combat global climate change.



Issuing green financial bonds domestically

In March 2023, the Bank successfully issued RMB10 billion of green financial bonds at home. All of the proceedings from the issuance were used in the green industry projects specified in the *Green Bond Endorsed Projects Catalogue (2021 Edition)*, including urban rail transit projects, sewage treatment projects, etc. The projects to be invested corresponding to the funds to be invested by those green financial bonds can reduce carbon dioxide emissions by 28,400 tonnes and save 14,100 tonnes of standard coal annually.



Participating in subscription for green bonds in provinces in southwest China

The Bank, as a cornerstone investor, actively participated in the subscription for green bonds issued by quality issuers in southwest China. The funds raised from the issuance were invested in a number of major large hydropower projects to support the coordinated regional development strategy, help the relevant high-quality issuers to promote the construction of large hydropower bases in an orderly manner and strengthen the comprehensive utilisation of water resources on the premise of ecological environmental protection and resettlement of immigrants, and to help safeguard energy security and boost regional economic growth. The bond issuance projects that the Bank participated in are expected to reduce carbon dioxide emissions by about 63,691,500 tonnes, save about 36,082,400 tonnes of standard coal, and reduce soot emissions by about 2,419.27 tonnes, sulphur dioxide emissions by about 11,320.78 tonnes and nitric oxide emissions by about 17,386.90 tonnes annually as compared with equivalent thermal power generation.



Helping underwrite and issue "green + rural revitalisation" Panda bonds

In September 2023, the Bank helped China Everbright Greentech Limited underwrite and issue "green + rural revitalisation" Panda bonds, with a scale of RMB1 billion, with all the funds raised being used in green projects. According to accreditation evaluation, the corresponding projects being invested in with the raised funds can reduce carbon dioxide emissions by about 400,200 tonnes, save about 200,800 tonnes of standard coal, and reduce sulphur dioxide emissions by 103.47 tonnes, nitric oxide emissions by 90.19 tonnes and particulate matter emissions by 17.99 tonnes. Most of the projects are agriculture and forestry biomass-type green and low-carbon industry projects, which not only have excellent environmental benefits but also can help boost the economic development in rural areas, create jobs and increase income, demonstrating great significance to consolidating the achievements in poverty alleviation and improving the rural environment.



Assisting ICBC Hong Kong Branch in pricing and issuing green bonds

On January 11, 2023, CCB International, as a co-lead underwriter, assisted ICBC Hong Kong Branch in pricing and issuing three-year USD900 million senior unsecured green bonds. The bonds issued were carbon neutrality themed green bonds and were part of ICBC's USD20 billion global medium-term note (GMTN) programme. The foregoing bonds were oversubscribed several times and the final coupon rate was priced at 4.5%.



Helping companies issue green offshore bonds

CCB International actively leverages its strengths to help companies issue green offshore bonds. On October 20, 2023, Jinan High-tech Holding Group Co., Ltd. issued three-year USD280 million senior unsecured green bonds, and CCB International served as the joint global coordinator of the issuance. Both the yield and the coupon rate of the bond issued were 7.4%. The raised funds will be used to repay the issuer's medium and long-term offshore bonds that are due within a year and support projects construction and general working capital according to the green finance framework. On November 6, 2023, Guangxi Investment Group Financial Holding Co., Ltd. issued two-year USD150 million senior unsecured green bonds, and CCB International served as the joint global coordinator of the issuance. Both the yield and the coupon rate of the bond issue were 7.5%. The raised funds will be used to repay some of the issuer's medium and long-term offshore bonds according to the green finance framework.

Other typical cases of green finance



Low-carbon card products lead green and low-carbon consumption

The Bank, together with MasterCard, launched the campaign for "Green and Low-carbon Upgrading for CCB MasterCard Global Payment Credit Cards", proposed conversion solutions for the relationship between consumption and low-carbon, and guided and fostered green consumption awareness and the concept of low-carbon lifestyle among clients. By offering clients three major privileges, namely, green vendor privilege packages such as new energy vehicle charging and Hellobike, the opportunity for participating in the "Priceless Planet Coalition" tree planting programme when meeting minimum consumption requirements, and the "carbon calculator" based on consumption type and amount, the campaign aimed to help clients establish the concept of green consumption.



Leveraging parent company-subsidiary collaboration to serve the first offshore wind power project with ultra-large stand-alone capacity in China

CCB Financial Leasing and Fujian Branch jointly provided custom comprehensive financial services for China's first offshore wind power project with ultra-large stand-alone capacity. They reasonably reduced the financing cost for the lessee through product design and tax planning and finally reached a cooperation agreement with an amount of about RMB1.6 billion with the client, of which RMB161 million was issued through direct leasing of financing leasing business. The project located in the open seas on the southeast side of the Liua Peninsula, Zhangpu and has a total installed capacity of 399MW and a total investment of about RMB6 billion. After it is put into operation, its annual on-grid electricity can reach over 1.6 billion kWh and its annual output value about RMB640 million, and it can save about 500,000 tonnes of standard coal and reduce carbon dioxide emissions by about 1.36 million tonnes every year. The project can provide valuable experience in developing offshore wind power in remote seas and building large offshore wind power bases.

 Serving leading enterprises in the new energy logistics vehicle industry

CGB Financial Leasing, together with Shenzhen Branch, issued a total of RMB191 million leaseback funds to a leading enterprise in the new energy logistics vehicle industry and its 25 co-lessee subsidiaries. The lessee is the largest operator of new energy logistics vehicles in China and focuses on supporting services for intensive operation of new energy logistics vehicles. Currently, the new energy trucks it operates nationwide account for about 10% of the new energy trucks in operation in the whole market and it has 90% of big express delivery and intra-city platform clients. The cost of use of new energy logistics vehicles is low and large-scale commercial application can help significantly reduce logistics cost, thus promoting the development of green transportation.

 Developing green debt investment plans

CGB Life actively expanded diversified green finance products and developed two green debt investment plans. Of the two plans, the "CGB Life Asset Management - Zhangzhou Jiulongjiang Hospital Green Bond Investment Plan" registered scale of RMB1 billion and was assigned a green level of G-1 by China Chengxin Green Finance Technology (Beijing) Co., Ltd. (CCXGF). The "CGB Life Asset Management - Foshan Metro Infrastructure Green Debt Investment Plan (Phase I)" registered scale of RMB1 billion and was rated as a G1 green project by Lianhe Equator Environmental Impact Assessment Co., Ltd. The project corresponding to the investment plan is expected to reduce carbon dioxide emissions by 343.52 tonnes and save 135.70 tonnes of standard coal annually.

 Promoting the fundraising of the Hubei Green High-quality Development Fund

Substantive progress was made in the fundraising of the Hubei Green High-quality Development Fund jointly initiated by CCB Private Equity, Hubei Branch, and Hubei Hongtai Group Co., Ltd. The target scale of the fund is RMB1.5 billion and the fund will invest mainly in the ecological and environmental protection projects in the Yangtze River Economic Belt. After the fund's foundation, solid steps will be taken to support and serve the green transition and ecological conservation in the central region. The fund is currently advancing the internal decision-making process of prospective investors.

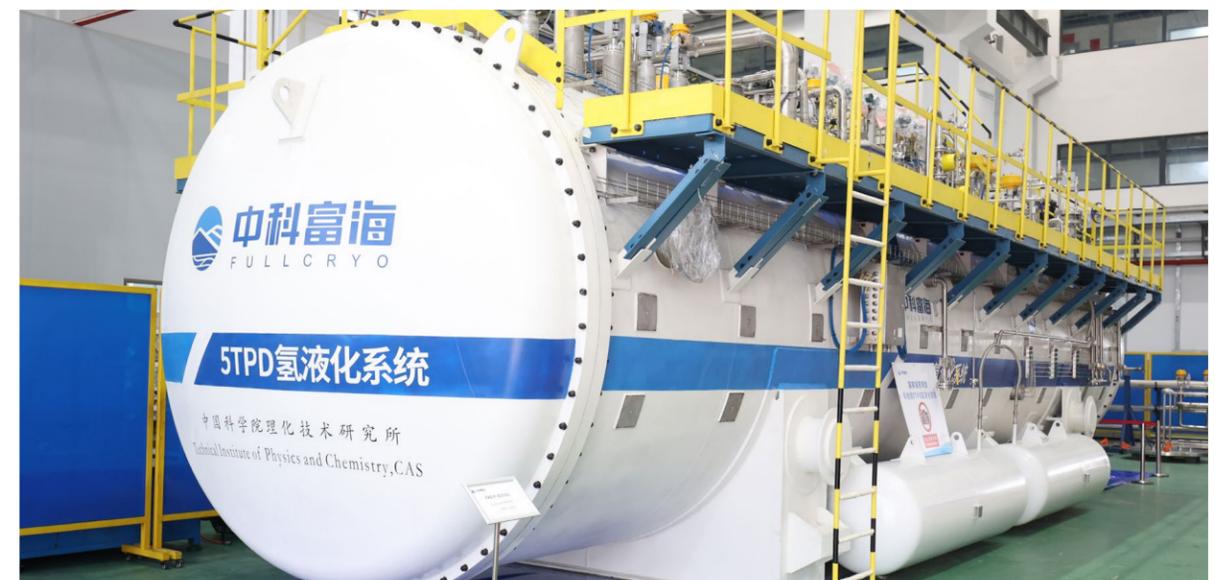


 Investing in the Comprehensive Pipe Gallery project to promote energy conservation and emission reduction

CGB Trust invested, through MCC CCB Investment Fund Management (Beijing) Co., Ltd., in the capital base of Guangzhou Knowledge City Comprehensive Pipe Gallery and Supporting Facilities Engineering PPP Project. The comprehensive pipe gallery will provide a foundation for the development and use of the urban underground space. It can help make traffic smoother and the environment cleaner, while can avoid repeated excavation of municipal roads and help reduce environmental impact. Meanwhile, inspection and service accesses and surveillance and alarm systems will be installed to reduce leakage and damage of pipes, thus reducing environmental pollution. The project is expected to save 895.71 tonnes of standard coal and reduce carbon dioxide emissions by about 2,203.45 tonnes per kilometre annually. In terms of energy conservation measures, the project uses transformers with excellent energy efficiency, installs capacitors for reactive power compensation, and adopts energy-efficient electric transformation and distribution system equipment, etc., realising economical operation.

 Enhancing investment support in new energy fields

CGB Private Equity, together with Anhui Branch, invested through the market-based sub-fund Zhanxin Fund in NIO Capital's Phase II RMB Fund, with an investment amount of RMB150 million, of which RMB90 million has been paid in. The fund was mainly invested in carbon peak and carbon neutrality fields. In terms of direct investment projects, on the basis of the investment in several leading projects in new energy and new energy vehicle industrial chains, in 2023 CCB Private Equity invested in four new projects, namely Sunwoda, Fullcryo, Jiemeng Intelligence and Gaopin Tech, with a total investment amount of RMB600 million, the cumulative total investment scale in green fields reached RMB1,575 million. CCB Private Equity's total indirect investments through sub-funds are RMB646 million, including RMB166 million new investments made in 2023.



06 / The Impact of Operating Activities on the Environment

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The Bank works continuously to deliver on the goals of green operation, advances energy audit for carbon peak and carbon neutrality across the Bank, establishes a sound mechanism for the management of carbon emissions, and improves the management system related to green operation. The Bank constantly refines green and energy conservation measures, promotes green office and green procurement, and drives the construction of green outlets and green data centres. The Bank scales up the publicity of the green concept to raise employees' awareness of green and low-carbon operation.

