Bank SinoPac

TCFD

Task Force on Climate-Related Financial Disclosures

2022 Task Force on Climate-Related Financial Disclosures Report

NET ZERO

C O N T E N T S

A Message from the Chairman

Utilize financial power to lead Taiwan and the world toward sustainable economy

Climate change is regarded as a major environmental crisis for this century. Floods, heat waves, droughts, plagues, and other impacts from extreme climate have brought huge losses and operational uncertainty for the world. In the face of these dire conditions, Bank SinoPac considers ESG and sustainability to be core performance measurement, with the principles of "Impactful" and "Sustainable" in mind, Bank SinoPac strives to lead the financial industry in Taiwan to shine on the global stage of sustainability by "green" financial means which are our core competence.

In 2022, "the 27th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP27)" reaffirmed the commitment of the "Paris Agreement" to keep temperature increases within 1.5 degrees Celsius and also reemphasized the importance of investing financial resources in climate change mitigation measures and carbon reduction efforts. In the same year, the National Development Council in Taiwan issued the 2050 net zero transformation goals and specific strategies. Green finance, which was listed as one of the 12 key strategies, included implementation focuses such as carbon inventory of financial institutions and climate risk management, development of sustainable economic activities, and integration of ESG and climate information. It is clear that both the international community and domestic authorities attach great importance to sustainability issues of financial institutions. To achieve our vision of "Together, a better life," Bank SinoPac reaps a fruitful success from integrating ESG into our actions, while simultaneously using the force as a financial institution to implement our three-step sustainability action plan. We start from ourselves (Scope 1 & 2), aim to influence the green behaviors (Scope 3) of our clients and promote green financial products to mold Taiwan into a sustainable home for us all through financial tools and innovation.

Utilize core competence, drive sustainability through diversification, and make constant progress on the path to sustainability

In line with the "Paris Agreement" and national 2050 net zero targets, Bank SinoPac adheres to the energy and environmental management policies and science-based targets (SBTs) of parent company SinoPac Holdings, reducing carbon emissions from own operations by "enhancing climate awareness and promoting low-carbon transformations" and implementing internal carbon pricing (ICP) mechanisms in 2022 to enhance energy efficiency and carbon reduction. In 2022, we signed a Power Purchase Agreement (PPA) contract to acquire 2.6 million kWh of green electricity annually, equivalent to 10% of our annual electricity consumption, and will aim to increase the percentage of green electricity consumption aggressively in the future, to effectively achieve the carbon reduction targets formulated by our parent company, SinoPac Holdings. In terms of specific energy and carbon reduction implementations, we launched "Paperless Green Financial Counters" which reduced annual paper usage by two times the height of the Taipei 101 building, demonstrating the effectiveness of green finance. For this, we were awarded the "Best Management Innovation Award" by the Business Next Future Commerce Awards in 2022. We also incorporated electronic energy-saving signboards and e-Note forms, and became the first company in the industry to launch integrated palm vein identification technologies at the counters of all our 125 branches in Taiwan in 2022 and in our automatic teller machines (ATMs) in 2023. Thus, to provide our customers with an energy-saving, sustainable and paperless user experience, we have enhanced operational efficiency, achieved energy reduction, environmental protection and long-term carbon reduction commitments.

Bank SinoPac, by combining green finance and business, employs financial tools to demonstrate green solutions, and proactively develops new business opportunities such as the 2013 “Solar Photovoltaic Equipment Financing Program,” which made us the first financial institution in the industry to provide financing for solar photovoltaic equipment. Starting in 2019, we began organizing large-scale photovoltaic syndicated loans for diverse installation models including rooftop, fishery and electricity symbiosis, ground and water surface installations, making us a solid market leader and the only domestic financial institute to receive the Top Solar Award Excellent Financial Service Award from the Ministry of Economic Affairs Bureau of Energy for seven consecutive years. As of the first quarter of 2023, our financing balance in solar photovoltaic equipment is NT$ 88.7 billion, and we work with 7,320 solar photovoltaic plants that have a cumulative installed capacity of 3 GW. We have also developed financing services for energy storage, geothermal, wind power, and other green energies, as well as expanded issuance of green bonds. Our financing services in “energy storage devices” leads the industry, and we lead managed the first energy storage syndicated loan in 2023, helping to build the biggest single energy storage power plant in Taiwan. We will continue our green finance initiatives to facilitate global net zero emission, enhancement of energy independence and other important transformation targets as a responsible green finance provider.

Additionally, leveraging the collective impact of our partners and stakeholders to drive market participation is key to expanding Bank SinoPac’s influence. Bank SinoPac works with clients and collaborating partners to launch low-carbon transformations; we work with the Fusheng Group and the British Standards Institution (BSI) to promote greenhouse gas inventories for upstream vendors and net zero transformations throughout our supply chain in line with government plan for establishing a carbon rights exchange. We also helped energy companies build frameworks for local rebate trust funds to properly manage funds for local rebates, and became the first company to combine a green electricity transaction platform with a trust framework, enhancing transaction convenience and security between green electricity buyers and sellers. We also initiated our corporate green time deposit program in 2022 to promote client awareness and green activities. Combining our innovation and financial means, Bank SinoPac has showcased our capability and commitment to sustainable economy.

Working together to advance toward sustainable and net zero visions

This report obtained the highest level of recognition for climate-related financial disclosure maturity following on-site audits by the British Standards Institution (BSI). We hope this report demonstrates our responsibilities, commitments, vision regarding climate, net zero, and sustainable developments as well as our achievement to sustainable developments in society and the environment as we spread sustainable concepts and efforts to others who agree with our sustainable values. As long as we work with like-minded partners from all walks of life, we are certain we will be able to create a bright, sustainable, and net zero future.

Bank SinoPac Co., Ltd.
Chairman Wei-Thyr Tsao

Company Overview

Bank SinoPac (hereinafter the Bank, we, us, our) is a wholly owned subsidiary of SinoPac Holdings restructured from Taipei Mutual Loans and Savings Co., which was inaugurated in 1948. The Bank has focused on serving SMEs over decades of restructuring and development, and completed a share swap merger to become a wholly owned subsidiary of SinoPac Holdings in 2005. SinoPac Holdings changed its Chinese name to "Yongfeng Holdings" in 2006. To integrate banking resources and optimize economies of scale, the Bank merged with International Bank of Taipei on November 13, 2006 and became Bank SinoPac; following strategic adjustments and strengthening of structural organizations, we are working to make progress toward our vision of "Together, a better life," through promotions of flat organizations, cost reductions, enhancement of operational efficiency, and improvements to cost-expense structures, aiming to become a leading brand in Chinese finance. Headquartered in Nanjing, Bank SinoPac (China) officially commenced business in 2014 and currently has four branches in Shanghai, Guangzhou, Chengdu, and Nanjing, respectively, providing a wide range of financial services to both enterprises and individuals.

To raise capital adequacy ratios and respond to medium and long term capital needs for business expansions, Bank SinoPac issued NT$ 5 billion in subordinated bank debentures in 2022, as well as NT$ 2 billion in senior unsecured bank debentures (green bonds) in response to the government's Sustainable Finance policies and SinoPac Holdings' sustainable development strategies, making a total of NT$ 7 billion. As of year-end 2022, Bank SinoPac and its subsidiaries have 6,554 employees, paid-in capital reached NT$ 90.3 billion, and assets amounted to NT$ 2.4034 trillion. Bank SinoPac has 22 divisions and 1 head office in addition to 125 domestic branches (including the Department of Business), an Offshore Banking Unit, and multiple overseas branches in Hong Kong, Kowloon, Macau, Los Angeles, and Ho Chi Minh City, as well as a Vietnam Representative Office. Bank SinoPac has also invested in subsidiaries such as SinoPac Insurance Brokers Limited and Bank SinoPac (China), offering customers a full range of financial services through professional division of labor and diversified channels.

About this Report

Since 2022, Bank SinoPac has adhered to the recommended framework of the Task Force on Climate-Related Financial Disclosures released by the Financial Stability Board and the "Guidelines for Financial Disclosures Related to Climate Risks by Domestic Banks" issued by the Financial Supervisory Commission to identify climate risks and opportunities, which are disclosed in our TCFD Report.

This is the first TCFD Report issued by Bank SinoPac, covering all operational activities (inconsistencies in scope, if any, are specifically detailed within this report) and aiming to aid the public and related stakeholders in understanding our assessments and measures related to the four TCFD aspects (Governance, Strategy, Risk Management, and Metrics and Targets). We provide specific explanations of scenario analyses for physical and transition risks, review progress of sustainability strategies, and hope to work with all stakeholders to promote sustainable corporate development.

The first section on climate governance details our climate governance units and responsibilities as well as relevant assessment methodologies.

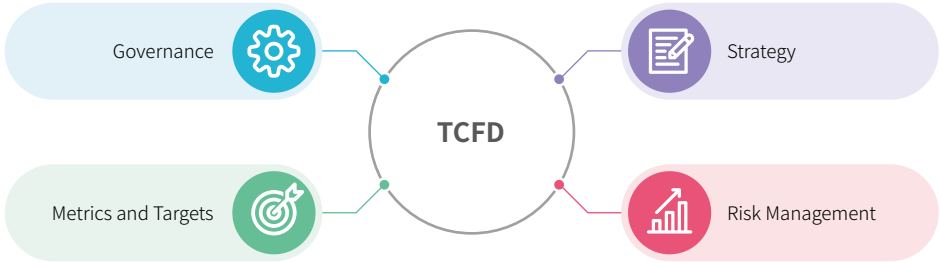
The second section on climate strategies clarifies our responses to and financial impacts of climate risks and opportunities; puts forward short, medium, and long-term assessments and plans; we further describe our achievements in this section.

The third section on management of climate risks lays out our management processes for identified risks, proposes plans for business continuity, and explains how climate issues are incorporated into investment and financing.

The fourth section on scenario analyses for physical and transition risks details our business, strategic, and financial planning risks and opportunities under different climate scenarios, and reviews the resilience of our formulated strategies.

The fifth section on climate metrics and targets not only discloses fundamental environmental information, but also provides further details of low-carbon investment and financing and asset exposure.

This Report was issued in June 2023. The reporting period spans the whole of 2022 (January 1, 2022 to December 31, 2022). The Report was verified by a third-party organization, which has issued an assurance statement. All disclosed environmental data have passed ISO14064-1, 14001, and 50001 verifications. This report will be updated and issued on an annual basis. Both the Chinese and English versions of this report can be downloaded from the Bank SinoPac website.