Calculation of Environmental Impacts

Greenhouse Gas (GHG) Emissions Scope 1 and 2

	2023	2022	
Total Greenhouse Gas (GHG) Emissions (Scope 1 and 2) (tCO ₂ e)	1,648,050.85	1,682,812.20	
Direct Emissions (Scope 1) (tonnes)	63,928.61	69,497.11	
Natural Gas (tonnes)	30,498.02	31,768.07	
Liquefied Petroleum Gas (tonnes)	449.55	593.48	
Coal (tonnes)	129.05	170.00	
Petrol (tonnes)	29,178.45	32,604.30	
Diesel (tonnes)	3,462.69	4,151.00	
Others (tonnes)	210.85	210.26	
Indirect Emissions (Scope 2) (tonnes)	1,584,122.24	1,613,315.09	

Purchased Electricity (tonnes)	1,584,122.24	1,613,315.09	
Greenhouse Gas Emission per Employee (Scope 1 and 2) (tCO ₂ e/person)	4.49	4.73	
Scope 3 (Purchased Goods and Services - Office Paper)	2023	2022	
Office Paper Greenhouse Gas Emissions (ten thousand tCO ₂ e)	1.76	-	
Office Paper Greenhouse Gas Emissions per Employee (tCO ₂ e/person)	0.02	-	

Energy and Resource Consumption

	2023	2022	
Energy Consumption (tonnes of standard coal)	317,579.85	325,657.59	
Energy Consumption (MWH)	2,300,828.73	2,346,668.6	
Direct Energy Consumption (tonnes of standard coal)	34,818.58	37,252.05	
Natural Gas (tonnes of standard coal)	18,695.21	19,104.16	
Liquefied Petroleum Gas (tonnes of standard coal)	263.59	347.96	
Coal (tonnes of standard coal)	44.75	58.00	
Diesel (tonnes of standard coal)	1,605.36	1,924.45	

Petrol (tonnes of standard coal)	14,110.88	15,719.03	
Others (tonnes of standard coal)	98.79	98.45	
Indirect Energy Consumption (tonnes of standard coal)	282,761.27	288,405.54	
Purchased Electricity (tonnes of standard coal)	282,761.27	288,405.54	
Energy Consumption per Employee (tonnes of standard coal/person)	0.87	0.92	
Water Consumption (tonnes)	16,977,313.26	18,246,296.32	
Water Consumption per Employee (tonnes/person)	46.27	51.27	
Office Paper Consumption (tonnes)	6,802.61	8,841.62	
Office Paper Consumption per Employee (tonnes/person)	0.02	0.025	

Low-carbon Operations

	2023	2022	
Proportion of Off-counter Account Transactions(%)	99.65	99.64	
Financial Transaction Migration Rate via Electronic Channels(%)	98.28	97.87	

Waste

Non-hazardous Wastes (tonnes)	370.09	713.33	
Waste Electronic Information Products (tonnes)	213.43	229.47	
Waste Vehicles (tonnes)	141.93	457.35	
Waste Batteries (tonnes)	4.61	10.62	
Waste Office Supplies (tonnes)	10.12	15.89	
Non-hazardous Waste Consumption per Employee (tonnes/person)	0.004	0.008	
Hazardous Wastes (tonnes)	34.36	37.09	
Waste Toner Cartridges (tonnes)	34.36	37.09	
Hazardous Waste Consumption per Employee (tonnes/person)	0.0004	0.0004	

Notes:

- The statistical scope of greenhouse gas emissions, energy consumption, water consumption and office paper related indicators include the Head Office, 37 domestic branches, Northeastern China College, and Eastern China College of CCB Learning Centre, Beijing Production Data Centre and Wuhan Data Centre.
- Based on the nature of the Group's business, greenhouse gas emissions are mainly from purchased electricity and fossil fuel combustion, and greenhouse gas emissions are calculated in accordance with the requirements on activity level data and emission factors as specified in the *Guidelines for Accounting Methods and Reporting of Greenhouse Gas Emissions of the Operating Unit (Company) of Public Buildings (Trial)*, *ISO 14064-1 Greenhouse Gases — Part 1: Specification with Guidance at the Organisation Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals*, and *2011 and 2012 Average Carbon Dioxide Emission Factors for Regional Power Grids in China*.
- Office paper (A3 and A4 type) GHG emissions data are calculated based on the *Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Corporate Value Chain (Scope 3) Standard* Ecoinvent 3 database for paper (cradle-to-gate, including transport) emission factors, activity level data, and related requirements.
- The Group's major sources of energy consumption include direct energy and indirect energy, of which direct energy is mainly natural gas, liquefied petroleum gas, coal, diesel, petrol, and others (ethanol, fuel oil, etc.), and indirect energy is mainly purchased electricity. The energy consumption is calculated based on power and fuel consumption and relevant conversion factors provided in the *General Rules for Calculation of Comprehensive Energy Consumption (GB/T 2589-2020)*.
- The statistical scope of water consumption includes municipal water supply, reclaimed water and drinking water.
- The statistical scope of waste includes the Head Office premises, the entire jurisdiction of 10 city branches (Beijing, Tianjin, Shanghai, Chongqing, Dalian, Ningbo, Qingdao, Xiamen, Shenzhen and Suzhou), and the headquarters office of 27 provincial and regional branches.
- The types of non-hazardous waste mainly include waste electronic information products, waste office supplies, waste batteries and waste vehicles. Waste electronic information products mainly include microcomputer mainframes, monitors, laptops, printers and servers; waste batteries include only dry batteries, excluding storage batteries; and waste office supplies include only pens, paper clips and staples.

Progress Towards the Goals of Green Operation

Focusing on the goals of green operation, the Bank steadily advances the implementation of various green measures related to energy saving, water conservation, reduction of emissions and wastes, and continuously refines the management of green operation.

Emission reduction targets

Target	Progress in 2023
<ul style="list-style-type: none"> The Bank will organise bank-wide low-carbon publicity activities and carbon peak and carbon neutrality professional training every year, in combination with the World Environment Day, World Water Day, and the National Energy Conservation Awareness Week, to enhance employees' awareness of emission reduction and energy conservation. 	<p>The Bank carried out campaigns to publicise low-carbon on the occasions of the World Environment Day and the National Skills Week, etc., encouraged employees to raise the awareness of carbon management, and promoted low-carbon and energy conservation practices among employees.</p>
<ul style="list-style-type: none"> From 2022 to 2026, the Bank will conduct bank-wide energy auditing. Based on the results of the energy auditing, the Bank will gradually carry out energy-saving renovation projects. LED fixtures will be preferred when adding or replacing lighting fixtures. It is expected that by 2026, 100% of lighting fixtures in the buildings owned by the Bank will use LED fixtures. 	<p>The Bank carried out energy audit for its branches and sub-branches and prepared the energy audit report. LED energy-saving light fixtures were selected for renewal and renovation in all branches.</p>
<ul style="list-style-type: none"> The Bank will continuously construct "green outlets". From 2022 to 2026, the percentage of recyclable materials used in renovated or new outlets will reach more than 60%. 	<p>The Bank advanced the development of "green outlets", formulated and issued guidelines, and developed development standards. As at the end of 2023, the Bank has built and opened a total of 228 green outlets. Recyclable materials represented 67.15% of the materials used in renovated or newly built outlets.</p>
<ul style="list-style-type: none"> The Bank will prioritise the new energy vehicles as the new official vehicles. From 2022 to 2026, the proportion of new energy official vehicles in the Bank will be gradually increased to promote green commuting. 	<p>The Bank continuously advanced the replacement of official vehicles with new energy vehicles, arrangements have been made to renew more than 50% of all sedan cars with new energy sources.</p>
<ul style="list-style-type: none"> From 2022 to 2026, the PUE (Power Usage Effectiveness) value of the data centres will be gradually reduced. 	<p>The PUE value of the data centre in the Bank's Beijing Daoxianghu Production Data Centre fell by 0.12 year on year, and the PUE value of the data centre in the Bank's Wuhan Production Data Centre fell by 0.032 year on year.</p>

Energy saving targets

Target	Progress in 2023
<ul style="list-style-type: none"> From 2022 to 2026, the energy consumption and carbon emission intensity across the Bank will be on a decreasing trend. 	<p>The intensity of energy consumption and the intensity of carbon emission across the Bank continued to decline year on year.</p>
<ul style="list-style-type: none"> The Bank will strengthen its capacity to reduce carbon emissions across the Bank, establish a bank-wide "carbon emission management platform", construct a solid database of the energy consumption, and improve the capabilities to collect, analyse and apply the data on energy and resource consumption of institutions at all levels. 	<p>The Bank improved and upgraded the system for the management of carbon emissions by refining its accounting feature and introducing the data analysis function, and prepared for building an energy conservation technical renovation project library.</p>

Waste reduction targets

Target	Progress in 2023
<ul style="list-style-type: none"> From 2022 to 2026, 100% of the Bank's waste IT assets will be delivered to enterprises with the qualification to dispose of electronic wastes and are registered on the website of the government's environmental protection department for green and eco-friendly treatment. 	<p>The Bank established a process for the socialised recycling and disposal of old and waste IT assets. It selected the waste assets recyclers that meet national environmental protection requirements through open bidding, and ensured green, environment-friendly and compliant disposal of waste assets by the recyclers through contract constraints.</p>
<ul style="list-style-type: none"> From 2022 to 2026, 100% of the Bank's retired self-service equipment, such as ATMs, will be recycled annually by suppliers with relevant qualification. 	<p>In 2023, the Bank scrapped 18,859 self-service equipment, 100% of which were recovered by equipment suppliers with environment management system certificates, quality management system certificates, waste electronic product disposal certificates, pollutant discharge permits and hazardous waste business licences, and are qualified for treating HW49 waste.</p>
<ul style="list-style-type: none"> The Bank will promote a paperless office, improve the recycling rate of office supplies, and reduce the generation of office supplies waste. From 2022 to 2026, the office paper consumption per employee in the Head Office will be lowered by 5%. 	<p>As at the end of 2023, the per capita use of paper decreased by 25% across the Bank.</p>

Water conservation target

Target	Progress in 2023
<ul style="list-style-type: none"> From 2022 to 2026, water-saving appliances will be selected for replacement and new installations to gradually increase the coverage of water-saving appliances, and water-saving education activities will also be held across the Bank. 	<p>Appliances including tap water appliances were regularly checked, and replaced or repaired in a timely manner in case of problems to improve water utilisation.</p>
<ul style="list-style-type: none"> From 2022 to 2026, the Bank will organise water conservation promotion activities at least once a year at the Head Office of the Bank. 	<p>The Bank carried out water conservation campaigns on the occasions like the World Water Day and the National Energy Conservation Week.</p>
<ul style="list-style-type: none"> From 2022 to 2026, the Bank will promote pilot projects on rejuvenated water recycling in branches with appropriate conditions. 	<p>The Bank installed recycled water recovery equipment in its production data centres in Beijing, renovated the water supply system by reserving the recycled water pipeline interface to be connected to the municipal recycled water pipe network. Meanwhile, it built recycled water treatment facilities for the pre-treatment and pressurisation of water for irrigation or cooling towers refill. The Bank further implemented the national requirements on popularising the use of recycled water, improving the rate of utilisation of non-conventional water sources in the parks to more than 40%.</p>

Energy Conservation and Environmental Protection Measures and Achievements

The Bank takes a combination of measures to continuously advance green and low-carbon operation and carbon emissions management. It actively promotes green office, advocates green and digital procurement, and strengthens the construction of electronic and online service channels. It promotes the development of green outlets characterised by low-carbon, environment-friendly, energy-efficient and intelligent operation, and establishes green data centres to build an eco-friendly bank.

Strengthening the Management of the Bank's Own Carbon Footprints

In 2023, the Bank reviewed the data about energy consumption and carbon emissions in 2022, and continued to advance the management of carbon emissions and energy audit.

- Enhancing the management of carbon emissions.** The Bank optimises the management system for carbon emissions, upgrades the statistical and accounting functions and adds the function of data analysis. The Bank prepares for building an energy conservation technical renovation project library, further consolidating the foundation for the management of carbon footprints, making the management of carbon emissions more systematic and digital, and providing a strong basis for promoting energy conservation and emission reduction across the Bank. The Bank organises training classes for the management of carbon emissions, which targets the business backbone responsible for the management of carbon emissions at branches, subsidiaries, directly affiliates institutions and CCB Learning Centre and aimed to train a talent team dedicated to the management of carbon emissions.
- Advancing work related to energy audit.** The Bank carries out energy audit across the entire bank, comprehensively monitoring, diagnosing and evaluating the economic and environmental benefits of energy use efficiency, energy consumption levels, energy utilisation etc., for all institutions of the Bank, to obtain a clear picture of the current use of energy. The Bank checks main energy-consuming equipment, optimises device operation, improves the efficiency of energy use, analyses and taps the potential of energy conservation, and identifies the directions and focuses of energy conservation.
- Calculating Scope 3 carbon emissions.** In 2023, the Bank explored and promoted the calculation of Scope 3 greenhouse gas emissions, and analysed and calculated the carbon emissions generated from paper use in offices and business travels in its own operations, covering the Head office and all the 37 domestic branches. In 2023, 6,802.61 tonnes of paper were consumed in offices, emitting 17,600 tonnes of carbon dioxide in total, or 0.02 tonnes per employee on average; business travels (by plane, train and car) generated 65,500 tonnes of carbon dioxide in total.

Promoting green and low-carbon operation

Green office

Promoting paperless digital office. The Bank actively deploys green, low-carbon and new-type digital devices, optimises the process of business handling, and promotes paperless office. It scales up the application of the paperless office system, and fully leverages online tools, including the collaborative office platform, "Long Video" system, email, "CCB Employee" and instant messenger to electronise document drafting, circulation, review and signing, settlement and filing and bank information, etc., so as to reduce printing as much as possible, cut the use of paper documents and disposable office supplies, enhance the circulation efficiency and lower energy consumption.

Refining measures for boosting energy-saving and low-carbon operation. The Bank advances the construction of green and energy-efficient facilities, and promotes the upgrading and renovation of energy-consuming devices like office lamps, solar water heaters and air-conditioners, improving the efficiency of resources utilisation. The Bank advocates electricity conservation, optimises the operation pattern of office elevators and refrains from using lights in the daytime, all the time or without persons in offices. The Bank intensifies the management of water use, and regularly inspects the water supply system to stop the waste of water resources. The Bank strengthens the management of the use of official vehicles, and prioritises new energy vehicles when using official vehicles, to reduce fuel consumption and tail gas emission.

Green procurement

Implementing green procurement in the whole process. For the commodities listed in the *Green Procurement Catalogue*, the Bank follows the requirements on green procurement across the process of procurement. In product selection and testing, the Bank adds green assessment indicators. In candidate selection, the Bank prioritises the suppliers with more green qualifications under equal conditions. In procurement, the Bank raises the weight of green indicators. It dynamically releases the *Bulletin on Green Procurement*, sharing the strategies and guidelines for green procurement to guide green procurement across the Bank.

Vigorously promoting digital procurement. While bringing risks under control, the Bank continuously improves its digital capability, and promotes online operation across the process of procurement to enhance the quality and efficiency of green procurement. This move cuts the use of paper for contracts and meetings, and reduces business travels for procurement purposes.

Green services

Boosting the capability of digital operation. Relying on corporate-level platforms, including mobile banking, "CCB Lifestyle", "CCB Huidongni", "Yunongtong" and "CCB e-Chain", the Bank continues to refine the intensive, platform-based and eco-friendly mode of operation, providing clients with easily accessible and efficient online financial services. The Bank continues to enhance the synergy and integration of three major middle offices respectively about business, data and technology, and applies its technical expertise to 2,609 business scenarios, to enhance the quality and efficiency of the operation of platforms targeting specific scenarios.

Promoting the electronisation of transactions. The Bank actively promotes the use of electronic certificates, based issuance on channels like online banking, direct bank-enterprise linkage, and interconnected platforms, and accelerates the expansion of the client base in pilot electronic certificate projects. As at the end of 2023, 2,586,613 electronic receipts and 1,136,092 detailed lists were issued in total; the expenses for printing certificates and statements fell by 13.4% year on year, and the volume of paper certificate scanning dropped by 46% from the end of the first quarter. In addition, the Bank upgrades credit card paper form input and billing media, and boosts the substitution of paper bills with electronic ones by refining the rules for sending application forms and bills, WeChat transaction tailing, and publicising electronic bills. As at the end of 2023, 91.82% of paper bills were substituted by electronic ones, increased by 0.92% year on year. In 2023, over 5.2 million paper bills were reduced in total.

At the end of 2023

Issued a total of

2,586,613

electronic receipts

1,136,092

detailed lists

The expenses for printing certificate and statements fell by

13.4% year on year

The volume of paper certificate scanning dropped by

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91.82% of paper bills

were substituted by electronic ones

Increased by

0.92% year on year

Over **5.2 million**

paper bills were reduced in total



Case: The Bank launched "CCB E Insurance", a green and low-carbon insurance service

CCB Life launched "CCB E Insurance", an electronic policy issuance tool, to improve the electronic process of insurance application, verification and underwriting and claim settlement, expand the coverage of electronic correspondences, and provide clients with easily accessible, professional, green and low-carbon full-lifecycle insurance services like online preservation and claim settlement. As at the end of 2023, the online usage rate of "CCB E Insurance" was 99.39%, with the rate of electronised claim settlement for personal and group insurance reaching 93.52% and 82.7%, respectively.

Optimising Waste Disposal

In strict compliance with the *Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Waste*, the *Regulation on the Administration of the Recovery and Disposal of Waste Electrical and Electronic Products*, the *Action Plan for Carbon Dioxide Peaking Before 2030*, and other applicable laws, regulations and policies, as well as the internal policies like the *Operation Specifications for the Management of IT Assets*, the Bank actively optimises the disposal of various types of hazardous and non-hazardous waste, to ensure the whole disposal process to be safe and controllable.

Disposal of electronic and hazardous waste

- The Bank selects waste asset recyclers that meet national environmental protection requirements through open bidding. In accordance with its *Green Procurement Catalogue*, the Bank requires suppliers and products to be procured to have relevant green qualifications, focuses on green indicators in supplier review, and procures the equipment consuming lower power and emitting less waste gas. Moreover, the Bank pushes recyclers to conduct green, environment-friendly and compliant disposal of hazardous waste through contract constraints.
- General electronic waste is transferred to the enterprises qualified for the disposal of electronic waste and filed on the websites of environmental protection authorities for green and environment-friendly disposal. For hazardous waste like lead-acid storage batteries, the Bank requires the enterprises to have the hazardous waste operation permits, pollutant discharge permits, road transport permits and environmental quality management system certificates.
- For UPS procurement, the Bank pioneers the establishment of a waste products recovery mechanism, and has introduced commodity recycling management such as deposit and withdrawal machines, smart teller machines, upgraded self-service teller machines and cash registers. It also standardises the requirements and prices for the recovery of waste storage batteries in line with relevant national policies about the recovery of waste storage batteries.

Disposal of non-hazardous waste

- The Bank standardises the disposal of domestic waste, transports domestic waste to the designated waste recovery spots inside office buildings for centralised disposal, and strictly implements the policy on waste sorting. The Bank engages specialised waste cleaning and transport service providers to clean and transport various types of domestic wastes, so as to improve waste recovery efficiency and reduce the pollution of waste on the environment during the transport process.
- The Bank advocates saving food, curbs food waste, and reduces the generation of kitchen waste. The Bank implements fine-grained meal preparation and serving, develops precise procurement plans, and carries out the "Clean Your Plate Campaign" in canteens to help employees develop the habit of saving food.

Building Green Operation Institutions

Building green and carbon neutrality institutions

The Bank actively advances the building of green and low-carbon operation institutions, with the Head Office and Beijing Branch rated as "Green Building Campaign Promotion Organisations", and carries out pilot projects of carbon neutrality at branches and sub-branches at all levels at home and abroad.

Building of green outlets: As at the end of 2023, the Bank built and opened 228 green outlets. After Xiamen Branch was certified as the first "Carbon Neutral" banking institution in Xiamen in 2022, Xiamen Government Affairs Centre Sub-branch was awarded the first "Zero Carbon Financial Outlet" certificate in Xiamen in 2023. The business outlets of Changsha Hexi Sub-branch and Hengyang Branch in Hunan Province were granted the "Carbon Neutral" certificates. The Wuchang Sub-branch and the Yiling Sub-branch of Three Gorges Branch in Hubei Province carried out the activities for building them into green outlets.

Green certification of overseas institutions: CCB New Zealand is the first Chinese-funded bank in New Zealand awarded the "Carbon Neutral" certificate by Toitu, a locally authoritative agency, receiving the certificate in 2023. After awarded the "Carbon Neutral" certificate by Climate Active, an official institution in Australia in 2021, CCB Sydney Branch has been awarded the certificate for three years in a row, becoming the only Chinese-funded enterprise granted the certificate for three straight years in Australia. For two consecutive years, the Frankfurt Branch has been certified "Carbon Neutral" by a local German certification organisation.



Case: Established green outlets based on IoT

The Bank, by relying on the integrated application of sensors, controllers and IoT platforms, introduced intelligent light control, automated temperature and humidity adjustment, environmental quality detection screens, among other smart means, to its outlets, to avoid power waste and build green outlets. So far, relevant construction tasks have been completed in its outlets in Kunming, Dali, Hangzhou, Nanjing and Chengdu, etc. Taking Zhejiang Lishui Zhongshan Sub-branch as an example, after the green outlet was put into operation, 367 kWh of electricity was saved per month on average and 4,404 kWh per year. In addition, the sub-branch also used harmless, green, environment-friendly and recyclable building materials to improve the quality, reduce dismantling, shorten the construction period, and reduce carbon emissions in construction.

Building green data centres

The Bank is committed to promoting the safe, stable and green sustainable operation of data centres. In the process of data centre operation and management, the Bank actively promotes the digital and intelligent construction of server rooms, carries out lean management of server room space utilisation, adopts a variety of measures to achieve energy saving and consumption reduction in server rooms, selects green and energy-saving IT equipment to reduce energy consumption and environmental impact, and does a good job in the certification of green data centres.

The Bank actively promotes the construction of low-carbon and green financial-grade data centres. During the design and construction of two new data centres in Inner Mongolia and Guizhou, it defines a PUE of below 1.2 as the core indicator, green building and the use of green electricity as important targets, and also puts forward the necessary requirements for energy conservation in terms of power facilities, air-conditioning and refrigeration, and intelligent machine rooms.

The Bank's Daoxianghu Data Centre in Beijing and Nanhu Data Centre in Wuhan were selected in the 2022 National Green Data Centre List released by six ministries and commissions including the Ministry of Industry and Information Technology.

Beijing Production Data Centre



Daoxianghu Production Data Centre

- The operation strategy was optimised to boost the energy efficiency of air conditioners in machine rooms, saving 3,819,147.8 kWh of electricity in the year. Specifically, 2,000,448 kWh of electricity was saved through natural cooling, 1,363,179.80 kWh of electricity was saved by improving the temperature of water supply, and 455,520 kWh of electricity was saved by improving the temperature of machine rooms.
- The ICIM system, part of the smart data centre initiative, enables predictive management where operation and maintenance activities were driven by data. Through collection and analysis of operation data, statistical and analytic rules are summarised to form the basis for decision-making, precisely improving the utilisation and management of resources.
- Blind plates are added to the cabinets in machine rooms to optimise air distribution, increase the utilisation of cold energy and enable energy conservation.
- Water-source heat pump units enable two-way use of cold and heat sources. The heat generated in machine rooms is transmitted to the office area for heating in winter, saving 129.3 tonnes of standard coal in the year.
- The water supply & drainage system is renovated to enable separation between rainwater and sewage. The rainwater on 60% percent of the land area of the data centre is not drained externally, and a 500m³ reservoir is built for the collection purpose. The water supply system is renovated, with a recycled water pipeline interface reserved to be connected to the municipal recycled water pipe network. Meanwhile, recycled water treatment facilities are built for the pre-treatment and pressurisation of water for irrigation or cooling towers refill. The national requirements on popularising the use of recycled water are further implemented, improving the utilisation of non-conventional water sources in the data centre to exceed 40%.

Yangqiao Production Data Centre

- When selecting equipment, the green energy efficiency indicators are taken into consideration and evaluation, and the efficient and energy-saving operation modes are selected from the system settings.
- Replacement of indoor LED lamps is completed. A total of 2,400 LED lamps are replaced indoors, saving 210,000 kWh of electricity annually. Outdoor lighting fixture is updated, with 80 outdoor road lamps and lawn lamps replaced in total, saving 10,000 kWh of electricity annually.
- Thermal insulation for exterior glass is completed. A total of 1,488m² of heat-insulating film is pasted on glass, saving 100,000 kWh of electricity annually.



Wuhan Production Data Centre

In 2023, based on its actual operations, the Wuhan Production Data Centre developed and implemented a series of energy conservation and emission reduction measures regarding lean management, energy recovery and utilisation, analysis and management of energy consumption, energy conservation reconstruction, and promotion of a green and low-carbon culture.

Energy conservation and emission reduction in data centre

- Natural cooling is realised for the air-conditioners in machine rooms. In winter and transitional seasons, natural cooling of the server room is achieved by making full use of the external natural cooling source through the plate heat exchanger, which reduces the working hours of mechanical cooling, thus significantly cutting down the energy consumption of the air-conditioning system operation.
- Heat in machine rooms is recovered and reused. Advanced water-source heat pump technology is adopted, effectively recovering a considerable amount of residual heat generated from the operation of machine rooms, converting it into heat energy and supplying it to the office area. This improves the utilisation of energy in machine rooms.
- The data centre carries out lean management of the equipment in machine rooms. It strictly implements the maintenance plan, replaces worn parts in a timely manner, and adds lubricating oil, to ensure infrastructures to be in sound conditions, sustain efficient operation, and reduce unnecessary wear. The quality of cooling water is controlled on a real-time basis, with various indicators of water quality under precise control. This effectively reduces the scale formed in the heat exchangers of water-cooling units and improves heat exchange efficiency. Sustained monitoring is conducted on the temperature difference of the water-cooling units, and the heat exchangers of the main cooling machine are cleaned in a timely manner to boost heat exchange efficiency.
- The mechanism for the analysis and management of energy consumption. The data centre further details and improves the mechanism for the analysis of energy consumption based on operation data. Through collecting data about energy consumption, baseline summarisation and analysis at regular meetings, among other steps, the data centre identifies abnormal energy consumption, providing data for various energy conservation moves.
- Improvement for energy conservation. The data centre implements the project to improve the energy efficiency of water pumps and precision air-conditioners in data rooms, upgrading 438 precision air-conditioning control systems and converting 30 water pumps into variable-frequency ones. After implementation, the project is estimated to save 10.34 million kWh of electricity annually.
- Lighting improvement in data rooms. The conventional fluorescent sources in the three data rooms are replaced with LED lamps. After implementation, the project is estimated to save 1.85 million kWh of electricity annually.