Bank SinoPac Climate Progress

-2020

- In 2017, became one of the first banks to issue green bonds
- In 2018, signed the "Stewardship Principles for Institutional Investors"
- Participated in the "SinoPac Life - A Million Acts of Green" initiative officially launched by SinoPac Holdings in July 2019 to protect the earth through daily green actions
- In 2019, incorporated the ISO 50001:2018 Energy Management System, ISO 14001:2015 Environmental Management System, and ISO 14064-1:2018 greenhouse gas inventories for the first time

2020

- In February 2020, officially signed the Equator Principles (EPs) and became the 102nd Equator Principle Financial Institution (EPFI) in the world, strengthening management of human rights risks, climate change risks, and other ESG issues during credit investigation processes for project financing
- Established the "Stewardship Policy" and incorporated ESG elements into investment assessment processes by formulating regulations to manage conflicts of interest, voting policies, and engagement activities
- Became one of the first banks to issue sustainability bonds
- Fishery and electricity symbiosis: Provided financing for Taiwan's first fishery and electricity symbiosis project

2021

- Became one of the first banks to issue social responsibility bonds
- Solar photovoltaic financing: Total installed capacity of 1,929.14MW, market share of 25%
- Continued to align with governmental green energy policies by building a "Green Energy Trading Platform" and launching an exclusive "green power plant information management system"
- Signed "Memorandum of cooperation for fishery and electricity symbiosis project financing" with Kaohsiung City, providing full support to development of fishery and electricity symbiosis projects in Kaohsiung City
- Green power plant information system: Implemented four major evaluation functions for power plants and obtained patent certification

2022

- In December 2022, formed the Sustainable Development Taskforce
- Completed implementation of ISO 50001 Energy Management System targets for third self-owned building (Nanjing)
- Implemented ISO 14001 Environmental Management System targets for two new self-owned buildings (Chengzhong, Nanjing)
- Implemented internal carbon pricing (ICP)
- Greenhouse gas inventories: Completed greenhouse gas inventories for 100% of domestic and foreign sites
- Net zero commitment: Implemented financial carbon inventories in accordance with plans formulated by parent company SinoPac Holdings, assisting SinoPac Holdings in joining SBTi in August 2022, and completing submission of SBTs before the end of the year
- Decarbonization commitment: Established a more proactive decarbonization commitment in line with plans formulated by parent company (Note)
- GSS bonds: Cumulatively issued NT$ 8.4 billion in green bonds
- Enhanced carbon management efficiencies in line with plans formulated by parent company SinoPac Holdings, assisting SinoPac Holdings in obtaining "A-Leadership level rating" from the Carbon Disclosure Project (CDP) for three consecutive years
- In December 2022, became a founding member of the "Taiwan Nature Positive Initiative" launched by The Business Council for Sustainable Development of the Republic of China (BCSD Taiwan)

Note: We stopped providing financing for projects related to steam coal and unconventional oil and gas (including mining, power generation, processing, trading, transportation and logistics, equipment manufacturing, and infrastructure) starting on July 1, 2022. Financing for existing projects will not be renewed upon maturity. We continue to develop more proactive decarbonization commitments. Please refer to our website for the latest updates on our progress.

Sustainability Performance

- Asiamoney "Taiwan's Best Bank for CSR"
- Taiwan Academy of Banking and Finance "Inclusive Finance Promotion Award" from the 11th Taiwan Banking and Finance Best Practice Awards「Financial inclusion」
- Newsweek "World's Most Socially Responsible Banks 2022"
- Asian Banking & Finance ABF Retail Banking Awards 2022 "Financial Inclusion Initiative of the Year"
- Taiwan Institute for Sustainable Energy 2022 TSAA Taiwan Sustainable Action Award "Gold Award in SDG 4 Quality Education - Let's Go to the Theater," "Silver Award in SDG 8 Decent Work and Economic Growth - FUN Biz," "Gold Award in SDG 17 Partnerships For The Goals - SinoPac Donation Platform"
- Taiwan Institute for Sustainable Energy 2022 Asia-Pacific Sustainability Action Awards "Gold Award in SDG10 Reduced Inequalities - Financial Services for Migrant Workers in Taiwan"
- Anue Network "Promising Corporate Sustainability Prospects in ESG Benchmarking Enterprise Billboard"
- Ministry of Education Sports Administration 2022 Sports Activist Awards "Sponsorship Bronze Award"
- Ministry of Health and Welfare Health Promotion Administration 2022 "National Healthy Workplace Motherhood Healthy Friendliness Award"
- Financial Supervisory Commission "Key Startup Industry Loans - Special Award for the Renewable Energy Industry"
- Financial Supervisory Commission 2021 Participation in "Schools and Communities for Financial Knowledge Promotion Activities"
- Taipei City Government Department of Health "Friendly Taipei Lactation Rooms"

CHAPTER 01

01

Climate Governance

1.1 Climate Governance Framework

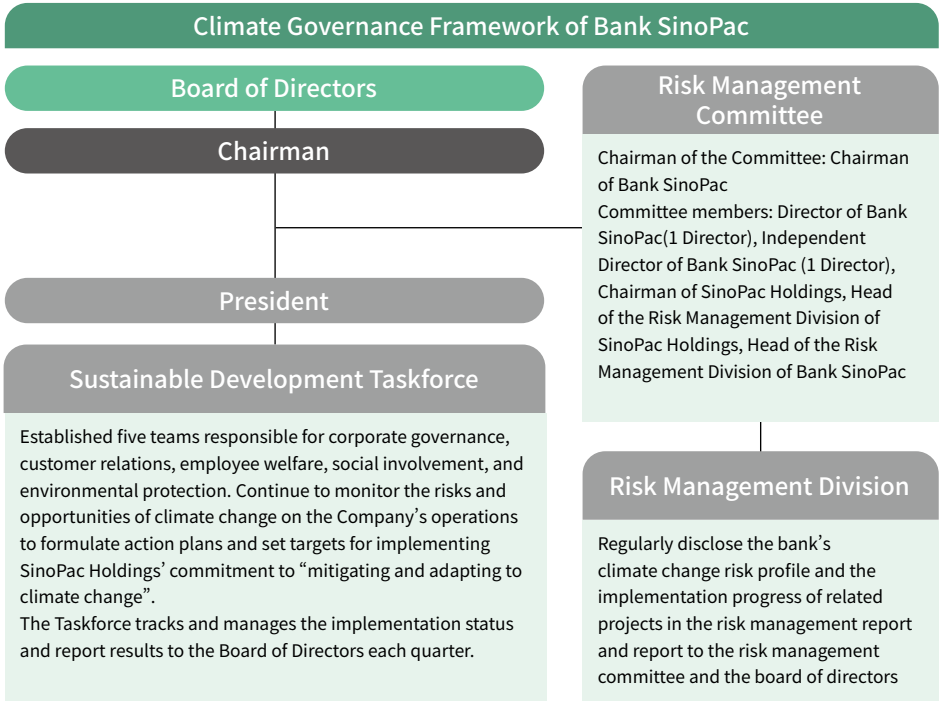
The Board of Directors is the highest decision-making unit for climate risk management mechanisms, and is responsible for approving climate policies and strategies, supervising implementations of climate-related metrics and targets, and incorporating climate risk factors into our risk appetite, strategies, and business plans, including identification and assessment of climate-related risks and opportunities as well as their impacts on our strategies and plans.

The Risk Management Committee has been established under the Chairman to implement major Board decisions and other matters related to climate risk management; formulate corresponding supervision and reporting mechanisms; and monitor climate risk management operations.

The President is responsible for supervising implementations of climate risk management mechanisms, including assessing and balancing climate risks and opportunities; formulating climate risk management strategies, management systems, and monitoring indicators; regularly reviewing effectiveness and implementations; continuing to monitor our exposures to climate risks; and reviewing resilience of response strategies for different climate scenarios.

Responsible units or teams designated by the President implement climate risk management tasks, including establishing management mechanisms, adopting response measures for different scenarios, and periodically or non-periodically reporting information on climate risks to the Risk Management Committee and the Board.

SinoPac Holdings became a TCFD supporter in 2021, demonstrating a determination to proactively respond to climate change risks. We adhere to the sustainable vision and development blueprint of our parent company. In order to promote various policies and plans related to sustainable development, we established a “Sustainable Development Taskforce” which heads five teams (Corporate Governance, Customer Relations, Employee Welfare, Environmental Protection, and Social Involvement) that manage the economic, environmental, and social risks and impacts from our operational activities. The Sustainable Development Group tracks and manages implementations on a quarterly basis, and reports to the Board of Directors every quarter. The Sustainable Development Group continues to be attentive to operational risks and opportunities caused by climate change and works to achieve the “mitigate and adapt to climate change” sustainability commitment, action plans, and targets of our parent company.



The Risk Management Division regularly discusses progress on climate-related projects, manages climate change risks, implements stress tests, monitors proportions of industries with high climate risks, and reports regularly to the Risk Management Committee and the Board. The Risk Management Division is also responsible for quantifying the financial impacts of physical and transition risks as well as presenting said financial impacts to senior management so that relevant units can shape response strategies, mitigation and adaption measures, and metrics and targets. The Risk Management Division works with the Risk Management Division of our parent company (SinoPac Holdings) to identify climate-related risks and opportunities each year, assisting SinoPac Holdings in identifying important climate-related risks and opportunities as well as mitigation and adaption measures; identifying, measuring, monitoring, and reporting climate risks; and making regular reports and disclosures.

Unit	Chair	Composition	Meeting Frequency	Responsibilities Related to Climate Issues	Implementation Results for 2022
Board of Directors	Chairman	6 directors and 3 independent directors	Convenes once a month, with sustainability and climate issues included at least once a quarter	The highest governance unit for climate change issues	Incorporated climate risks into our risk tolerance, strategies, and business plans, and continued to monitor implementations of climate-related projects
Risk Management Committee	Chairman	Bank SinoPac's Chairman serves as the Committee convener and chair; Committee members include 2 directors (one of whom is the SinoPac Holdings chairman), 1 independent director, the SinoPac Holdings Risk Management Division director, and the Bank SinoPac Risk Management Division director	At least once a quarter	Implement major Board decisions and other matters related to climate risk management; establish corresponding supervision and reporting mechanisms; and monitor climate risk management operations	Monitored exposures to climate risks and reviewed resilience of response strategies for different scenarios
Sustainable Development Taskforce	President	Managers designated by supervisors and the President	At least once a quarter	Established five teams (Corporate Governance, Customer Relations, Employee Welfare, Environmental Protection, and Social Involvement), continue to be attentive to climate change risks and opportunities on Bank operations, and work to achieve the "mitigate and adapt to climate change" sustainability commitment, action plans, and targets of our parent company	This Taskforce was established on December 26, 2022 following approval from our president to manage the economic, environmental, and social risks and impacts on our operational activities, as well as promote various sustainable development policies and plans formulated by our parent company

1.2 Board of Directors Responsibilities

1.2.1 Board Governance Structure

Bank SinoPac adheres to the governance structure and management processes for "climate change risks and opportunities" of parent company SinoPac Holdings, and conducts annual identification procedures for climate change risks and opportunities in accordance with the sustainable development plans formulated by SinoPac Holdings to identify the climate-related risks and opportunities that impact operations and business. The Board considers overall operational strategies and business environments; approves risk management policies, major decisions, and risk appetite related to climate issues; and is responsible for the ultimate supervision and management of climate-related issues. To fully understand the impacts of climate risks on our operations, Bank SinoPac directors hire external consultants to aid the establishment of climate governance frameworks and promote sustainable developments, and also attend classes themed around sustainability and climate issues to facilitate management and implementation of corporate sustainability matters and climate issues.