Energy conservation and emission reduction in the office area

- Strictly abiding by relevant environmental protection requirements at the state and local levels, the data centre exercises daily management of solid waste, sewage and chemicals in the data centre and sorts wastes to ensure compliance with regulatory requirements.
- The data centre steps up promotion of a green and low-carbon culture, and encourages employees to use public and green means of transport for travelling. Charging piles for electric vehicles are installed in the data centre to guide the employees to use pure electric vehicles to reduce carbon emissions.
- The data centre advocates paperless office and food saving, and exercises time-phased control over elevators, end-use air-conditioners and information release equipment in the data centre, partially turning on or completely turning off all of these devices after work, on weekends or holidays to reduce electric power consumption.

Publicity of the Green Concept

The Bank continuously steps up publicity of the concept about green and environmental protection, and encourages employees to implement energy conservation and environmental protection measures through a variety of publicity and public welfare activities. Leveraging occasions like the World Earth Day, the National Energy Conservation Week and the National Low-Carbon Day, the Bank carries out publicity campaigns themed energy conservation and carbon reduction, pasting posters and repeatedly playing videos in main passages of its buildings, popularising the knowledge about energy conservation and carbon reduction via its internal website and WeChat official account, organising themed lectures and knowledge quizzes, soliciting tips about low-carbon operation and distributing written proposals, to raise employees' sense of participation in green operation. The Bank also organised public welfare activities like tree planting, green travelling and waste sorting to boost employees' awareness of green and low-carbon practices.

Relying on its outlets and making full use of its public welfare brand "Workers' Harbour", the Bank carries out activities and knowledge dissemination themed environmental protection, resources conservation and waste sorting through online and offline means, such as promotion screens at outlets, mini salons, community visits and the "Cloud Studio". The Bank also collaborates with Alipay and launches environmental protection projects like "Workers' Harbour Public Welfare Woods", to enhance public awareness of environment protection and low-carbon development.

In addition, the Bank collaborates with external media on publicising its achievements in carbon footprint management. In 2023, external media, including *People's Daily* and the *Talents* magazine, published 66,488 articles about the Bank's efforts in green finance, carbon reduction, carbon neutrality, and ESG, attracting extensive attention from institutional investors both at home and abroad and the general public. The WeChat official account titled "CCB Today" introduced new columns including "Carbon' Pioneer" and "Lecture Room", with 35 ESG related articles posted and viewed 60,000 times in total.



Case: The Bank launched a green and public welfare activity under the inclusive finance initiative

In November 2023, the Bank launched a green and public welfare activity themed "Converting Green into Gold" as part of its inclusive finance initiative. On behalf of the micro and small enterprises that it grants green loans to, the Bank donated RMB300,000 of funds to the "Greening Alxa with RMB10" project launched by China Green Foundation. The fund was used for planting haloxylon forests in the desertified areas of Alxa, Inner Mongolia, and supporting local ecological governance and economic and social development.



Case: The Bank launched online green publicity activities via the "Workers' Harbour" App

In March 2023, the Bank launched online activities themed "Low-Carbon Life for a Green Future" and "Green Life in Beautiful Cities" via the "Workers' Harbour" App. Through interesting interactions like online quizzes, it made the public learn more about the culture and services of the "Workers' Harbour", and disseminated the knowledge and concept about low carbon and environmental protection. The activities attracted more than 50.59 million views to the webpage by over 3.84 million viewers.

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The Bank keeps improving its environment-related data governance structure, develops the strategy for refining data quality, establishes the data quality management system, and strengthens data sorting and validation. By improving institutional system, refining process mechanisms, fulfilling the responsibility and intensifying the emergency management, it effectively guarantees data security. The Bank continuously improves the data governance system, and has passed the DCMM level-5 certification and ISO 27001 information security management system certification, with its data and information management capability reaching the industry-leading level.

Improving the Structure of Data Governance

Board of Directors

The Bank's Board of Directors and its special committees attach great importance to the protection of privacy and data security, and are responsible for approving and supervising the execution of information security strategies. They push the information technology risk to be covered by the Bank's risk appetite, constantly enhance the support for security operation and maintenance, and improve information security and the prevention against and control over network risks, to protect client privacy and the security of the Bank's information and funds. They continuously advance the building and drill of disaster recovery for the information system to boost information security and privacy protection.

The Related Party Transaction, Social Responsibility and Consumer Protection Committee of the Board of Directors supervises issues related to client privacy and information protection, and urges the Management to ensure privacy protection in strict compliance with applicable laws and regulations as well as the Bank's rules and policies. In 2023, it listened to and discussed the report about the progress of work related to privacy and data security, focused on the risks and challenges posed to privacy and security, and required the Management to strictly implement internal audit and validation in accordance with relevant management suggestions given by external auditors.

The Risk Management Committee of the Board of Directors is responsible for supervising on the control over information technology and network security risks. It pushes information technology risk to be covered by the Bank's risk appetite, enhances support for security operation and maintenance, and improves information security and the prevention against and control over network risks, to secure the information and funds of both clients and the Bank. It continuously advances the building and drill of disaster recovery for the information system. It regularly discusses the reports on the management of information technology risk and network security risk, analyses the basic conditions of the Bank's information technology risk management system, the Bank's ways to identify, evaluate, control and alleviate information technology risk, current situations and problems, as well as next-step work plans, and acquires detailed knowledge of the Bank's network security governance, risk profile analysis and risk management as well as measures to be taken.

Management level

The FinTech and Digitalisation Promotion Committee, set up under the Bank's Management and directed by the Bank's leader, makes overall planning for advancing important work related to fintech, digital operation, information security and data governance in a coordinated manner, reviews major matters like relevant planning, and reports to the Board of Directors and the President's executive meetings in accordance with relevant procedures for decision-making. The committee comprises 12 member organisations, covering Head Office departments, directly affiliated institutions and subsidiaries.

In 2023, the committee convened eight plenary sessions and six thematic meetings, which reviewed and approved the *Opinions for Implementing the Measures of CBIRC on Data Security*, and the *Management Measures on Data Security (2023 Edition)*. The discussions covered data governance and data security, etc., and called for efforts to improve the capacity of data management, including data governance, data security, data quality and data sharing, and to steadily advance the implementation of the *Master Plan for Building a Digital CCB (2022-2025)*.

Execution level

The Head Office's Data Management Department leads the management of data security across the Bank, is responsible for planning and implementing the management of data security and organising emergency response related to data security. The Data Security Division is responsible for detailed implementation as the special division dedicated to the management of data security. The Head Office's FinTech Department and Data Operation Centre, among other departments, are responsible for implementing data security measures in the field of information technology. Each business department is responsible for implementing data security management requirements within its own business areas. The Risk Management Department and the Internal Control & Compliance Department of the Head Office are responsible for implementing data security risk management, internal control evaluation and accountability within their respective scopes of responsibility. The Audit Department of the Head Office is responsible for audit related to information security and privacy protection. All branches and sub-branches take primary responsibility for the data security within their respective jurisdictions, performing management of data security in compliance with local policies related to data security, to control data security risk within their respective jurisdictions.

Implementing Data Sorting and Validation

The Bank revised and issued the *Management Measures on Data Quality (2023 Edition)*. The policy makes it clear that data quality management includes processes of putting forward requirements, conducting inspections, analysing problems, and improving quality. It also defines the working mechanism in which the Head Office's Data Management Department takes the lead and all business departments are responsible for the quality of business data they are in respective charge. The Data Management Department of the Head Office takes the lead in establishing data quality management tools to support the implementation of data quality work. All business departments monitor data quality status by defining the rules for data quality control and validation, and urge the rectification of data quality problems online to ensure the timeliness and accuracy of data.

In terms of green finance data, the Bank continuously improves the tools for classified and graded marking. It organised the graded marking of data security for the enterprise-level data dictionary, and completed the manual review of the preliminary judgement results. For the revisions to green credit marks, the Bank required branches to file them in accordance with relevant processes. For the validation of data quality, the Bank released the rules for validating the quality of environmental data, and included the environmental data into the financial statistics inspection in 2023. The Bank sent identified data problems to branches, and required branches to examine and rectify them immediately.

In terms of green operation data, the Bank reinforces the foundation for the management of carbon footprints by updating and upgrading the management system for carbon emissions, improving the statistical and accounting functions, adding the function of data analysis, and building a library of technical improvement projects for the energy conservation purpose. The Bank engaged a third-party organisation to conduct an inventory and accounting of the data about carbon emissions in 2023, and used the carbon emission management system to collect the basic data about consumption across the Bank. It reviewed data both on the site and through spot check, cross-validated invoices, ledgers and system data, and conducted special validation of the data with big year-on-year changes.

Strengthening the Management of Privacy and Data Security

The Bank strictly abides by the *Data Security Law of the People's Republic of China*, the *Cybersecurity Law of the People's Republic of China*, the *Personal Information Protection Law of the People's Republic of China*, and other applicable laws and regulations, and continues to strengthen the management of privacy and data security in line with the regulatory requirements and standards including the *Guidelines for the Data Management of Banking Financial Institutions*, the *Measures for Data Security Management of Banking and Insurance Institutions*, the *Measures for the Administration of the Protection of Consumer Rights and Interests by Banking and Insurance Institutions*, the *Financial Data Security - Guides of Data Security Classification*, and the *Financial Data Security - Security Specification of Data Life Cycle*.

Improving the system for the management

- The Bank developed the *Management Measures on Data Security*, its basic policy on the management of data security, and supporting policies including the *Detailed Rules for the Implementation of Classified and Graded Protection of Data*. It formulated the specifications for the graded identification of data, made clear the requirements for the classified and graded management of data, classified and graded data based on the sorting of data resources, and implemented the requirements on the protection of data at different security levels in the collection, processing, use and external sharing processes.
- The Bank strengthens the management of data security associated with the third parties. It developed the exemplary clauses for data security involved in the data processing activities in the cooperation with the third parties, and issued the *Notice on Implementing the Clauses about Data Security in External Cooperation Agreements* to guide the implementation of laws, regulations and regulatory requirements and to define the responsibilities and obligations of partners in the protection of data security.
- The Bank continues to optimise the fintech system. It re-examined and improved the framework for the technological system, and revised and released more than 10 policies covering the coordinated management of technology, delivery of R&D outcomes, operation and disaster preparedness, and risk control.
- The Bank developed and issued the *Management Measures for the Protection of Personal Client Information (2023 Edition)* and the *Work Plan for Further Strengthening the Protection of Personal Client Information (2023 Edition)*, specifying the requirements on the lifecycle management of the protection of personal client information, emergency response mechanism, and supervisory management. The Bank developed and posted online the *Personal Information Protection Policy Overview*, and established the system for personal information protection applicable to the whole bank and its affiliated institutions.

Implementing protection measures

- **Establishing a mechanism for the evaluation of data security.** The Bank carried out evaluation of data security risk across the Group, and submitted evaluation reports in accordance with regulatory requirements, covering the Head Office, branches, overseas institutions and domestic subsidiaries. Through the evaluation, the Bank obtained a clear picture of the current situation of management, identified problems and gaps, and defined the directions for further improvement. The Bank organised evaluation of the impact of the protection of data security in scenarios like business outsourcing and external data sharing. The Bank conducted evaluation of data security risks involved in new products to ensure the compliance of innovative data applications. The Bank consistently regularised the mechanism for risk evaluation, and organised the assessment of the graded protection of network security and the security of password application, which produced excellent results. The Bank carried out the evaluation of information technology risk in 2023, and included business lines, technology lines and domestic subsidiaries into the scope of evaluation.
- **Improving the technical prevention and control system for data security.** The Bank builds the "security as services" enterprise-level security structure, which comprises nine security components, including identity authentication, password service, data security and security monitoring, etc., that are flexibly combined to deliver over 900 security services. The Bank improves technical protection of data security, and guards against the risk of internal information leakage. It improved and promoted the application of the data sharing and safe computing platform, and advanced the application of the technical framework for data access control to data inquiry, batch data use, data interface calls and other data use scenarios. It optimised functions such as automated desensitisation of production data extraction and inspection of sensitive information to enhance the ability of data security protection in the whole life cycle.
- **Comprehensively monitoring and analysing data leakage.** The Bank checks the effectiveness of the technical prevention and control system for data security. The Bank monitors and blocks the leakage of sensitive information via internal office email or internet on a real-time basis by using sensitive information anti-leakage product, and proactively monitors and addresses the internet information leakage via the third parties. The Bank regularly carries out internet system penetration tests, focusing on covering network security and data security, and steps up efforts to identify and address key data security problems like data leakage and application beyond authorisation.
- **Strengthening internal supervision and guidance.** Combining onsite inspection and institutions self-inspection, the Bank conducted two special inspections and evaluation of 37 tier-one branches and 11 domestic subsidiaries in 2023, which included "management of third-party cooperation involving the Bank's clients' personal information" in addition to daily operation, risk management and internal control. The inspection results were announced across the Bank. The Bank also organised reviews of the identified problems, and urged the rectification of the problems.