The 11th Board of Directors at Bank SinoPac is composed of 9 directors, including 3 independent directors, 1 director concurrently serving as a manager (Director Eric Chuang serves as the President of Bank SinoPac), 2 directors concurrently serving as SinoPac Holdings managers (Director Stanley Chu serves as the President of SinoPac Holdings and Director Kerry Hsu serves as the chief financial officer, spokesperson, and Financial Management Division director of SinoPac Holdings), and 3 directors who do not concurrently serve as managers, one of whom is Director Shi-Kuan Chen, the chairman of SinoPac Holdings, who also serves as an executive supervisor of the Taiwan Business Council for Sustainable Development, and leads Bank SinoPac in continuing to be attentive of climate change and environmental sustainability issues.

1.2.2 External Consultants

In line with parent company SinoPac Holdings, Bank SinoPac hired external consultants to provide TCFD consulting services, assess financial impacts from physical/transition risks, create climate risk heatmaps, complete climate risk management systems, and provide TCFD training in 2022 and 2023. After SinoPac Holdings established a Net Zero Team in 2022, Bank SinoPac worked with SinoPac Holdings' external consultants to conduct carbon inventories of investment and financing projects, set SBTs, and pass SBTi verifications. SinoPac Holdings joined SBTi in August 2022, completed submission of SBT at the end of 2022, and plans to conduct verifications in July 2023. Please refer to the SinoPac Holdings corporate website for more information.

1.2.3 Board of Directors Education and Training

To strengthen supervision of implementations related to corporate sustainability and management of climate issues at Bank SinoPac, the directors attended classes themed around climate-related issues. All directors completed 126 hours of training in 2022, including 18 hours of training related to climate or sustainability issues covering legal matters associated with ESG issues, impact investing, international environments, and corporate governance responses. For details on director training in 2022, please refer to our 2022 annual report.

Climate-related Education and Training for Board of Directors

Participating Directors	Course Title	Course Syllabus	Hours
Chairman Wei-Thyr Tsao	Technological developments and business opportunities for electric vehicles and smart vehicles	Electric vehicles, a key semiconductor market for the next decade, have received full investments from major automobile manufacturers around the world. Fuel vehicles are declining, and in the future, lithium electronics, solid lithium batteries, and fuel cell batteries will become mainstream trends as well as key electric vehicle technologies, components, and development paths.	3
Director Eric Chuang	ESG governance aspects-From knowing to doing	Industrial and corporate transformation, low-carbon, and circular innovation case studies. The latest trends in ESG investments and sustainable finance, ESG performance evaluations for financial industries, and business implications of CSR reports. Board promotion of corporate ESG and key sustainable governance matters.	3
Director Chia-Hsien Chen	Global risk perceptions-Opportunities and challenges for the next decade	I. Analysis of global risk reports II. International sustainability and ESG solutions III. Establishment of risk management mechanisms	3
Independent Director Yu-Fen Lin	ESG-related legal issues of concern for the board of directors	Board roles, responsibilities, and duties in corporate governance. Board responsibilities toward sustainable development challenges under Corporate Governance Development 3.0, key aspects and greenhouse gas reductions in sustainability reports, and re-analyses of management regulations.	3
Independent Director Yu-Fen Lin	Changing the world through investments-Impact investments and SDG actions	Use impact investing to reshape capitalism. Utilize corporate influence to enhance corporate values integrated with SDG development opportunities, increase investment profitability and development strategies, help others, and achieve mutual prosperity.	3
Independent Director Yu-Fen Lin	Variabilities in international order and corporate governance responses	I. Analysis of current regional tensions 1 The outbreak of regional conflicts between Ukraine and Russia triggered a security crisis in Europe and created dilemmas for global companies. How should corporations analyze this situation? 2 US promotions of behind-the-scenes strategies and market links related to Indo-Pacific structures. Should companies in the Asia-Pacific region re-examine their business strategies? II. Are ESG trends triggered by climate change an act or an ideal? 1 Are corporate promotions of ESG a means of enhancing image or a new global economic order? 2 ESG communications, practical actions, and potential crises III. Corporate responses to crises under changing global conditions 1 Use of information under corporate governance to avoid risks 2 Corporate governance, reshaping communication vocabulary, and building image	3

1.3 Senior Management Responsibilities

1.3.1 Senior Management Governance Structure

The Chairman and the President are following SinoPac Holdings' "Sustainable Development Committee" to execute climate strategies, plan and establish the system. Bank SinoPac adjust internal documents and regulations to integrate climate risk factors into our business and operations. In April 2023, the President approved "Management Rules for Climate-Related Risks and Opportunities" which reference to the four core elements of TCFD, and other external regulations, such as "Guidelines for Financial Disclosures Related to Climate Risks by Domestic Banks", "Implementation Rules of Internal Audit and Internal Control System of Financial Holding Companies and Banking Industries", and "Guidelines for the Management of Climate-Related Risks and Opportunities" of SinoPac Holdings. Through the regulations of governance corporate, develop sustainable environment and protect public welfare, Bank SinoPac can assess the potential effect of climate-related risks and opportunities now and in the future.

The annual performance objective of the President are included the setting of net zero economy (10%) in 2022, and the progress of performance objective is connected to bonuses in this year. In response to the expectations of stakeholder and in line with SinoPac Holdings' remuneration policy for executive managers, the "Long-Term Incentive Bonus Program" applies to the President and Vice Presidents (executive managers). The weighting of sustainability indicator is set at 15% and included in assessment target for 2022-2024 to encourage continued optimization of medium, and long-term sustainability actions (including net-zero and sustainable finance) by executive managers to exert our financial influence. (Please refer to 5.2 Climate Performance and Remuneration Systems)

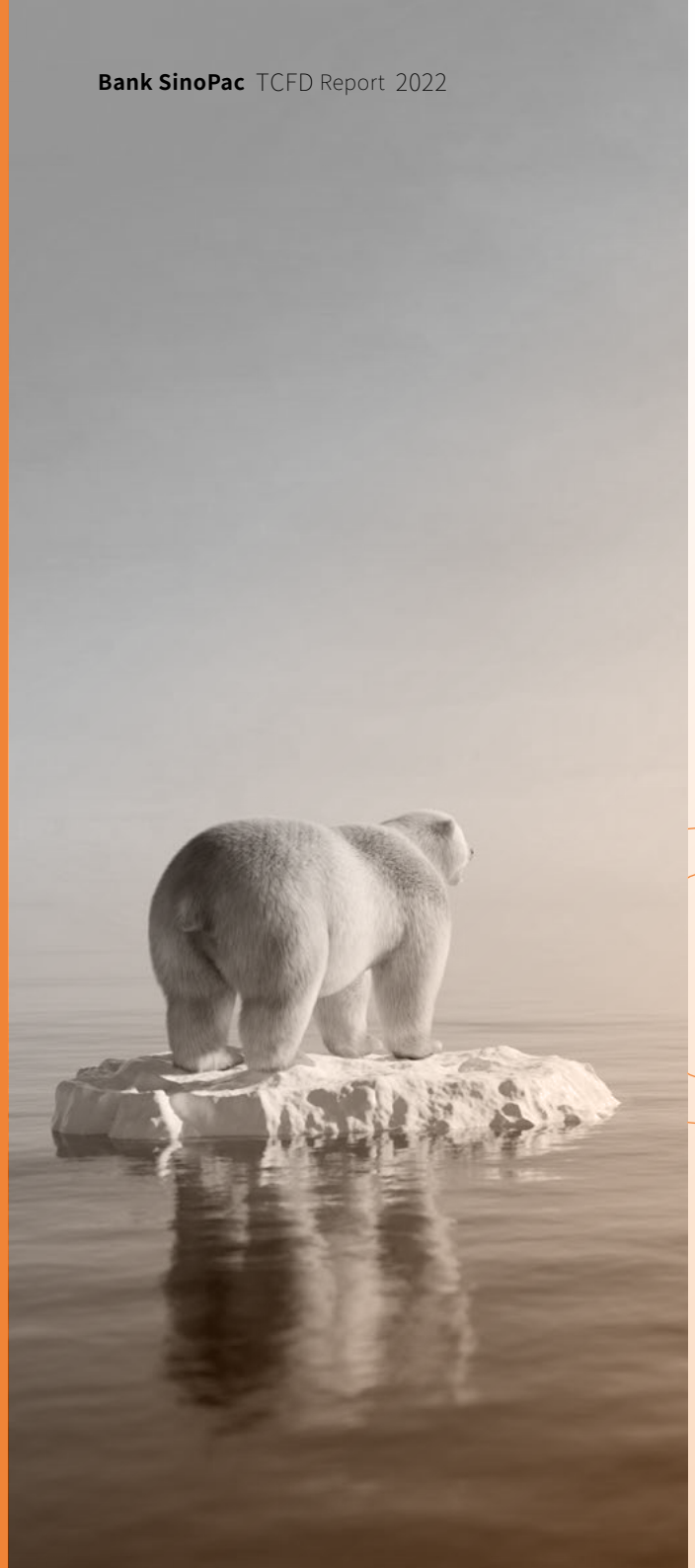
1.3.2 Senior Management Education and Training

Executive Managers completed 2774.6 hours of training, of which 261.5 hours were climate related. The content of course include financial sustainability strategies, discussions of net zero trends, and corporate social responsibility.

261.5 hours

Course Syllabus

- Discussion of Financial Supervision and Corporate Governance Related to Penalties Imposed on the Financial Industry
- SinoPac ESG Forum: "Helping Taiwan Go Net Zero with Sustainable Finance"
- Capturing, Storing, and Reusing Carbon Dioxide
- Business Opportunities of Green Electricity and Energy Storage Market in Taiwan
- Sustainable Development Trends and Green Business Opportunities
- Wind Power Industry Trends and Supply Chains
- BSCD Sustainable Academy: Corporate Climate Transformation Assessment
- BSCD Sustainable Academy: Carbon Inventory of Investment and Financing Portfolios in Financial Industry (PCAF)
- BSCD Sustainable Academy: Net Zero Transformation Trends and the Applications of Sustainability Categories
- Achievements of Net Zero Transformation Strategies Forum
- Operations of Energy Storage Equipment and Business Opportunities for Supporting Services to users
- Carbon Rights Seminar
- Construction Costs, Feed-In Tariff Rates, and New Policy Directions of Photovoltaic Equipment
- Composite Photovoltaic Sites: Fishery and Electricity Symbiosis (Series 1 & 2)
- Digital Finance Development Trends: From AI to ESG
- Carbon Reduction Lifestyle and Signing of Code of Environmental Protection and Energy Conservation in Offices
- Low-Carbon Diet and Healthy Lifestyle



CHAPTER 02

02

Climate Strategies

Climate change has significant impacts on corporate and social environments. In order to monitor specific impacts of climate change and strengthen climate issues, our Risk Management Division creates climate risk and opportunity assessment tables each year and references climate laws and reports released by domestic and foreign institutes. The risk management units of all subsidiaries are responsible for identifying climate-related risks and opportunities. Our management procedures for climate-related risks and opportunities are shown in the following figure:

STEP 1	STEP 2	STEP 3	STEP 4
Identification of risks/opportunities	Risk/opportunity assessment and measurement	Response to risks/opportunities (mitigation or adaptation measures/response strategies)	Report
SinoPac Holdings activates climate risk/opportunity identification procedures	**Bank SinoPac and other subsidiaries assess climate-related risks/ opportunities**	**Identify group-level climate-related risks/opportunities and mitigation or adaptation measures**	**Report climate-related risks/ opportunities**
▸ Use the TCFD recommendations and sustainability reports of benchmark companies as guidelines for the identification, assessment, and management of climate-related risks and opportunities. ▸ SinoPac Holdings requires Bank SinoPac and other subsidiaries to assess climate-related risks and opportunities each year.	▸ Bank SinoPac uses qualitative or quantitative methods to evaluate the likelihood. ▸ Use qualitative or quantitative methods to evaluate the level of impacts. ▸ Bank SinoPac identifies climate-related risks and opportunities of concern in operations and business and prepares mitigation/adaptation measures. ▸ Bank SinoPac's risk management division submits evaluation tables of climate-related risks and opportunities to the Risk Management Division of SinoPac Holdings.	▸ SinoPac Holdings compiles climate change risks/ opportunities of Bank SinoPac and other subsidiaries, and considers likelihood and level of impacts to identify group-level climate change risks/opportunities. ▸ Feedback for Bank SinoPac is reviewed again to verify group-level climate-related risks/opportunities. ▸ Prepare mitigation or adaptation measures/response strategies for group-level climate-related risks/ opportunities.	▸ The climate-related risks/opportunities identified by SinoPac Holdings and mitigation or adaptation measures are disclosed in the annual TCFD report after approval.

2.1 Climate Risks and Opportunities

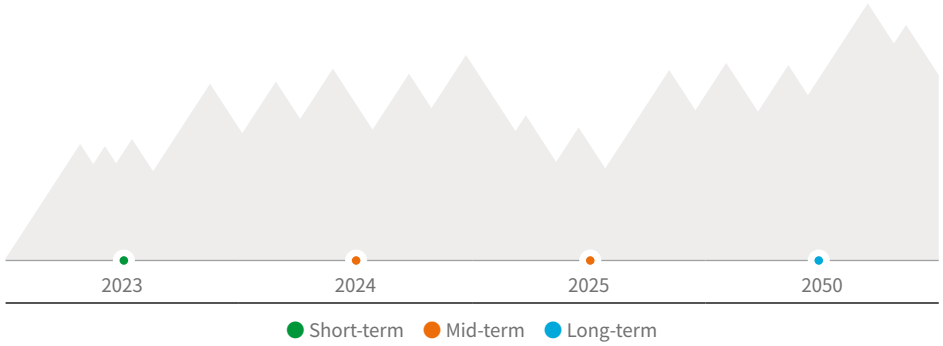
To establish an integrated risk management framework, we included "climate change risks" in our "Risk Management Policy" and formulated the "Guidelines for the Management of Climate-Related Risks and Opportunities" to evaluate current and future impacts from climate risks and opportunities. We also formulated mitigation and adaption actions in response to climate change as well as the "Emergency Incident Response Rules" emergency notification procedures, and response handling guidelines to strengthen emergency response capabilities to natural disasters and other major emergencies. We adhere to the SinoPac Holdings "Emerging Risk Management Guidelines" reference the Global Risks Report released by the World Economic Forum, and consider overall environmental changes when conducting assessments of emerging risks each year.

During annual processes for identifying climate risks and opportunities, we comprehensively consider "time of occurrence" "likelihood" and "extent of impact" (Note 1). The scores identified for each dimension are multiplied and used as a basis for ranking the materiality of risks and opportunities. We assessed potential operational and financial impacts, possible times of occurrence, and connections with existing risks in the financial industry (such as credit risks, market risks, and operational risks) for the top three risks and opportunities to serve as a reference for formulating mitigation and adaption strategies as well as risk management.

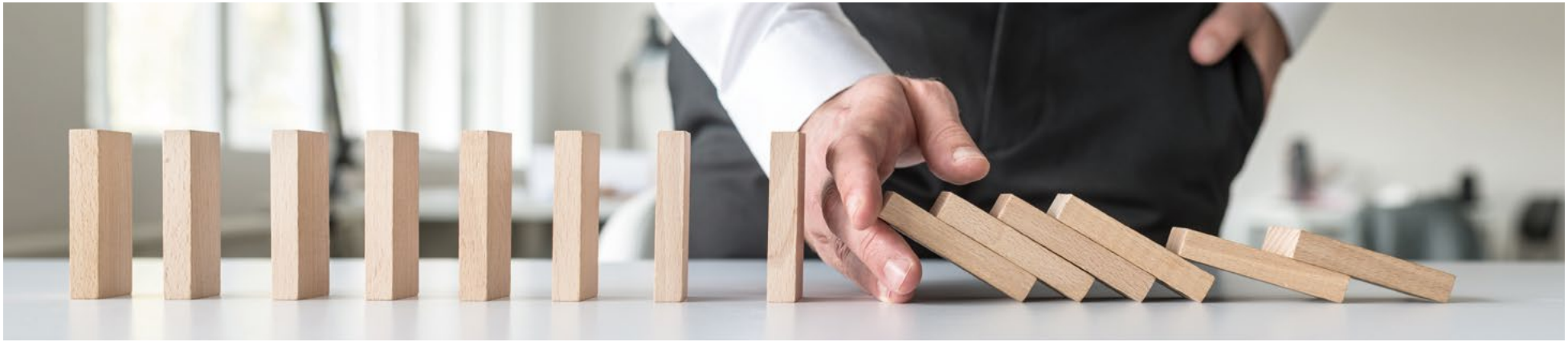
Climate Risks and Opportunities-Timelines

Time of Occurrence

Short-term	Mid-term	Long-term
Likely to occur before the end of 2023	**Likely to occur from 2024-2025 (inclusive)**	**Likely to occur after 2025 (exclusive)**



Note 1: "Likelihood" and "extent of impact" are divided into 5 levels, with 1 being the lowest and 5 being the highest. The maximum "extent of impact" for major unexpected incidents is set at expected losses of US$ 10 million (NT$ 300 million).

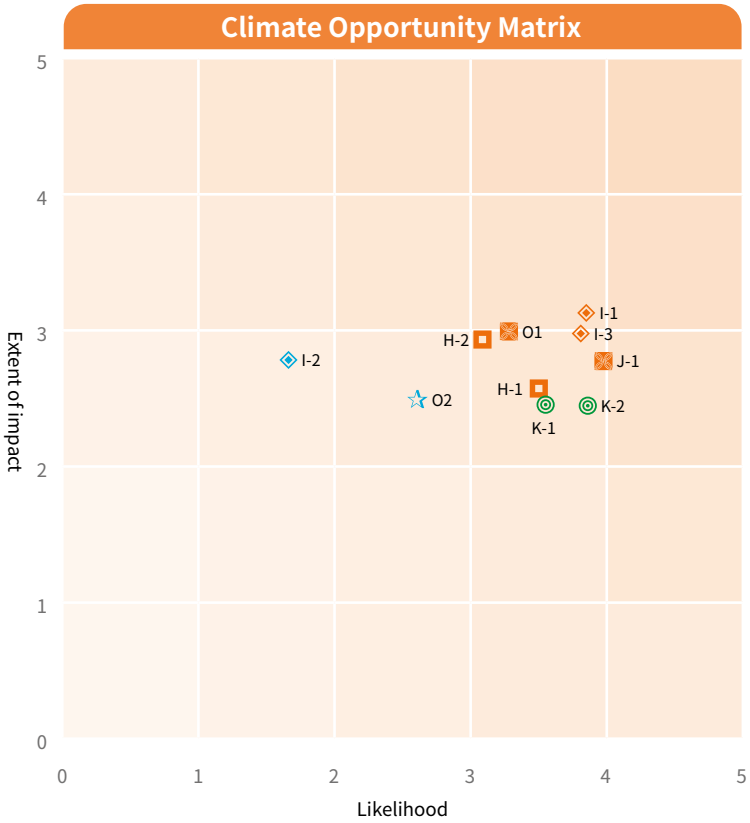


2.1.1 Identified Climate Risks

We divided our compiled risk items into physical risks, transition risks, and liability risks, then comprehensively considered likelihood and extent of impacts. Risk items with material impacts for Bank SinoPac are as follows:

- A-1 Stricter greenhouse gas reduction, energy conservation, and power consumption policies and laws may increase operating costs
- A-2 Penalties from non-compliance with stricter greenhouse gas reduction, energy conservation, and power consumption policies and laws
- A-3 Policies associated with carbon prices, carbon taxes/emissions, carbon reduction targets, and reporting obligations, or stricter energy conservation and power consumption policies and laws may reduce profits for loan and investment targets, impact debt recovery, or affect income
- B-1 Failure to successfully develop financial technologies or spearhead paperless functions and carbon-reducing green monetary flows through digital finance and electronic services may reduce customer willingness to interact with a company, impacting revenues
- B-2 During transformation processes, errors in technological judgment or large investments in development of new technologies may result in increased costs or reduced profits for corporations
- C-1 Increased awareness of environmental sustainability and extreme climate affect corporations with high power consumption/high carbon emissions, resulting in difficulty recovering debts or declines in investment values
- C-2 Failure to launch sustainable finance products and services at the suitable times may lead to loss of markets related to climate change themes, causing loss of business and customers as well as revenue declines
- D-1 Corporations considered to be not environmentally friendly or which do not offer green products may suffer damages to their corporate reputations, causing loss of business and customers as well as revenue declines
- D-2 Failure to actively participate in climate change issues of stakeholder concern may affect corporate images and reputations
- R1 ❶ Strengthened incentive mechanisms for low-carbon investment and financing projects by competent authorities may result in changes to the central bank's refinancing qualifications and standards, including increased weighting for brown asset risks, which may hinder refinancing strategies for banks
  ❷ Rises in carbon emission prices may lead to stock fluctuations in industries with high carbon emissions, causing chain reactions within financial markets, including sell-offs of high carbon emissions assets and subsequent liquidity risks
- R2 Government promotion of low-carbon policies results in artificially accelerated depreciation for a large number of equipment from industries with high carbon emissions(such as fossil fuel industries), such that they are written off before the end of their life cycles, causing their value to decline, following which they become "stranded assets"
- R3 New low-carbon industries and maturity of developed low-carbon technologies mean that traditional industries have lower profitability compared with new industries, affecting debt recovery and income (for example, coal-fired electricity is not competitive)
- E-1 Abnormal events caused by typhoons, heavy rainfall, and other extreme climate conditions may result in damage to operational sites or equipment, operational interruptions, or personnel injuries
- E-2 Abnormal events caused by typhoons, heavy rainfall, and other extreme climate conditions may lower loan collateral values and affect debt recovery or impact investment values
- E-3 Abnormal events caused by typhoons, heavy rainfall, and other extreme climate conditions may damage the operational headquarters, sites, factories, and other assets of our investment and financing companies, affecting debt recovery or impacting investment values
- E-4 Uneven distribution of rainfall may cause water shortages and damage to manufacturing, agricultural, semiconductor, or other industries with heavy water usage, affecting debt recovery
- E-5 Operational sites may suffer operational interruptions or equipment damages due to heightened probabilities of droughts/water shortages
- F-1 Rising average temperatures and sea levels may result in damage to operational sites or equipment, operational interruptions, or personnel injuries
- F-3 Rising sea levels may damage the operational headquarters, sites, factories, and other assets of our investment and financing companies, affecting debt recovery, impacting investment values, or depreciating loan collateral values, thereby affecting debt recovery
- F-4 Rising average temperatures increase electricity consumption of air-conditioners and water usage, increasing corporate operating costs
- R4 Corporations and residents affected by natural disasters will rapidly increase their bank withdrawals (customer overdrafts caused by extreme weather events) to meet sudden capital needs following disasters, and banks have limited short-term capabilities to provide loans to those affected, so these withdrawals may affect bank liquidity, causing internal liquidity risks to materialize
- R5 Long-term climate changes (such as rises in average temperatures, rising sea levels, changes in rainfall patterns, water stresses/water shortages, or droughts) lower the expected values of some climate-sensitive assets (such as those related to agriculture or real estate)
- R6 Extreme climate events (typhoons, storms, mudslides, forest fires, and so on) may cause operational and outsourcing interruptions, and key customer data may be lost if data center equipment is damaged, increasing associated legal risks
- G-1 Failure to establish a climate governance structure, failure to reduce greenhouse gas emissions, insufficient disclosures of climate-related risks, and failure to adjust business strategies or credit/investment targets that cause environmental damage or property losses to third parties may lead to lawsuits or liability risks and claims