Conducting internal and external audits

In terms of internal audit, the Bank's Audit Department audits privacy and data security annually, and completes information technology audits covering the Head Office, branches and CCB FinTech in a 3-year cycle. In 2023, selecting six tier-one branches, six Head Office departments, four direct subsidiaries, CCB FinTech and other institutions, the Bank completed the audit of fintech cost control and financial expenses, the audit of important information security technology, the audit of the control over personal loan business system application, and audit of the Head Office's credit investigation business. Contents of audit covered the technological cost of the R&D line, operation and maintenance line, data line, and finance line, involving items related to information, network and data security; items related to the client information protection technology; control over the critical applications of personal loan system and the support for business services, involving the audit of client information security; the organisational structure and institutional building, daily management, data quality and system building, information system and security protection of the credit investigation business, involving items related to information control and data security in credit investigation.

In terms of external audit, the Bank engages a third-party specialised agency to conduct financial report IT audit annually. In 2023, the third-party specialised agency included 74 systems into the scope of audit, covering the Head Office, 17 branches, Operation Data Centre, CCB FinTech and affiliated business groups. Contents of audit covered tests at the general control level such as the management of the changes to system programmes, management of system logic access, and information technology operation and management, as well as tests at the application control level such as real-time system validation, automated system computing, system authorisation of key users, system parameter setting and inter-system data transmission. In addition, the audit also focused on data security, personal information protection, network security and other critical areas, with approaches including inquiry, onsite observation, re-execution, document checking and data analysis.

Raising the professional capacity

- Through the "CCB Learning" platform and WeCom, among other channels, the Bank launched the course named *Introduction to the Special Policies for Data Security Management*, data security evaluation video course, financial standards training course and articles, and established a library of data security knowledge.
- The Bank organised security CFT skill training, security defence simulation training, security R&D and technical training, and other information security related training, covering all employees. The Bank organised regular network defence simulation competitions, which covered over 3,500 tech personnel across the Group, and helped foster a high-level team of network security talents with expertise to prevent and control fintech risk. The Bank organised employees to participate in national drills on network security defence, and achieved outstanding results.
- The Bank held training sessions themed the protection of personal client information, which were attended by over 700 employees and viewed for more than 6,000 times online. For external service providers, the Bank made clear the confidentiality rules about personal information and training requirements through agreements or contracts, and according to the principle of "whoever introduces is responsible", relevant internal institutions organised training for representative personnel from outsourcing service providers.

Enhancing Management of the Response to Security Emergencies

The Bank constantly enhances the management of security emergencies, and has established a handling process and an emergency contact mechanism that operate in a coordinated and orderly manner, continuously improving the information system continuity management system.

Standardising the process for emergency response management

The Bank developed the *Plan for Response to Data Security Emergencies*, clearly defining the division of responsibilities for data security event emergency management, the grading, key scenarios, and the process for event response and reporting as well as the key points of addressing. The Bank established an emergency contact book covering institutions at all levels, to ensure contact with corresponding persons. The Bank revised and issued the *Operation Specifications for the Response to Information System Emergencies (2023 Edition)*, making clear the division of responsibilities, and defining a mechanism for systematic emergency response characterised by "pre-event prevention, fast response during events and post-event review and improvement".

Strengthening information system continuity management

The Bank further intensifies information system continuity management. It revised and issued the *Specifications for Information System Continuity Management (2023 Edition)*, strengthening organisational management and making clearer the requirements on risk prevention, response plans and drills. The Bank continues to advance disaster recovery, with remote disaster recovery covering 100% of its important systems, enabling major businesses to have sustainable service capacity. The Bank carried out drills of disaster recovery for important systems, with 505 sets of system drills conducted throughout the year. The level of emergency response has been improved, and 24 important businesses have been covered by live drills. The Bank actively participated in the stress tests for the business continuity of important information systems in the financial industry, effectively validating the availability of disaster recovery.

Responding to security events in a timely manner

In the event of a data security incident such as information leakage, tampering or loss, the Bank will immediately take effective countermeasures to deal with it. The institutions where the events happen shall report to the data security management departments at the same level immediately for confirmation. The corresponding competent institutions shall immediately initiate emergency response, take steps for business and technical control, analyse causes of events, take timely remedial measures to prevent the situation from worsening and avoid the negative impact from expanding, and report as required.

The coverage rate of remote disaster recovery for important systems reached

100%

505 sets

of system drills conducted throughout the year

24 important businesses

have been covered by live drills

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Innovative Practice about Green Financial Products and Services

The Bank vigorously advances the innovation of green finance, continuously expands the diversified green financial product and service system, and continues to carry out exploration and practice related to the transformation and upgrading of products and services, so as to help the green and low-carbon industries flourish.

Innovative green credit products and services

"Green Climate Loan"

In support of the Nansha District Government's climate investment and financing policy *Notice on Issuing Several Measures of Nansha New Area on Promoting Climate Investment and Financing*, the Guangdong Branch created an innovative financial service solution named "Green Climate Loan", to provide climate investment and financing loans to the enterprises in the climate investment and financing project library of the Greater Bay Area. By offering green loans in full through a fast approval channel and at preferential interest rates, the solution supports enterprises in building and reconstructing projects aimed to ease and adapt to climate change, and helps advance pilot climate investment and financing projects. In 2023, the Bank granted RMB100 million of "Green Climate Loan" to a climate investment and financing project in the Greater Bay Area.

"ESG Sustainability Loan"

The Zhejiang Branch launched the industry's first-ever "ESG Sustainability Loan" based on the ESG rating tool independently developed by the Bank for corporate clients. Designed innovatively, the product enables a price adjustment mechanism where loan rates are dynamically linked to an enterprise's sustainability performance. The Zhejiang Branch provides differentiated green financial services to clients based on their ESG rating results, to help green and environment-friendly enterprises lower financing cost, and urge enterprises to actively reduce carbon emissions and improve ESG performance through financial means. As at the end of 2023, it had granted RMB854 million of ESG sustainability loans.

China's first-ever "Emission Rights Pledged Loan" to a central energy enterprise

The Hubei Branch launched "Emission Rights Pledged Loan", an innovative green finance product, in accordance with the *Operation Guidelines of Hubei Province for Emission Rights Pledged Loans (For Trial Implementation)*, and granted the first national energy central enterprise emission right pledge loan for a power enterprise. Considering that if the enterprise's main pollutant emission rights was pledged and not reserving the borrower's right to use the pledge during the period of pledge would affect its normal emission of pollutants, the Hubei Branch granted a working capital loan worth RMB100 million to the enterprise by innovatively introducing additional main pollutant emission rights pledge. The loan was China's first-ever emission rights pledged loan to a central energy enterprise, helping the enterprise revitalize their ecological resource equity assets, and was listed among "Wuhan's First Green Finance Innovation Practice Cases".



Xiamen's first-ever "Carbon Emission Rights Pledged Loan" in the national carbon market

Based on the demand for working capital and the carbon emission allowances of a power company in Xiamen, its client, the Xiamen Branch introduced an innovative financing guarantee model that combines credit loan and carbon emission rights pledge, and provided the client with a working capital loan worth RMB40 million. The loan helped the client resolve the financing problem and activate its carbon assets. It was Xiamen's first carbon emission rights pledged loan in the national carbon market, and provided valuable experience for the innovation and application of environmental rights financing instruments.

One of the first "Carbon Performance Linked Loans" under the Technological Innovation Fund in Xiamen

Targeting the loans with a term of five years or more under the Technological Innovation Fund in Xiamen, the Xiamen Branch innovatively launched a "carbon performance linked credit" policy, and provided credit support for a Xiamen optoelectronic technology company. If the client fulfilled the carbon performance targets in its operating activities before the assessment, that is, its key carbon performance indicators were better or equal to the benchmark values, it could enjoy the agreed preferential interest rate. The loan was one of the first carbon performance linked loans under the Technological Innovation Fund in Xiamen.

"Lijiang River Ecological Protection Loan"

The Guangxi Zhuang Autonomous Region Branch launched "Lijiang River Ecological Protection Loan", a new financial service model, combining a series of green finance products and instruments to support the ecological protection and restoration of the Lijiang River. Through a green fixed asset loan, it supported "Guilin Flood Prevention and Lijiang River Water Replenishment Hub Project", contributing to the protection and comprehensive treatment of the ecological environment of the Lijiang River, urban flood prevention, replenishment of water to the Lijiang River in dry season, agricultural irrigation, and green power generation as well. Through a green PPP loan, it supported the construction of "Guilin's Secondary Water Source Project-Water Diversion Sub-Project", enhancing the development and use of water resources, lowering the impact of the development of the golden reach in downtown Guilin on the Lijiang River. Through a green upfront loan, it supported the early-stage construction of the comprehensive treatment project for the Lijiang River. The project mainly included the comprehensive treatment of water environment, ecological restoration and landscape improvement on both sides, etc., providing water resources support for the ecological water system around the city in Lingui New District, Guilin. As at the end of December 2023, RMB3.1 billion of loans were granted for the ecological protection of the Lijiang River on a cumulative basis.



Making innovation in to the green finance product system for rural revitalisation

The Bank continuously enriched the green finance product system for rural revitalisation, and launched Head Office-level products, including "High-Standard Farmland Loan" and "Facility Agriculture Loan", etc., the first of their kinds in the industry, based on the business scenarios specified in the *Green Industry Guidance Catalogue*. As at the end of 2023, the balance of the "High-Standard Farmland Loan" was RMB3.698 billion, and the balance of the "Facility Agriculture Loan" was RMB3.041 billion. Meanwhile, the Bank advanced the building of green industry platforms, and delivered financial services targeting the ecosystem scenarios across agricultural industry chains through "agricultural industry platforms", such as the "Lantian Potato Platform" for Gansu and "Korla Pear Platform" for Xinjiang. As at the end of 2023, the platforms saw 29 core enterprises, 471 chain enterprises, and 29,674 registered farmers, and facilitated RMB1.059 billion of transactions.

Innovative green bond products and services

Issuing the "Biodiversity" and "Belt and Road" themed green bond overseas for the first time

As one of the first financial institutions endorsing the *Green Investment Principles for the Belt and Road*, the Bank issued the "Biodiversity" and "Belt and Road" themed green bond overseas for the first time in May 2023, raising funds equivalent to USD780 million. During the issuance, the Bank selected assets related to natural forest protection, protection of rivers, lakes and wetlands, turning marginal farmland into forest, and clean energies in the key provinces under the "Belt and Road" initiative in compliance with the *Green Bond Principles* of ICMA and relevant standards, to drive the implementation of China's "Belt and Road" development.

Solely underwriting China's first "green + purpose sci-tech innovation" perpetual medium-term note

In September 2023, the Bank solely underwrote the Huaneng Lancang River Hydropower Inc's sixteenth green medium-term note (sci-tech innovation notes) for the year 2023, with the funds raised all in place. This marked the successful launch of China's first green perpetual medium-term note that was also labelled as a purpose sci-tech innovation note. The funds raised will be used to support the subsidiaries of Huaneng Lancang River Hydropower Inc. in the area of sci-tech innovation through equity investment, and finally replace the issuer's self-owned funds invested to finance the construction of PV and other new energy projects. The 47 fundraising projects corresponding to the funds raised by this bond are expected to reduce carbon dioxide emissions by 205,000 tonnes, save 93,900 tonnes of standard coal, reduce sulfur dioxide by 25.92 tonnes, nitrogen oxide emissions by 41.53 tonnes, and reduce soot emissions by 5.31 tonnes per year.



Underwriting China's first sustainability-linked panda bond of an energy enterprise

On June 12, 2023, as a lead underwriter, CCB Asia helped Towngas (Financing) Co., Ltd. issue 1-year and 3-year RMB bonds in Chinese mainland for the first time, raising RMB1.5 billion of funds in total. The 3-year RMB bond was the first sustainability-linked panda bond issued by a Hong Kong-funded enterprise in Chinese mainland. The successful issuance of China's first sustainability-linked panda bond by an energy enterprise enriched the client's financing channels, and helped the client seize the opportunities associated with sustainable finance and drive the transition towards low-carbon operation.

Helping issue the first green quasi-REIT asset-backed note in northwestern China

As a lead underwriter and custodian bank, the Bank helped SPIC Shanxi New Energy Co., Ltd. issue the first green quasi-REIT asset-backed note in northwestern China. According to estimates, after operated, the underlying PV assets will reduce carbon dioxide emission by 196,800 tonnes, standard coal consumption by 76,100 tonnes, sulphur dioxide emission by 25.51 tonnes, nitric oxide by 38.39 tonnes, and fume emission by 5.56 tonnes per year, producing notable environmental benefits.

Providing custody service for the first offshore wind power quasi-REIT project

In October 2023, the Bank provided custody service for the "SPIC-Guangdong Branch New Energy Infrastructure Investment Carbon Neutrality and Green Asset-Backed Special Plan (quasi-REITs)" launched by SPIC Guangdong Power Co., Ltd., and the assets under custody reached RMB8.1 billion. With the offshore wind power generation facilities of Xuwen Port as the underlying assets, the project effectively activated real estate through asset securitisation, driving the efficient development of clean energies and ranking among the clean energy quasi-REIT projects with the biggest size of issuance so far in the market. After being put into operation, the project is estimated to generate 1.756 billion kWh of clean power annually, and cut standard coal consumption by 566,800 tonnes, carbon dioxide emission by 1,145,400 tonnes, fume emission by 38.42 tonnes, and sulphide emission by 832.28 tonnes per year. With a carbon sequestration capacity equivalent to over 1,100 hectares of mangrove forests, it helps offer reliable, green and safe clean energy resources.



Underwriting and providing custody service for the first "green + sci-tech innovation" labelled quasi-REIT in the market

In May 2023, as the leading underwriter and custodian bank, the Shanghai Branch helped Shanghai Energy Technology Development Co., Ltd. successfully issue a green directed asset-backed note (quasi-REIT/sci-tech innovation note) with a size of RMB2.1 billion. The note was the first "green + sci-tech innovation" labelled quasi-REIT project in the market. According to the third-party evaluation and certification report, the underlying wind power project of the note will reduce carbon dioxide emission by 372,700 tonnes, sulphur dioxide emission by 46.62 tonnes, nitric oxide by 70.16 tonnes, fume emission by 10.16 tonnes and standard coal consumption by 139,200 tonnes per year.

Helping issue the first green quasi-REIT in Hebei's interbank market

The Hebei Branch assisted SPIC Hebei in issuing a green quasi-REIT with a size of RMB1.441 billion, helping the enterprise fulfil its objective of activating assets and lowering liabilities in the year. The project was the first green quasi-REIT in Hebei's inter-bank market, with three wind power and PV power generation projects as the underlying assets. According to estimates, this single class of REITs products will reduce carbon dioxide emission by 382,700 tonnes, sulphur dioxide emission by 46.74 tonnes, nitric oxide by 70.35 tonnes, fume emission by 10.18 tonnes, and standard coal consumption by 139,500 tonnes per year, resulting in a significant carbon emission reduction benefit.



Other innovative green finance products and services

Creating the "Investment Flow" assessment tool

To address the pain points, such as long cycles, slow returns and the difficulty in assessment, the Bank created the "Investment Flow" assessment tool based on big data models and quantitative analysis methods. It incorporated the ESG equity investment logic into its credit culture, and worked out an integrated solution that includes assessment methodology and supporting financing products to serve green industries as a commercial bank, committed to providing green and low-carbon enterprises with integrated green financial services covering the whole lifecycles of "stocks, bonds, loans and consulting". The project was honoured the "Global Green Finance Award · Innovation Award" of the 4th International Financial Forum (IFF).



Launching "CCB Principal New Energy", the first UCITS fund

In May 2023, "CCB Principal New Energy", the first EU UCITS fund launched by CCB Principal Asset Management in collaboration with its US shareholder Principal Financial Group, was approved by the Irish regulatory authorities. As a product under EU's uniform regulatory framework, the UCITS fund meets UCITS directives and can be offered to all types of investors in EU member states. Aligned with EU's ESG criteria defined for financial products, the product is a pioneering application of CCB Principal Asset Management's concept and methodology on ESG investment to overseas markets. It features three highlights. Firstly, it meets Article 8 criteria and sets a new benchmark for domestic ESG fund products. Secondly, it has a size of over RMB117 million, making it the first fund issued by a domestic fund company in foreign equity markets. Thirdly, as the first new energy fund issued by a domestic fund company overseas, it connects China's new energy industry to the world, and meets China's strategy of promoting "New Trio", namely, electric vehicles, lithium-ion batteries, and photovoltaic products.

Serving the green upgrade of traditional state-owned enterprises as a financial advisor on debt-to-equity swap

In collaboration with CCB Investment, the Anhui Branch supported the transformation of traditional state-owned enterprises to green, low-carbon and tech innovation-oriented ones with integrated commercial banking and investment banking services and debt-to-equity swap advisory services. By providing clients with large sums of long-term and sustainable funds featuring marketised operation, it met client needs for financing their reforms and innovations. So far, it has helped 11 large state-owned enterprises realise debt-to-equity swap, investing RMB15.696 billion in total and earning about RMB130 million of revenue as a financial advisor. In 2023, it pushed the implementation of two debt-to-equity swap projects. Specifically, the mixed ownership reform project of a leading cement enterprise effectively boosted the grinding efficiency in cement production and helped to reduce energy consumption. reduced energy consumption. The mixed ownership reform of a rail traffic enterprise accelerated the integration of green R&D, manufacturing and application of railway wheels, significantly cutting nitric oxide and sulphur dioxide emissions, enabling zero discharge of wastewater, and to help significantly reduce the noise and vibration in the production of green and environment-friendly wheels.

The "Jiantan Huixing" project helps promote new energy vehicles

Relying on the Bank's enterprise-level carbon account, the Shanghai Branch collaborated with Shanghai International Automobile City and launched the "Jiantan Huixing" project. Leveraging the data governance capacity of Shanghai International Automobile City, the project included the owners of new energy vehicles, the mainstay of driving carbon reduction, into the personal carbon account system for the first time, allowing every kilometre of distance travelled by drivers of new energy vehicles to be counted as contribution to carbon reductions. The project provided "millions of new energy vehicle owners" in Shanghai with "ten million of exclusive benefits" in the purchase and use of vehicles, encouraging more urban residents to choose new energy vehicles, to contribute to the realisation of the carbon reduction goal, and drive green and low-carbon development together.

Advancing green innovation of the credit card business

The Bank continued to drive the migration to digital credit cards and R&D of new products, improved the function and services of digital credit cards, and strengthened the deployment of the functions of digital credit cards on mobile banking and "CCB Lifestyle" App platforms and their interactions. In 2023, the Bank issued 3.93 million digital credit cards. It established MasterCard low-carbon workshop, deployed carbon calculators, designed and developed MasterCard branded low-carbon card products, and enriched the green and low-carbon card product shelf. It advanced the "China Southern Power Grid Co-branded Credit Card" (the China Southern Power Grid co-branded version of its green and low-carbon credit card) project, to continuously raise clients' awareness of green finance through providing privileges and promote the use of green energy.

Meanwhile, the Bank continued to step up the combination between the MasterCard carbon section and the personal "Carbon Account Book" across the Bank, and drove the deployment and promotion of functions like MasterCard carbon emission calculator, conversion of green energy into MasterCard privileges and MasterCard Phase II green and low-carbon project. The Bank expanded the application scenarios of the personal "Carbon Account Book" credit card, sped up the launch of functions like credit card electronic bill and credit card green bill, and evaluated the results of carbon reduction associated with credit cards, to stimulate the enthusiasm of credit card clients for carbon reduction and green consumption.

Completing settlement for the first e-CNY CCER transaction in Beijing

The Beijing Branch actively created innovative applications of e-CNY in green finance scenarios. It successfully completed settlement for the first Chinese Certified Emission Reduction (CCER) transaction based on e-CNY in Beijing, achieving a new breakthrough in the application of e-CNY in green and low-carbon scenarios and promoting green transactions.

Providing insurance against the loss of personal charging piles

Targeting the demand for protecting personal charging piles for new energy vehicles against risks, CCB Property & Casualty developed the clauses of the *Additional Property Damage Insurance of CCB Property & Casualty for Personal Charging Piles*. The move aimed to provide comprehensive property insurance for the users of personal charging piles, support the business of charging pile property insurance, and improve the Bank's services and market competitiveness in the area of new energy vehicle insurance.

Providing liability insurance against the damage to rare wild animals

CCB Property & Casualty continued to expand the green insurance business. With a focus on the protection of biodiversity, it developed the clauses of the *Additional Damage Liability Insurance of CCB Property & Casualty for Rare Wild Animals*, to support the economic compensation for the damage to rare wild animals during the process of project construction. The move effectively eased the damage to rare wild animals caused by project construction, and promoted the protection of rare wild animals.

Continuing to promote build the green theme cross-border matchmaking

In 2023, relying on "CCB Match Plus" platform, its innovative matchmaking platform, the Bank launched a number of green cross-border matchmaking event activities, which covered clean energy, green building, and climate investment and financing, etc. During the 9th China (Shanghai) International Technology Fair, the Bank successfully held "China-Australia Matchmaking Conference Exchange Meeting for High-tech Enterprises" under on "CCB Match Plus", which attracted nearly 100 representatives from more than 40 high-tech enterprises, research institutes and investment institutions in areas of new energy vehicles, energy conservation and emission reduction, and biopharmaceuticals, etc. The event consisted of expert lecture speeches, thematic sharing and technical roadshows covering with under themes like the recovery of lithium batteries, carbon capture, technology cooperation export and investment, and facilitated efficient one-to-one business negotiation talks as well. Several roadshow enterprises received the letters of cooperation intentions from target enterprises.



Releasing the first environmental information disclosure report of banking institutions in Xiamen

In April 2023, Xiamen Branch completed and officially released the *Environmental Information Disclosure Report*, which is the first environmental information disclosure report of a banking institution in the Xiamen. The report strictly followed the principles and requirements of the People's Bank of China's *Guidelines for Financial Institutions Environmental Information Disclosure*, and used a combination of qualitative analysis and quantitative assessment to show the green financial business development and the results of green and low-carbon operations of the Xiamen Branch in 2022 by multiple levels, which was highly praised by the local regulatory authorities and the industry, and was also publicised and reported by the major mainstream media, which further disseminated the concept of green and low-carbon development.

Green Finance Related Research Outcomes

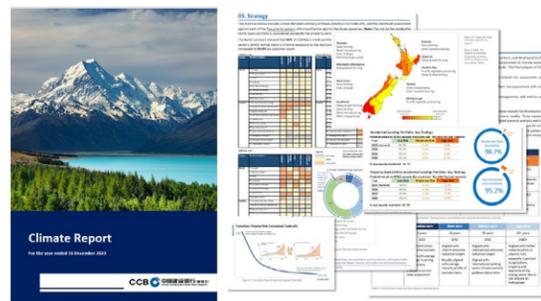
Intensifying Internal Research

While closely following green finance policy orientations and business needs, the Bank keeps deepening the research on risk management, credit strategies and business development and forward-looking research as well. It shares excellent research results across the Group while actively releasing them externally and publicly, and strengthens the guiding role of the research results in business practice.

Risk management research

The Bank continuously advances the research on the integrity environment and climate risk. It organised a flexible team to hold in-depth exchanges and discussions on the views of the annual meeting of the Green Finance Committee of China Society for Finance and Banking, domestic carbon market and EU carbon tariff, external issues related to climate risk, benchmarking against peer practice of climate risk disclosure, and the progress of carbon accounting, to enhance the systematic understanding and forward-looking management of the environment and climate risk. The Bank conducted research on the regulatory policies on climate change, practice related to climate risk management, evaluation of climate risk, the framework of climate risk management, and the impact of climate change on commercial banks. As a result, it developed nine special research reports, respectively titled the *Evaluation of Climate Risk to Commercial Banks*, the *Impact of Climate Change on the Risk Taken by Commercial Banks*, the *Integrated Framework of CCB for Climate Risk Management*, the *Impact of Extreme Weathers on the Personal Loan Default Risk to CCB*, the *Impact of Typhoon Disaster on the Credit Risk to Commercial Banks*, and the *Research on the Mechanism for the Impact of Climate Risk on the Financial Market*.

In addition, overseas institutions of the Bank actively explore the ways to manage climate risk. As one of the first climate risk disclosing entities recognised by the local regulator, CCB New Zealand focuses on evaluating the impact of climate change on the industry, and builds an analysis model with forward-looking evaluation and the basic risk evaluation approach to analyse and evaluate the physical risk and transitional risk involved in existing businesses. Since 2022, it has used a model to measure its financed emissions. Covering main asset categories, the model can measure Scope 3 financed emissions. During the management of climate risk, it has developed clear objectives and indicators, and monitored and managed the implementation process to ensure the effective implementation of the green finance strategy.