2.1.2 Identified Climate Opportunities



- H-1 Relocate IT rooms to more efficient buildings, purchase new energy-saving equipment to improve energy efficiency, and reduce operational costs
- H-2 Incorporate green building designs into offices or self-owned buildings to reduce energy costs
- I-1 Align with government policies and regulations to expand investment and financing for renewable energy or green industries, and develop innovative sustainable finance products and services to increase business opportunities
- I-2 Optimize digital finance services and enhance convenience to attract customers and expand business opportunities
- I-3 Promote urban renewal and green building renovation projects to bring in more investment and financing projects
- J-1 Increase issuance and investment of green bonds or participate in the underwriting of green energy-related industries to enter new markets and obtain new business opportunities related to the circular economy
- K-1 Add products related to climate change into our investment portfolio to grasp market trends and increase operational flexibility
- K-2 Actively participate in internal and external energy conservation/environmental protection activities, establish incentive measures, and obtain recognition through sustainable evaluations (such as the CommonWealth Magazine Sustainable Citizen Award, Taiwan Corporate Sustainability Award, Taiwan Sustainability Index, and so on) to implement related concepts and achieve energy and carbon reduction targets which garner positive media coverage and in turn enhance our overall corporate image
- O1 In response to international green finance trends, the market has negatively listed, raised thresholds, or declined to work with non-green industries. If the Company can act as a client-side ESG communicator, we can assist and guide clients in low-carbon transformations to improve operational strategies and create mutual benefits by protecting the environment and stabilizing our relationship with existing customers, thereby enhancing our corporate image
- O2 The Company has invested in renewable energy usage and installed solar power generator systems in our self-owned buildings for our own use and surplus electricity is sold to others, thereby achieving our carbon reduction targets to earn non-operating income through market transactions. Additionally, in response to the "Green Leasing 2.0 Program" launched by the Ministry of Economic Affairs, we assist tenants of commercial buildings or similar venues to change their power supply models so that they can obtain green electricity and renewable energy certificates

Opportunities: Resource Efficiency (H) Products and Services (I) Energy Source (O2) Markets (J)(O1) Resilience (K) Short-term Mid-term Long-term

2.2 Climate Strategies and Actions

Bank SinoPac identified the impact periods and potential financial impacts of climate-related risk and opportunity issues, as well as their connections with existing risks in the financial industry (such as credit risks, market risks, and operational risks) to serve as a basis for formulating related countermeasures and risk management. We screened and analyzed the top three risks and opportunities based on the following materiality ranking.

Material climate risks, potential financial impacts, and response measures for 2022 are shown in the table below.

Risk Category	TCFD Climate Change Risk Classification	Item Number	Climate-Related Risks	Impact Aspects	Potential Impacts	Links to Other Risks	Analysis of Impacts on Operational Strategies, Potential Businesses/Products, and Financial Plans	Mitigation or Adaption Measures /Response Strategies	Time of Impact
Transition Risks	Policies and regulations	A-3	Policies associated with carbon prices, carbon taxes/ emissions, carbon reduction targets, and reporting obligations, or stricter energy conservation and power consumption policies and laws may reduce profits for loan and investment targets, impact debt recovery, or affect income	Credit business	Increased losses in debt recovery	Credit risks Market risks	If investment and financing targets belong to industries with high power consumption, high pollution, or high climate risks, changes in energy laws, domestic and foreign carbon fees, and carbon taxes (such as carbon tariffs imposed by the EU and US) will increase operational costs and affect profitability, resulting in difficulties recovering debts or reductions in investment income.	Policy aspect: Bank SinoPac has signed the Equator Principles, and rigorously evaluated environmental and social risks and impacts of credit recipients when making decisions on project financing, particularly possible financial impacts from environmental risks and corresponding issues related to debt recovery and corporate reputations. Bank SinoPac has established the Responsible Lending Management Guidelines, which includes guidelines and standards related to stranded assets (steam coal and unconventional oil and gas) and industries or economic activities with high carbon emissions.	Long-term
				Investment business	Reduced investment income			Systemic aspect: Implement creditable external database to provide sales and credit analysis/ approval personnel with objective assessments and information disclosures of transition risks, as well as increases in carbon taxes, carbon prices, and improving calculations of carbon emission costs for financing and investment clients to reduce impacts on Bank SinoPac.	
Transition Risks	Policies and regulations	R3	New low-carbon industries and maturity of developed low-carbon technologies mean that traditional industries have lower profitability compared with new industries, affecting debt recovery and income (for example, coal-fired electricity is not competitive)	Business products and sales	Increased losses in debt recovery	Credit risks Market risks	If traditional industries or other legal entities do not undertake transformations or improve carbon reduction technologies, they may suffer elimination from markets or regulations, or lose market share as existing products and services are replaced by low-carbon products, resulting in revenue declines, losses in corporate asset values, or even operational difficulties. Financial institutes that provide financing to these types of companies may see rises in excess lending and bad debt, as well as increased operational risks, which in turn affects creditors, and finally creates bad debts or lower than expected income for companies, reductions in corporate investment values, and relatively increased risks for creditors and other financial market participants.	Our relevant business manuals have stipulated related threshold conditions and principles for setting corresponding preferential interest rates. We encourage clients to enhance carbon reduction technologies, maintain market competitiveness, and be attentive to prevent improper use.	Long-term
					Reduced investment income				
Physical Risks	Immediate	E-4	Uneven distribution of rainfall may cause water shortages and damage to manufacturing, agricultural, semiconductor, or other industries with heavy water usage, affecting debt recovery	Credit business	Increased losses in debt recovery, reduced investment income	Credit risks Market risks	Debtors in industries with heavy water usage (such as agriculture, semiconductor, and manufacturing) may be affected by water shortages or uneven water distribution, affecting production volumes, reducing profits, and creating difficulties in debt recovery.	Bank SinoPac needs to establish assessment mechanisms for regular review of impacts on investment and financing clients from uneven rainfall to provide advance warning of risks.	Mid-term
				Investment business					
				Collateral					

Material climate opportunities, potential strategies, and management responses for 2022 are shown in the table below. To better understand climate opportunities, Bank SinoPac formulated opportunity development strategies and associated targets for climate opportunities based on the previous operational performance of related businesses. Please refer to "5.1 Climate Metrics and Targets" for more information.

TCFD Climate Change Opportunity Classification	Item Number	Climate-Related Opportunities	Impact Aspects	Potential Impacts from Opportunities	Assessments of Development Opportunities Related to Operational Strategies, Potential Businesses/Products, and Finances (Opportunity Items)	Opportunity Development Management Measures /Response Strategies	Time of Impact
Products and services	I-1	Align with government policies and regulations to expand investment and financing for renewable energy or green industries, and develop innovative sustainable finance products and services to increase business opportunities	Credit business Investment business	Increased income	1 Use financial expertise to support industrial developments in energy production, energy storage, and clean energy financing, thereby increasing revenues. 2 Consider expanding investments in renewable energy or green industries through self-operated businesses to increase income. 3 Establish industrial monitoring and management mechanisms as well as product framework plans. 4 Identify climate-related risks and opportunities of concern in operations and business, and prepare mitigation or adaptation measures/response strategies. 5 The National Development Council announced the 2050 net zero emissions pathway and strategy containing twelve key strategies which include wind power/solar power; hydrogen energy; alternative energies; power systems and energy storage; energy conservation; carbon capture, utilization, and storage; vehicle electrification and decarbonization; resource recycling and zero waste; natural carbon sinks; net zero green lifestyles; green finance; and fair transformations, as well as targets for 2025 and 2030-2050 for each strategy. These twelve key strategic industries are potential new targets for investment where new investment opportunities can be created with financial expertise. 6 Underwrite green bonds and green infrastructure to obtain business opportunities and increase revenues. 7 Develop climate adaption, insurance, and risk solutions. 8 Develop new products, services, and innovations. 9 Global trends in low-carbon green energies have increased demand for products associated with environmental sustainability and climate change.	1 ESG factors are evaluated during the process of financing decision-making, and external databases provide sales and credit analysis/approval personnel with an objective basis for assessments. 2 Sales personnel strengthen climate engagement with clients, and encourage clients to disclose carbon emissions and consider investments in transformation plans (green expenditures). 3 Formulate incentive programs for solar power promotions to attract solar power companies, be attentive to market products, and continue to assess/provide themed products that fulfill client needs.	Mid-term
Products and services	I-3	Promote urban renewal and green building renovation projects to bring in more investment and financing projects	Credit business Investment business	Increased income	Participate in urban renewal or green building renovation projects, increase preferential financing products for green buildings and energy-saving targets to not only obtain business opportunities, but also highlight our image as an eco-friendly and green company, attracting consumers who focus on related issues.	1 Proactively promote climate change mitigation actions, and support eco-friendly and sustainable building designs and concepts. Apart from financing for urban renewal projects, Bank SinoPac has also launched "Green Mortgage". 2 Work with the government in promoting and responding to consumer needs, deploying relevant manpower, and establishing industrial monitoring and management mechanisms. 3 Formulate internal asset management/investment and credit management rules which stipulate support for urban renewal and green building renovation projects, linking professional performance and personnel performance appraisal to encourage business developments and implementations. 4 Continue to seek opportunities to lead or co-organize syndicated loans to obtain more investment and financing opportunities and enhance corporate image.	Mid-term