Research on credit approval strategies

The Bank has established a mature special research system for the credit approval line, which produced fruitful results covering extensive areas every year. In 2023, the business line launched 507 special research projects, 92 of which were completed under the leadership of the Head Office's Credit Approval Department, and 34 of which were focused on the environment, climate change and green credit, representing 36.96% of the total and covering energy, chemical, iron & steel, and transport, etc. The Bank analysed the major risks and development trends faced by the relevant areas by issuing approval guidelines, and put forward specific recommendations on the selection of regions, clients and projects, which helped to further safeguard the high-quality development of green finance business. Taking into account the latest market dynamics and policy requirements, it issued timely research and approval recommendations on environment-oriented development (EOD) projects, which are innovative and forward-looking.

Research on business development

The Bank conducts research on the development of green finance business. The Bank published research reports including the *Best Practice of the Low-Carbon Transition to Green Finance by Internationally Leading Banks under the Carbon Peak and Carbon Neutrality Goal and Its Inspiration for CCB* on columns like *Strategic Reference*, and published the *Research on the Development of the Personal Carbon Account Business in the Banking Industry* on the *Financial Computerising*. The Bank carried out project research on the integration between green finance and inclusive finance. On the basis of domestic and foreign practices and its own business conditions, it made an in-depth analysis of existing problems and looked into the future, offering reference for advancing the integrated development of green finance and inclusive finance across the Bank. The Bank conducted research on green transition policies and its progress in the market, green finance products and services, as well as the integrated service solutions for the green transition of iron & steel enterprises. Consequently, it developed the special research report titled the *Solutions for the Green Transition of the Iron & Steel Industry*, providing guidelines for investment banks to support the transition of traditional iron & steel enterprises. In addition, the subsidiaries formed more than 60 research reports on green investments, green funds, green futures, green insurance and other businesses related to the key industry sectors of green transformation.

Forward-looking research

The Bank conducts forward-looking research centring on areas like green finance, transitional finance, new energy and ecological assets, and developed a dozen of special research reports, including the *Analysis of the Liquidity of the Green Bonds of Commercial Banks*, the *Prospects and Focuses of New Energy Development and Response by Banks*, the *Exploration of and Suggestion on Carbon Accounting by Financial Institutions*, and the *Development of China's Carbon Pricing Mechanism and the Directions of Optimisation*. The Bank vigorously conducts research on green industries under themes like wind power, PV, energy storage, new energy vehicles, carbon transactions and green agriculture, publishing the *Research on the Current Development and Trends of Hydrogen Energy* on the *Modern Commercial Bank Herald*.

Promoting Collaborative Research

The Bank continues to deepen the collaborative research on green finance, releases a number of research results jointly with partners, actively participates in the formulation of industrial standards and pilot research projects, and promotes the continued improvements and innovative development of green finance products and services.

Leading the research on the standards for transition finance launched by the People's Bank of China

The Bank leads the research on transition finance standards launched by the People's Bank of China. The Bank formed a cross-industry working group with the Ministry of Housing and Construction, China National Building Materials Group and other industry authorities as well as leading enterprises, convened a number of thematic seminars and research meetings on the transformational financial needs of clients of leading enterprises to discuss in-depth technical details, and reported on behalf of the working group to the People's Bank of China on several occasions to report on the progress of the work. At the present time, it has completed the formulation of two sets of financial support standards respectively for the transition of the building industry and the building materials industry. The financial support standards for the transition of the building materials industry are relatively mature, having been initially recognised by the People's Bank of China and sent to relevant ministries or commissions for signature.

Participating in the research on ESG evaluation and management standards for banking financial institutions of the People's Bank of China

The Bank deeply participated in the research of the People's Bank of China's ESG evaluation management standards for banking financial institutions in corporate finance. Combining with the Bank's practice of constructing an ESG rating system for its corporate clients, it promoted the formation of an indicator system and evaluation procedure specifications for banking financial institutions to carry out ESG evaluation of corporate finance. It could help to enhance the ESG risk identification and management capability of banking financial institutions and effectively guided banking financial institutions to strengthen their funding support and service in the field of green and sustainable development. At present, the relevant standards have been signed by related ministries and commissions.

Engaging in the pilot tests of macro climate risk scenarios organised by the People's Bank of China

The Bank engaged deeply in the pilot tests of macro climate risk scenarios organised by the Research Bureau of the People's Bank of China in 2023, which covered the full range of loans and explored ways to quantitatively analyse the impact of different climate scenarios on loan quality and capital adequacy. The Bank joined the seminars on test plans, completing test reports and submitting modification proposals on test plans. The efforts won the recognition from the People's Bank of China.

Participating in the preparation of standards for the carbon account services for banks' personal and corporate clients

As a drafting organisation, the Bank participated in the preparation of two financial industry standards which were led by the Research Bureau of the People's Bank of China, namely the *Guide on the Carbon Account Services for Banks' Personal Clients* and the *Guide on the Carbon Account Services for Banks' Corporate Clients*. Both projects have so far been approved and moved into the pilot stage. The Bank published the *Research on the Development of the Personal Carbon Account Business of the Banking Industry*, the outcome of the research on personal carbon accounts, on the *Financial Computerising*. The case titled the *Financial Services of CCB Based on Personal Carbon Accounts*, was included into the *Collection of Cases of the Innovative Application of Fintech in the Payment and Clearing Industry* compiled by the Fintech Committee of the Payment & Clearing Association of China.

Participating in the project research on the green and low-carbon transition launched by China Banking Association

The Bank participated in the project research on the green and low-carbon transition launched by China Banking Association, prepared the report titled the *Status and Demand arising from the Zero-Carbon Transition of Green Finance of China's Banking Industry*, and summarised and reported its cases about the transition to zero-carbon green finance. This project systematically researches how the banking industry can grasp the investment and financing needs under the carbon peak and carbon neutrality goals and prevent the risks brought by climate change, and the related research results help the Banking institution to seize green and low-carbon business opportunities to achieve sustainable and high-quality development.

Jointly unveiling the first version of the *Green Paper on China's Green Capital Market (2022)* at home

On April 11, 2023, the Bank officially unveiled the first version of the *Green Paper on China's Green Capital Market (2022)* at home jointly with the Institute of Finance and Sustainability. The paper aims to contribute wisdom to the carbon peak and carbon neutrality goals and the transition to a green and low-carbon economy and society by summarising the practice and experience in the green investment and financing market, and share China's valuable experience in global environmental protection and addressing climate change.



Releasing the *Report on the Operation of CCB-Wind Green ESG Bond Issuance Index*

On March 28, 2023, the Bank released the *Report on the Operation of CCB-Wind Green ESG Bond Issuance Index (2022)*. In collaboration with Wind Information Technology Co., Ltd. and the International Institute of Green Finance under the Central University of Finance and Economics, the Bank released "CCB-Wind Green ESG Bond Issuance Index and Yield Curve", the first-ever green bond issuance index that integrates ESG and carbon neutrality concepts in the market, synchronously in Beijing and Luxembourg in May 2021. Subsequently, the Bank prepared reports disclosing its operation on an annual basis, helping the participants in domestic and foreign markets learn about the trends of China's green bond market in real time.

Participation in the preparation and revision of teaching materials on *Green Finance*

The Bank attaches great importance to the green financial market cultivation and infrastructure construction. Under the guidance of the China Banking Association, the Bank actively participated in the preparation of the teaching materials of *Green Finance*, submitted the first draft in April 2023, and completed the second round of revisions in November. *Green Finance* comprehensively analysed the historical evolution of green financial bonds at home and abroad, policy changes, product services, and outlook to support the development of green financial bonds and other capital market businesses.

Taking the lead in formulating of the *Specifications for the Implementation of Loans to the Green Building Industry of Hubei Province*

The Hubei Branch took the lead in formulating the *Specifications for the Implementation of Loans to the Green Building Industry*, the first local standard for the financial industry in Hubei Province. Drafted by the Hubei Branch jointly with the Hubei Branch of the People's Bank of China, Hubei Office for Building Technology and Building Energy Conservation and the School of Architecture and Urban Planning of the Huazhong University of Science and Technology, the standard features three innovations. Firstly, it supports the whole industrial chain of green building on both supply and demand sides. Secondly, based on authoritative certification in the industry, it introduces the mechanism for pre-assessing green buildings, changing the situation in which the certification of green buildings comes later than the upfront financing for projects. Thirdly, it ensures compliance by establishing the post-project assessment mechanism for the green building industry. The standard provides a solid basis for the financial institutions in Hubei Province to grant green loans and drive the high-quality development of the green building industry in the province.

Jointly completing preparation of the first *Report on the Evaluation of Climate Risk in the Banking Industry of New Zealand*

CCB New Zealand actively supported the Financial Markets Authority of New Zealand and NZ Banking Association in completing preparation of the first *Report on the Evaluation of Climate Risk in the Banking Industry of New Zealand*. Aligned with the TCFD standards and NZCS, the report covers the hypothetical evaluation, governance structure, strategic layout and management mechanism for climate risk scenarios as well as related indicators and objectives. As New Zealand has passed laws to strengthen climate risk management, local banks are exposed to tougher regulatory requirements in more dimensions. Therefore, participating in relevant discussions and evaluations helps the Bank learn more about local concepts and methods for climate risk management and lay solid foundation in dealing with climate risk.



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Increasing External Exchanges

The Bank actively participates in the construction of an open and inclusive platform for the exchanges on green finance, promotes exchanges and cooperation and mutual learning of experience related to green finance, and actively provides suggestions for green and low-carbon development economy and society.

Attending the 2023 Green Low-Carbon High-Quality Development Conference

On August 29, 2023, Zhang Jinliang, the Bank's Chairman (then-President), attended and addressed the Green Low-Carbon High-Quality Development Conference. He said, as part of the tide of green development, financial institutions should build a greater consensus, take the political responsibility of building a beautiful China, and plan and drive the green and low-carbon development of financial services at a higher stance, from a bigger-picture view and through stronger efforts; enhance the capabilities to support the green transition of the economy and society, advance the integration between green development and industrialised, digital and intelligent operation, and accelerate product innovation centring on the rights to carbon emission, energy use and pollution discharge; build a platform for the international cooperation on green finance, take active part in the formulation of international standards, and tell stories about China's green finance well. Next, the Bank would work further to build a new ecosystem for green finance, actively serve the key strategies of the country, and actively guide the transition to green and low-carbon operation.

Attending the annual conference of the Global Asset Management Forum

On March 18, 2023, Ji Zhihong, the Bank's Vice President, attended the annual conference of the Global Asset Management Forum and delivered a keynote speech. He said that China Construction Bank, upholding the vision of "becoming a world-leading sustainable development bank", worked actively to explore contributing to the green transition of the economy and society, leveraged its strengths to meet the demand for financing green development; created innovative service models, and supported the green upgrade of industrial structures; focused on climate governance, and boosted the capacity to prevent financial risk; spread the concept about low-carbon operation, and guided the green transition of the lifestyle. In terms of propelling the high-quality development of green finance, he suggested efforts to advance green and low-carbon development in a coordinated manner, further explore transition finance, facilitate the building of the carbon market, refine the carbon pricing mechanism, strengthen innovation in green finance products, and foster a green finance ecosystem.

Hosting the 2nd Financial Street · Youth Finance Forum

On September 26, 2023, in collaboration with Beijing Financial Street Service Bureau and the Xicheng District Committee of the Communist Youth League, the Bank hosted the 2nd Financial Street · Youth Finance Forum, an activity as part of the annual conference of the Financial Street Forum. Attending and addressing the event, Li Yun, the Bank's Vice President, said as a major force serving national strategies, China Construction Bank kept in mind the top priorities of the country, and consistently built up the momentum for high-quality development. Focusing on the decisions and plans of the CPC Central Committee, the Bank continuously enhanced its capability to compete internationally, built the financial service network along the "Belt and Road", and empowered the joint development of the green Silk Road across the border. Participating guests and young representatives held dialogues and discussions on the financial cooperation under the "Belt and Road" Initiative, as well as green finance and sustainable development, injecting the youths' vitality to China's financial reform.

Co-undertaking COP28

In 2023, the Bank co-undertook a side event themed "Green Finance and Climate Change Solutions: The Role and Opportunities of Chinese Banking Sector" of China's pavilion of the 28th session of the Conference of the Parties to the *United Nations Framework Convention on Climate Change* (COP28) in Dubai, UAE. On December 5, Wang Bing, the Bank's Vice President, attended the side event via video link and delivered a keynote speech. The side event focused on the goals and requirements for the development of green finance, accurately identified the key role of green finance in building China into a "Financial Power", showcased the achievements and practice of China's banking industry in supporting the carbon peak and carbon neutrality strategy and responding to climate change, and contributed positively to telling China's stories well in an international language.

Attending China International Finance Annual Forum

On September 3, 2023, Hu Changmiao, then Bank's Secretary of the Board, attended China International Finance Annual Forum, a main forum on financial services of China International Fair for Trade in Services, at which he introduced China Construction Bank's efforts to practice the new development philosophy, and incorporate the ESG concept into its strategic development, operation and management. Next, the Bank would continue to implement the strategies and plans of the CPC Central Committee and the State Council, strengthen disclosure and publicity, and actively engage with leading peers and specialised agencies. Based on China's national conditions, the Bank would closely follow regulatory trends and requirements, advance the establishment of an ESG standard system with Chinese characteristics and aligned with international practice, and create a sound external environment for deepening the ESG concept.

Officially signing the UN PRB

In November 2023, the Bank officially signed the UN *Principles for Responsible Banking* (PRB), becoming a member of the UN Environment Programme Finance Initiative (UNEP FI). Comprising six basic principles, i.e., alignment, impact and target setting, clients and customers, stakeholders, governance and culture, transparency and accountability, PRB serves as an important international standard for commercial banks to advance sustainable development. Signing PRB is a major move taken by the Bank to actively align with internationally advanced ESG governance concepts. Going ahead, centring on the vision of "becoming a world-leading sustainable development bank", the Bank would step up support for building a green, circular and low-carbon economy, so as to contribute financial strength to making ecological progress characterised by the harmony between humanity and nature.

Attending the annual meeting of the Green Finance Committee of China Society for Finance and Banking

On September 17, 2023, the Bank attended the 2023 annual meeting of the Green Finance Committee of China Society for Finance and Banking. At the event, the Bank shared its innovative practice about the ESG rating system, and discussed with other financial institutions about various issues in the area of green finance, including the innovation in green finance products, green, low-carbon and high-quality regional development, sustainable information disclosure, green, inclusive and integrated development, financial support for biodiversity protection, transition finance, as well as the exploration and practice of continuously improving the quality and efficiency of sustainable information disclosure, with the aim to promote the efficient and fast development of green finance.

Participating in the ESG themed salon hosted by China Association for Public Companies

On September 26, 2023, the Bank participated in the ESG themed salon (3rd session) hosted by the ESG Committee of China Association for Public Companies, where the Bank shared its practice in implementing the ESG concept and exploring the path to financial development with Chinese characteristics. Practising the ESG concept and driving high-quality and sustainable development is a long-term initiative, and how to ensure sound ESG development became a question that commercial banks must answer. Next, the Bank would continue to explore ways to enrich green finance and deepen ESG practice, further engage with industrial peers and specialised agencies, intensify disclosure and publicity, and tell China's stories and CCB's stories about ESG practice well.

▶ Attending the UK-China Financial Institution Sustainability Disclosures Taskforce meeting

On September 3, 2023, the Bank attended the 2023 UK-China Financial Institution Sustainability Disclosures Taskforce meeting, sharing its practice and experience in green finance and sustainable development as well as related difficulties and challenges. At the meeting, representatives from the regulator, the Chinese and English guiding agencies of the taskforce, co-leading institutions and other institutions participating in the meeting jointly discussed the path to high-quality and sustainable information disclosure, reviewed work progress, explored relevant frontier issues, and elaborated on plans on future work.

▶ Attending the meetings of the China Council of the Sustainable Markets Initiative

As a member of the China Council of the Sustainable Markets Initiative (SMI), the Bank took an active part in the 2023 council meeting and the year-end exchange meeting, sharing its achievements in green finance and strengthening exchanges with other council members. The move aimed to advance the innovative development of green finance and lay a solid foundation for deeper global communication and cooperation in sustainable development. As a member of the "Sustainable Markets Initiative" (SMI) China Council, the Bank took active part in the 2023 SMI council meeting and the year-end exchange meeting, publicising its achievements in green finance, and strengthening communication and ties with other council members. The move aimed to advance the innovative development of green finance businesses and lay a solid foundation for the deeper exchanges and cooperation in the area of green finance.

▶ Conducting exchanges in the area of climate risk management

On October 24, 2023, the Bank held themed talks and exchanges with the Financial Stability Bureau of the National Bank of Georgia on green finance, ESG rating and management, and environment and climate risk stress testing. On November 15, the Bank attended the exchange meeting on the climate risk stress testing project jointly launched by Haikou Municipal Government and the People's Bank of China, where it shared with the World Bank, the Asian Development Bank, banking peers, insurance and other financial institutions its practice and experience in the design of climate risk scenarios. On November 20, the Bank held a thematic exchange with the World Bank on climate risk stress testing, which was led by the People's Bank of China and helped the World Bank understand the relevant practices in China.

▶ Co-hosting the matchmaking seminar on the green development of New Zealand's construction industry

CCB New Zealand hosted the matchmaking seminar themed "Green Development" jointly with the biggest construction association in New Zealand. The event attracted over 150 construction enterprises at home and abroad, and discussed the construction industry's ecological responsibility of and practical path to the transition from a high energy-consuming one to a zero energy-consuming one. As a pillar of the economy, with its huge industrial size, complex industrial chain and robust development momentum, the construction industry plays a crucial role in stabilising the economy and increasing people's living qualities. After the event, CCB New Zealand arranged over 40 bilateral matchmaking meetings to promote the exchanges and cooperation between participants.

▶ Hosting industrial forums on the development of green investment

In 2023, the Bank held the business promotion meeting for the green capital market themed "Making New Achievements in the Bond Business", the forum for industrial chain innovation services themed "Navigating the Cycle and Building a Green Future" and the CCB forum for new energy industry services in the Yangtze River Delta economic circle themed "Empowering the Intelligent Industrial Chain in Jiangsu by PV and Electricity" successively in Jiangxi, Sichuan and Jiangsu. Clients, industrial experts and market investment institutions were invited to the events and exchanged ideas on issues like products in the green capital market, frontier development of the new energy industry, and the ESG development trends both at home and abroad.



Strengthening Internal Empowerment

The Bank focuses on green development and strengthens education and training. Centring on areas like green finance, green industries and green lifestyles, the Bank has done a lot of work related to training, teaching and research development, project research, industry-university-research institute-user collaboration, and external empowerment, and works to build a multi-dimensional knowledge system that covers policy interpretation, industry analysis and product service.

▶ Improving the online learning channel

Giving play to the role of the "CCB Learning" platform, the Bank launched the learning channel themed green finance to strengthen the training of green finance talents. Since it was launched at the end of 2021, the learning channel has seen the number of learning columns increases from over 100 to 267, including 12 Level-1 columns and 22 Level-2 columns. Covering contents like high-level voice, lectures on carbon peak and carbon neutrality, lectures on green development, expert lectures on green finance products, international lectures, policies and systems, industrial analyses, CCB services, selected courses, micro lessons, academic forums, and classic cases, the learning channel aims to create a shared, synergetic and efficient learning ecosystem focusing on green finance. As at the end of 2023, the number of active learners exceeded 736,000.

The Bank strengthened the development of the learning channel focusing on climate risk, and launched the column focusing on carbon peak and carbon neutrality policies and concepts, among others. Fifteen courses were offered, attracting more than 26,000 learners in total. The Bank developed the ESG themed channel on the "CCB Learning" platform, introducing diverse ESG learning resources. In 2023, the online ESG channel recorded more than 900,000 visits in total, with over 500,000 learners of ESG courses and over 140,000 learners of 70 ESG themed short videos.

▶ Developing green themed courses

The Bank organised the development of and launched ten "green development themed micro lessons". Presenting the key contents of lecture courses, the selected micro lessons attracted more than 64,000 online learners. Moreover, six "green finance themed micro lessons" were developed, such as *Green Credit in Credit Policies*, and *Green Credit: Risks and Opportunities*, recording 7,722 learners in total. Other courses feature topics like the "carbon peak and carbon neutrality" goals and the "1+N" policy system, summary of regulatory policies about green finance, the policy framework for "three functions" and "five pillars", ESG and UN sustainability goals, the new energy industry development, CCB's green finance product system, CCB's achievements in developing green finance, and the next-step development strategies and measures. Cumulatively, the courses were applied in 72 training sessions, and learned by 103,000 people online.

▶ Launching "Lectures on Green Development"

The Bank organised a learning project themed "Lectures on Green Development". As at the end of 2023, the Bank had successively posted videos about four special lectures and three themed forums on the "CCB Learning" platform for all employees, recording more than 340,000 learners online. Meanwhile, related lecture courses were included into the contents of training for the competition aiming to improve the abilities of corporate client managers in 2023. Several internal and external media outlets, including the CCB News and the Xinhua News App carried out publicity reports, with the views of single events covered by external media outlets exceeding one million.

▶ Launching "E-Livestream" on green finance

The Bank launched the "E-Livestream" on green finance via the "CCB Learning" platform. Opened to all employees across the Bank, the livestreams covered topics like the interpretation of green credit policies, green fund investment, ESG trends, new energy vehicles and the key industries related to the carbon neutrality initiative, etc.

▶ Organising training on green finance

- A special training course on energy and green finance was conducted for tier-one branch leaders and business backbones of green credit, covering the key points of green finance development and related policies, policies about ESG risk management, green finance and green industry development, as well as green investment banking business introduction and practical cases, etc.
- The Bank launched an offline training class on bond undertaking themed "Making New Achievements in the Bond Business" (focusing on green finance). The training targeted the heads and key employees dedicated to green investment banking. Centring on the innovative practice in green bonds and other green capital markets, the training explored how to further enrich the Bank's green non-credit services.
- At the 15th Financial Street No.25 Forum held in 2023, the Bank organised a lecture titled *ESG Rating and Research on the Credit Qualifications of RMB Credit Bond Issuers* based on the outcomes of its project research. The move aimed to raise employees' awareness of the importance of ESG rating, further advance the implementation of responsible investment, expanding the influence of responsible investment.
- The Bank organised a training class on the "expansion of ecological scenarios and related universal abilities", where the key employees of 37 branches (80 employees offline, and all employees online) were trained on the business related to personal carbon accounts. The move aimed to guide branches to carry out publicity on green and low-carbon development and advocate a low-carbon life.
- On the basis of business practice and research results, the Bank's subsidiaries launched a variety of training activities on green finance. For example, CCB Investment held nearly 30 training sessions or lectures on green industries, covering wind power, PV, energy storage, hydrogen energy and new energy vehicles, etc. CCB Private Equity organised a number of lectures on strategic emerging industries, focusing on the investment in environmental protection and PV and energy storage industries. CCB Property & Casualty launched training on green insurance, covering green insurance business and the guidelines for undertaking wind power facilities. CCB Principal Asset Management introduced ESG learning resources, and held themed learning and training sessions.

▶ Organising training on green operation

- The Bank organised a training class on improving the abilities of the persons in charge of channel operation, which comprised training on the key work in the building of green outlets and business discussions. By listening to expert lectures, studying and discussing cases, and communicating with each other, the participants gained better understanding of the building of green outlets, shared experience and offered valuable suggestions in business discussions.
- The Bank held a training class on the management of carbon emissions, which offered in-depth explanations on the policy requirements for carbon peak and carbon neutrality, strategic opportunities and practical paths for the banking industry, as well as the practical work needs of the Bank, etc., and covered the employees of tier-one branches, subsidiaries, directly affiliated institutions, Northeastern China College and Eastern China College of CCB Learning Centre. The move helped train a talent team dedicated to the management of carbon emissions and laid a solid foundation for improving the Bank's management of carbon emissions.
- The Bank invited experts from CTC and SinoCarbon to give lectures on green data centres and discuss energy-saving and technical improvement measures in data centres, so as to raise

its employees' awareness of conserving energy and reducing consumption. On the 2023 "National Low-Carbon Day", the Bank invited the experts from China Beijing Green Exchange to provide a training session themed the "Digitalisation of Carbon Assets under the 'Carbon Neutrality' Background", to guide employees establish awareness of energy conservation and boost green operation.



Outlook

Going forward, the Bank will remain focus on the carbon peak and carbon neutrality goals, uphold the strategic vision of “becoming a world-leading sustainable development bank”, continue to advance the implementation of the strategies and plans including the *Strategic Plan for the Development of Green Finance (2022-2025)* and the *Action Plan for Carbon Peaking and Carbon Neutrality*, and speed up the development of green finance businesses. The Bank will further tap the areas where finance and ecological environment may converge, keep enriching green finance products and services, and offer all-round financial support for the protection of ecological environment and sustainable development. It will continue to improve the capacity to serve the green transition of industrial structures, step up support for green economy, circular economy and low-carbon economy, and build green finance into a new pillar underpinning its high-quality development and its new advantage in market competition. The Bank will strengthen the application of technology empowerment, and leverage fintech to boost the quality and efficiency of green finance services. The Bank will actively address climate change, enhance the capacity to manage environmental and climate risks, continuously improve the management system for green operation, and drive the fulfilment of environmental objectives for green operation, so as to build itself into an eco-friendly bank and propel the all-round green transition of both the economy and society.



Appendix I

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