TCFD Climate Change Opportunity Classification	Item Number	Climate-Related Opportunities	Impact Aspects	Potential Impacts from Opportunities	Assessments of Development Opportunities Related to Operational Strategies, Potential Businesses/Products, and Finances (Opportunity Items)	Opportunity Development Management Measures/Response Strategies	Time of Impact
Market	J-1	Increase issuance and investment of green bonds or participate in the underwriting of green energy-related industries to enter new markets and obtain new business opportunities related to the circular economy	Product and sales services/ customer service Credit business Investment business	Increased income	Increase issuance and investment of green bonds to enter new markets and obtain new business opportunities related to the circular economy.	1 Grasp new business opportunities; work to understand investor and consumer concerns regarding climate change issues and needs as well as preferences for green finance products and services; continue to develop green/ESG funds, bonds, and loan products and services themed around sustainable development; and increased investment balances of green bonds as appropriate. 2 Provide low-carbon products and services; offer solar energy, wind power, water power, biomass power, and other renewable energy solutions; and support electric motorcycles, electric bicycles, and electric vehicles for transportation. 3 Establish internal innovative green energy proposal activities and encourage colleagues to demonstrate their creativity. 4 Actively participate in green energy-related businesses to enhance corporate image, attract more investors, and increase business opportunities. 5 In response to the "Green Finance 3.0" and "Trust 2.0" initiatives of competent authorities, Bank SinoPac has successively issued green bonds and sustainable bonds in recent years, and has launched innovative local rebate trust mechanisms to support developments of green energy-related industries. In the future, we will continue to use trusts, financing, and other diverse finance tools to expand our green and sustainable finance services.	Mid-term

2.2.1 Green Operations

Bank SinoPac identified business, strategic, and financial planning impacts from identified climate-related risks and opportunities; adopted "mitigation" and "adaption" climate actions in line with the "Paris Agreement" and national 2050 net zero emissions goals; and actively expanded energy and environmental management measures and improvement programs for all branches. Additionally, we strengthened supply chain management benefits through green operations and took on industrial environmental protection responsibilities. Bank SinoPac will continue to upgrade energy-saving equipment, implement energy management to enhance usage efficiency, and continue to purchase renewable energies. In 2022, we purchased a total of 234,000 kWh of green electricity to achieve our long-term carbon reduction commitments.

Energy Management

We adhere to the energy management policies of SinoPac Holdings and implemented the ISO 50001:2018 Energy Management System for the first time in 2019 to optimize energy management efficiency. In 2022, we completed ISO 50001 Energy Management System targets for our third self-owned building (Nanjing), increasing the overall coverage rate of SinoPac Holdings to 35%. We plan to complete the implementation of the ISO 50001 Energy Management System in all five of our self-owned buildings by 2024, and continue to monitor and quantify our energy conservation targets and key operational characteristics each year as we implement various energy-saving programs. Link to the certificate

Environmental Management

We adhere to the environmental management policies of SinoPac Holdings and implemented the ISO 14001:2015 Environmental Management System for the first time in 2019 to improve environmental risks. In 2022, we completed ISO 14001 Energy Management System targets in our two new self-owned buildings (Chengzhong, Nanjing), increasing the overall coverage rate of SinoPac Holdings to 35%. We plan to complete the implementation of the ISO 14001 Environmental Management System in all five of our self-owned buildings by 2024, and continue to control and reduce impacts from major environmental factors, as well as establish long-term and feasible measures to facilitate climate-sustainable development. Link to the certificate

Greenhouse Gas Inventories

Bank SinoPac works with SinoPac Holdings, began conducting greenhouse gas inventories under the Operational Control Rights Law in 2018, and began implementing ISO 14064-1:2018 inventories of total greenhouse gas emissions in 2019. We set short, medium, and long-term scope 1 and scope 2 reduction targets under SinoPac Holdings SBTs, using our own energy and carbon reductions, renewable energy usage, and renewable energy certificates to achieve our target of net zero emissions in our own operations by 2030. In 2022, we completed the inventory of all domestic and foreign locations, achieving a coverage rate of 100%. In the future, we will continue to conduct greenhouse gas inventories in accordance with our carbon reduction pathway plans and incorporate green energy and low-carbon transformations into our sustainable finance vision. Link to the certificate

Energy Conservation and Carbon Reduction Measures and Results in 2022

Energy Conservation Measure	Description	Annual Electricity Saved (MWh)	GHG Reduced (metric tons-CO_2e)
Electricity Consumption of Air-Conditioner Cooling Tower	Consolidation of air-conditioning chillers (including replacement of cooling towers) can reduce power usage from chillers and cooling tower fans	70.75	36.01
Electricity Consumption Of Air-Conditioner	The original air-conditioner chillers at our Donghu and Xinyi branches were replaced by inverter split air-conditioners	20.14	10.25
Electricity Usage Of Air-Conditioner Units	Replaced air-conditioner chiller units at Pingtung Branch	68.88	35.06
Installation of LED Lights Fixture	Replaced traditional lights fixtures with energy-saving LED lights fixtures in branches and offices	302.55	154.00
Installation of Solar Panels	Installed rooftop solar panels on Beigao building, generating 16,000 kWh each year	16.03	8.16
Total		478.35	243.43

2.2.2 Green Investments and Financing

Bank SinoPac actively responded to government initiatives for transformations of national economic and industrial structures, proactively developed green finance products and services, enhanced client and public climate awareness, facilitated Energy Transition, and helped clients and investors explore business opportunities in net-zero economies. SinoPac Holdings pledged to achieve net zero emissions in own operations by 2030 and across its entire asset portfolio by 2050; this pledge was approved by its Board in March 2022. We work to initiate low-carbon transformations alongside our stakeholders and strive to "Help Taiwan Go Net Zero through the Sustainable Finance."

2.2.2.1 Green investment products and services

Third-party sustainable investment (mainly green) products

Unit：Million NTD

Category	AUM at Year-End 2022	ESG Product Ratio
Integration of ESG	1,391	1.49%
Best in Class	409	0.44%
Total Sustainable Products	1,801	1.93%
Overall Product Scale	93,158	

2.2.2.2 Green financing products and services

1 Corporate finance

Unit：Million NTD

Category	Financing Balance at Year-End 2022	ESG Product Ratio
Green Loans/Sustainable Loans	86,430	11.57%
Eco-Friendly Textile Industry Financing	3,243	0.43%
Financing for Energy Storage And Generation Facilities	1,058	0.14%
Replacement of Large Diesel Vehicles	1,058	0.14%
Financing for Green Infrastructure	82,129	11.00%
Solar Photovoltaic Energy Generation Equipment Financing for Corporate	77,622	10.39%
Fishery and Electricity Symbiosis Project Financing	4,215	0.56%
Green Energy Trading Financing Project	292	0.04%
Sustainability Linked Loans	13,686	1.83%
Total Sustainable Products	100,116	13.40%
Overall Product Scale	746,858	

2 Consumer Finance

Unit：Million NTD

Category	Financing Balance at Year-End 2022	ESG Product Ratio
Sustainable Loans and Mortgages Provided to Consumers	893	0.14%
Green Mortgage	533	0.08%
Energy-Saving Equipment	360	0.06%
Financing For Household Solar Energy Equipment	261	0.04%
Personal Electric Vehicles	99	0.02%
Overall Product Scale	652,796	

2.2.3 Green Procurement

We prioritize purchases of government-certified eco-friendly products with environmental protection labels, energy-saving labels, and water-saving labels, including green building materials and recycled paper. We adhere to the "Supplier Corporate Social Responsibility Code of Conduct" established by SinoPac Holdings to determine whether suppliers comply with environmental protection regulations, establish specific environmental management systems and processes, and require our suppliers to sign the "Supplier Social and Environmental Responsibility Code of Conduct" We hope our suppliers can be attentive to labor rights, business ethics, and ethical management as well as promote economic, social, and environmental balance along with developments in environmental sustainability. The SinoPac Group's achievements in green procurement have been recognized by external parties, receiving three Private Enterprise Excellence in Green Procurement awards from the Taipei City Government Department of Environmental Protection.

Bank SinoPac's Achievements in Green Procurement

Unit：Million NTD

2022 Category	Total Expenses On Said Item	Green Procurement Amount
Construction Services	314.24	7.16
Computer Information Services	1,000.62	12.12
Office Supplies	64.03	31.09
Property Management and Security	95.61	0
Printed Materials	81.95	7.66
Advertising and Marketing	77.34	12.09
Total Procurement Amount	1,633.79	70.12
Green Procurement Ratio	4.3%	

CHAPTER 03

03

Climate Risk Management

Bank SinoPac adheres to the "Guidelines for Financial Disclosures Related to Climate Risks by Domestic Banks" released by the Financial Supervisory Commission and the "Guidelines for the Management of Climate-Related Risks and Opportunities" of parent company SinoPac Holdings, and has established "Standards for the Management of Climate-Related Risks and Opportunities" to evaluate current and future impacts from climate risks and opportunities, as well as adopted related mitigation and adaption actions.

3.1 Risk Policy Framework

The Bank SinoPac Chairman oversees the Risk Management Committee, which is responsible for implementing major Board decisions and matters related to climate risk management policies. We have included "climate change risks" in our "risk management policies" and formulated the "Standards for the Management of Climate-Related Risks and Opportunities" to enhance the management of climate risks and opportunities. Our Risk Management Division regularly discloses climate change risks (including all metrics for physical risks and transition risks) in risk management reports which are submitted to the Risk Management Committee and the Board. To enhance climate risk awareness at all internal levels, we have included climate-related targets such as the collection and calculation of carbon emissions, as well as the implementation and strengthening of climate risk measures in variable remuneration indicators for senior managers.

We assign climate risk management responsibilities and management mechanisms for each line of defense based on these three lines of defense for internal control:

First line of defense	Investment, financing, and related operational execution units	▸ Climate risks are assessed when handling related business activities, and climate-related risks are incorporated into business considerations. Appropriate identification and management processes are adopted to ensure that risks can be properly controlled at an early stage. ▸ Differentiated risk management measures are adopted for businesses or transactions with high climate risks depending on the climate risks identified or assessed and the rankings of said risks; relevant records are stored for future reference.
Second line of defense	Investment and financing and related operational management units, product management units, compliance units, and risk management units.	▸ Effectively monitor climate risk management implementations under the first line of defense ▸ Remain attentive to the sustainability commitments set by SinoPac Holdings and international sustainability trends, as well as potential impacts and materiality from clients with high climate risks, client willingness and capability to improve their own climate risks, alternative methods to offset our own risks, and corresponding measures. When formulating management measures for clients with high climate risks, we require clients who fail to effectively manage their own climate risks to gradually adopt corresponding measures. ▸ When formulating management measures for assets with high climate risks, we consider climate risk materiality, management capabilities for said assets, and alternative methods to offset our risk exposures. We may gradually adopt response measures for asset portfolios that fail to effectively manage climate risks. ▸ Related units track regulatory changes to ensure that all operations and management rules adhere to and are updated according to climate-related regulations released by competent authorities. ▸ We conduct scenario analyses and stress tests on physical and transition risks to show how climate risks are transmitted and affect our financial risks. In consideration of the uncertainties and long-term outlooks of climate change, we gradually include prospective information in selected scenarios to avoid relying solely on historical data and underestimating potential future risks. ▸ During regular reviews of climate risk management policies and practices, we reference the results of scenario analyses and stress tests, and store documents containing key assumptions and parameters for scenario analyses and stress tests for at least five years.
Third line of defense		▸ Assess effectiveness of the first and second lines of defense for monitoring climate risks, and provide suggestions for improvement as appropriate.

3.2 Management of Investment and Financing Risks

SinoPac Holdings formulated a group-level sustainable finance statement in 2022, incorporating environmental, social, and corporate governance (ESG) factors into corporate banking, retail banking, asset management, wealth management, private banking, and investment banking businesses, as well as establishing related management procedures. Bank SinoPac's "Responsible Lending Management Guidelines" incorporates environmental pollution and corporate governance regulations into Client Due Diligence (CDD) and Know Your Customer (KYC) processes, and continues to reference ESG risk issues during evaluations. Bank SinoPac's "Stewardship Policy", "Responsible Investment Management Guidelines", and other regulations also establish criteria for excluding and screening investment targets, determining risk levels for targets, and reviewing whether investment companies have violated environmental sustainability rules or incurred material ESG disputes. We do not invest in targets that have incurred violations and pledge to continue engaging with our investees on possible ESG issues to help them realize their responsibilities related to environmental protection and social sustainability.

Bank SinoPac stopped providing financing for projects related to steam coal and unconventional oil and gas starting on July 1, 2022. Financing for existing projects will not be renewed upon maturity.

Bank SinoPac Principles for Responsible Investment and Responsible Lending

Prohibit financing of controversial industries/ enterprises/economic activities	▸ Controversial industries include pornography, controversial arms, and weaponry.
Carefully evaluate sensitive industries/enterprises/economic activities	▸ Sensitive industries include industries involving oil and gas; cigarette manufacturing; agriculture, forestry, fishing, and animal husbandry; thermal power; gambling; food safety concerns; hazardous radioactive substances; non-medical and hazardous genetic engineering; non-adhesive asbestos sheets; and polychlorinated biphenyl (PCB) manufacturing.
Cease project financing for steam coal and unconventional oil and gas	▸ We stopped providing financing for projects related to steam coal and unconventional oil and gas starting on July 1, 2022. Financing for existing projects will not be renewed upon maturity.
Guidelines for industries with high carbon emissions	▸ Incorporate ESG performance and carbon emission information into investment and financing processes for industries with high carbon emissions (such as oil and gas industries and thermal power industries). ▸ Actively engage with related companies, and carefully evaluate whether to continue financing if clients fail to establish transformation plans after repeated communication.
Voting policy	▸ Oppose in principle proposals that violate major climate-related issues. ▸ Oppose in principle or abstain from voting on proposals where the issuing company damaged shareholder rights and interests due to unsound operations, or was penalized by related competent authorities due to major violations of environmental, social, corporate governance, or other sustainable management issues.
Engagement with other companies and shareholder activism	▸ Deliver annual questionnaires to investee companies to understand their awareness of ESG-related-related initiatives, as well as their management processes and goals for sustainability issues. ▸ Engage with investee companies on ESG-related issues.

3.2.1 Responsible Investment

Bank SinoPac actively complied with the six principles of the United Nations Principles for Responsible Investment (PRI) in 2019 and established the "Responsible Investment Management Guidelines" to guide our investment, asset management, and wealth management businesses, incorporating ESG issues and related risks into the decision-making processes of related businesses, prohibiting investments in controversial industries, and carefully evaluating investments in sensitive industries. We also signed the "Stewardship Principles for Institutional Investors" and established a "Stewardship Policy" in 2020, incorporating ESG factors into the investment evaluation process, and also incorporating climate change-related issues into voting policies.

Bank SinoPac Responsible Investment Developments

2018	Signed the "Stewardship Principles for Institutional Investors"
2019	Complied with the six principles of the United Nations Principles for Responsible Investment (PRI) and established the "Responsible Investment Management Guidelines"
2020	Established the "Stewardship Policy," incorporating ESG factors into the investment evaluation process, and also incorporating climate change-related issues into voting policies.
2021	Completed amendments to "Stewardship Policy" and "Responsible Investment Management Guidelines" and established high-emission industry targets as well as industrial guidelines for gasoline, natural gas, and thermal power
2022	Added new high-emission industries including cement and concrete manufacturing as well as steel, iron, and other metal manufacturing industries

Wealth Management Product Review Process

The proposing unit conducts a preliminary issuer ESG review

- Domestic securities investment trust companies have signed the "Stewardship Principles for Institutional Investors"
- The offshore fund asset management has a sustainability report, or sustainable investment policies, or evidence of voluntary compliance with the PRI

Product ESG review

Prioritize funds with ESG factors
- The fund's investment targets are ESG-related topics
- The fund has ESG management policies

Other items
- Investment strategy
- Reasonableness of fees
- Risk premium
- Past performance
- Suitable customer type

Approved by 3/4 or above of reviewers in attendance → Funds listed

Not approved by 3/4 or above of reviewers in attendance → Cannot be listed

In 2022, all (100%) 35 domestic securities investment companies that offer funds through Bank SinoPac signed statements of compliance with the "Stewardship Principles for Institutional Investors." All 33 offshore fund asset management institutions that offer funds through Bank SinoPac adhere 100% to the Principles for Responsible Investment (PRI).

Incorporating ESG Factors into Wealth Management Product Review Processes

Bank SinoPac incorporates ESG compliance principles into review processes for wealth management products and evaluation items for product issuers, and incorporates ESG factors into product review processes. Following comprehensive assessments of other items, we prioritize products with ESG investment concepts or relatively positive concepts to fully implement responsible investment and due diligence, and promote and sell ESG funds on the Bank SinoPac marketing website

Bank SinoPac wealth management website sustainable investment section

Post-Investment Management

- We review ESG information on our investment targets each quarter. If any investees are involved in negative news related to ESG matters, these will be explained in our review reports. If annual credit limit reviews uncover potential ESG risks in our issuers (or guarantors), we will actively work to understand and record related risks in reports submitted to investment business management units.
- Bank SinoPac monitors investee operations by attending shareholders meetings, exercising voting rights, and engaging with senior executives. Stewardship Reports are disclosed on an annual basis, and we continue to engage with investee companies on ESG issues and monitor ESG-related opportunities and risks of investee companies through e-mail, telephone interviews, questionnaires, and on-site visits. If investee companies are fined for violating ESG-related regulations and fail to make effective improvements, we will gradually reduce investments in said companies or impose penalties.

3.2.2 Responsible Lending

Bank SinoPac established the "Responsible Lending Management Guidelines" and the "Guidelines for Loans Linked to Sustainable Development" based on letters from competent authorities and the guidelines of three global lending associations: the Loan Market Association (LMA), the Asia Pacific Loan Market Association (APLMA), and the Loan Syndications and Trading Association (LSTA). The "Guidelines for Loans Linked to Sustainable Development" incorporate ESG considerations into lending processes, and serve as a positive guide for funding related to green lending, social responsibility lending, sustainability-linked loans, and other sustainable products.

Bank SinoPac Responsible Lending Developments

2014

- Incorporate Equator Principles into corporate finance lending regulations to serve as a review and assessment standard for project financing.

2018

- All loan applications are required to undergo reviews of ESG risks and our regulations stipulate targets for rejection and loan limits.

2019

- Formulated "Responsible Lending Management Guidelines" which stipulate exclusion criteria to prevent financing of controversial industries.
- Remained attentive to credit client response strategies to climate change risks and opportunities.

2020

- Signed Equator Principles.
- Our project financing business provides recommendations on ESG risks for clients involved in "high-emission" industries/activities, encouraging them to disclose greenhouse gas emission data and communicate with stakeholders on climate change issues to strengthen climate resilience.
- Comply with Equator Principles 4 (EP4) to further strengthen assessments of project financing in terms of human rights, biodiversity, and climate change risks.

2021

- Participated in the"Taiwan Sustainability Classification Standards" workshop hosted by the Financial Supervisory Commission.
- For cases submitted to the Board of Directors Credit Committee and Lending and Investment Review Committee (i.e., the case reaches a certain amount and above), the Company disclosed the clients' ESG risk information and improvement action plans, providing the basis for the members of committees.
- Frontline corporate financing personnel explain Bank SinoPac ESG principles to clients and obtain consensus and adherence with the environmental protection, social responsibility, and climate change items on our "Lending and Transaction Application Form."
- Established dedicated "Environmental and Social Risk Team" to assist risk assessment and review of EP cases, and submitted a report detailing the first year of Equator Principles implementations.

2022

- Amended the "Responsible Lending Management Guidelines" to include positive performance indicators for green loans and social responsibility loans
- Amended "Corporate Finance Business Manual-Equator Section" to stipulate that the "Environmental and Social Risk Team" is responsible for the assessment and review of environmental and social risks involved in EP cases
- Launched exclusion policy for "project financing for steam coal and unconventional oil and gas" beginning in July 2022
- Incorporated TEJ-CSR database into credit investigation system to automatically include client ESG information in credit reports and provide ESG performance search functions through a joint credit system

Corporate Finance Loans

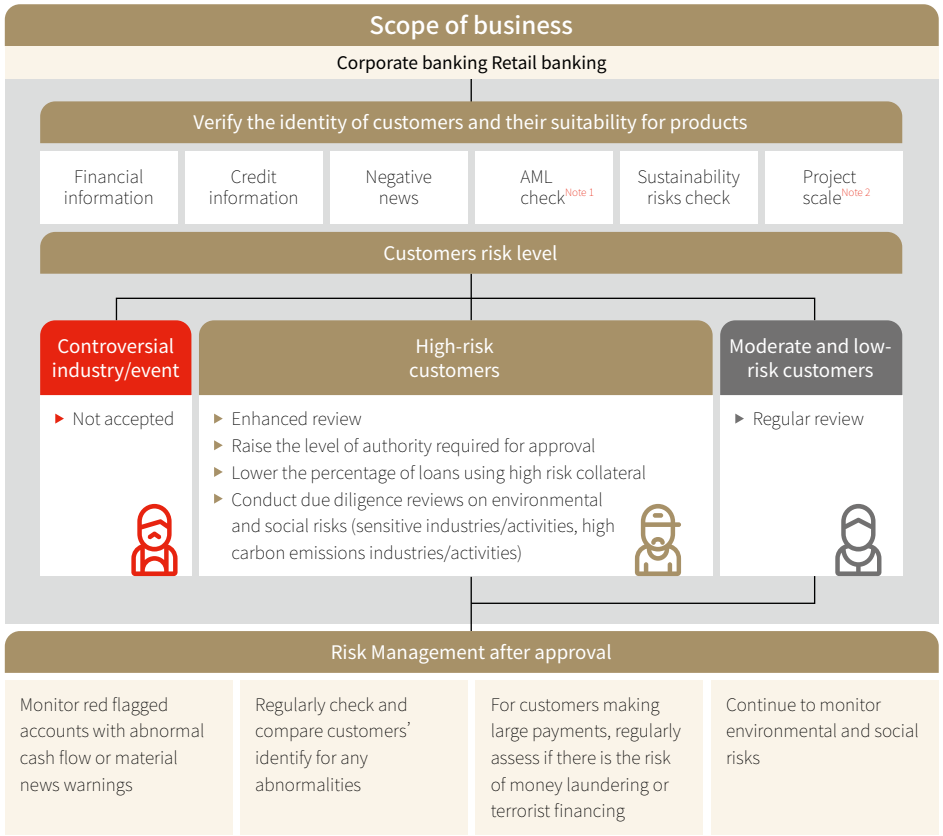
Bank SinoPac fully implements KYC and CDD mechanisms for corporate lending projects and also conducts ESG risk assessments and reviews on clients. Frontline corporate financing personnel explain SinoPac ESG principles to clients and obtain consensus and adherence with the environmental protection, social responsibility, and climate change items on our "Lending and Transaction Application Form." For applications exceeding specific amounts which are submitted to the Board Credit Committee and Lending and Investment Review Committee, we also disclose client ESG risk information and action plans for improvement to serve as a reference for committee members when approving or rejecting loans. We have also formulated a list of industries with high ESG risks (such as pornography, controversial arms, and weaponry) and strengthened ESG risks analyses on sensitive industries (such as those involving gambling, food safety concerns, hazardous radioactive substances, non-medical and hazardous genetic engineering, non-adhesive asbestos sheets, and PCB manufacturing). Factors related to environmental, social, governance, and climate change risks include the following:

1. Environmental risks: Air, soil, and water pollution; waste management; biodiversity and ecological protection; energy management; and compliance with environmental laws.
2. Social risks: Occupational health and safety, human rights issues, supplier management, and community relations.
3. Corporate risks: Corporate governance, ethical management, legal compliance, and risk management.
4. Climate change risks: Asset losses, operational interruptions, and other physical risks caused by short-term climate variability and extreme climate events or long-term changes in climate patterns; and transition risks arising from responses to policies, laws, technologies, and market changes associated with low-carbon economic trends.

Frontline corporate financing personnel explain Bank SinoPac ESG principles to clients and obtain consensus and adherence with the environmental protection, social responsibility, and climate change items on our "Lending and Transaction Application Form"; 100% of financed targets underwent this engagement process.

CDD and KYC Processes for Corporate Finance Loans

Bank SinoPac incorporates ESG factors into Know Your Customer (KYC) and Client Due Diligence (CDD) procedures, and implements classified management of corporate banking customers, carrying out reviews and management operations by risk level. Furthermore, we have strengthened ESG risk reviews for large project financing and continue to monitor environmental and social risks after approval.



Note 1: Please refer to "SinoPac Holdings 2022 Sustainability Report"; 2.2.3.4 Client Due Diligence; and 3.1.3.2 Retail Finance Credit for more information.
Note 2: Projects that require financing of 10 million USD or more should undergo risk classifications based on the Equator Principles. Please refer to "SinoPac Holdings 2022 Sustainability Report" and 3.1.3.1 Corporate Finance Credit for more information.

Financing for Large Corporate Projects

Bank SinoPac formally became a signatory of the Equator Principles (EPs) in February 2020, and published the first Equator Principles Report in 2021, disclosing the EPs implementation process and mechanisms, education and training, and related information. We established a dedicated Environmental and Social Risk Team in November to serve as an internal consultant for assisting risk assessment and review of EPs cases. The team was expanded in 2022 and is currently composed of 9 members with professional backgrounds in in credit risk management management. Of the team members, 2 have obtained corporate sustainability management certifications and serve as contact personnel for the Equator Principles Association; in October 2022, 3 team members attended the Equator Principles online Annual General Meeting; the remaining members are members of the EPs Project Management Office (PMO) who have completed EP4 training and have practical experience with the credit review processes for EPs cases. For high-risk projects, the team seeks assistance from third-party external consultants in accordance with the EPs. In 2022, a total of 18 financing projects were reviewed in accordance with the EPs, of which 7 have reached financial close; the remainders are still ongoing.

Results of Project Finance Review in 2022

Overall number of project finance	Percentage of projects reviewed according to the EPs	Number of projects that reached financial close	Number of projects rejected
18	100	7	1

Organization and Duties of Bank SinoPac's Environmental and Social Risk Team

Corporate Credit Risk Management Division

- Corporate Credit Management Department
- Corporate Banking Credit Department I & II
- Corporate Banking Collection Department

Environmental and Social Risk Team

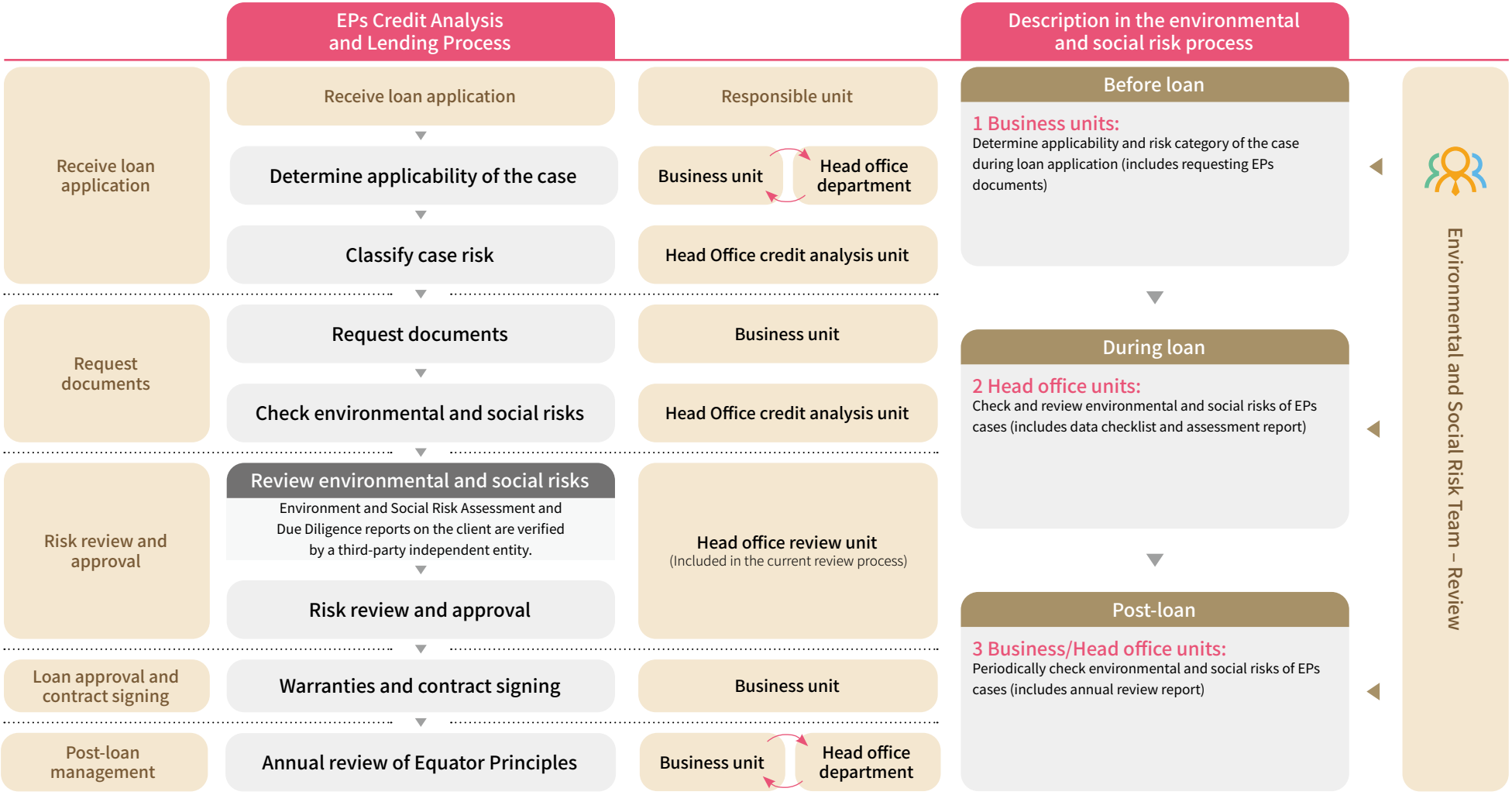
Formed functionally and is currently formed by 9 internal experts with a background in credit review practices

Main responsibilities

- Establish the environmental and social risk assessment system and processes, and revise the "Corporate Banking Manual – Equator Principles" for alignment of implementation
- Responsible for checking compliance with the EPs and reviewing results of environmental and social risk assessments (including continuous monitoring)
- Disclose the implementation status of cases, related data and reports, and attendance in annual meetings on the official website of the Equator Principles Association each year
- Responsible for providing EPs training courses to personnel of domestic and overseas branches and the head office, and for engaging in exchanges on EPs practices

Financing for Large Projects

In 2022, we received an application for a large-scale syndicated loan project involving the construction of port petrochemical oil (natural gas) storage, transportation, and ancillary facilities. The lead bank was not a signatory of the Equator Principles and the client was unable to provide an independent third-party report on environmental and social risks, and failed to adopt relevant measures following three-party communications between our first-line personnel, clients, and the lead bank. Bank SinoPac therefore declined to participate in this syndicated loan.



Retail Finance Loans

CDD and KYC Processes for Retail Finance Loans

Scope of business

Retail banking

Verify the identity of customers and their suitability for products

Credit information	Financial information	AML check[Note 1]	ESG related data and controversy (such as environmental pollution or illegal cash flow) survey[Note 2]	Negative news

Customers risk level

Controversial customers	High-risk customers	Moderate and low-risk customers
▸ Rejected	▸ Provide reasonable explanation or improvement measures, adjust requirements by case	▸ Regular review

Risk Management after approval

Monitor red flagged accounts with abnormal cash flow or material news warnings	Regularly check and compare customers' identify for any abnormalities	For customers making large payments, regularly assess if there is the risk of money laundering or terrorist financing	Continue monitoring environmental and social risks

Note 1: Please refer to "SinoPac Holdings 2022 Sustainability Report" Section 2.2.3.4 Client Due Diligence for more information.
Note 2: Environmental and social factors incorporated into relevant ESG data investigations include whether collateral for loans are located in legally restricted areas or areas prone to flooding, whether clients are involved in environmental pollution penalties, money laundering, terrorism, sanctions, or illegal money schemes.

Retail Finance Loans-Incorporating Sustainability Risks into Credit Investigation Processes

- During mortgage review processes, we pay especial attention to real estate located in legally restricted areas as well as areas prone to flooding, mudslides, and soil liquefaction (areas with high physical climate risks) during valuation processes, and avoid undertaking cases with non-target collateral. If special conditions necessitate undertaking related cases, loan ratios should be reduced and approval levels should be raised.
- When classifying locations of real estate, severe earthquakes, natural disasters, and other factors are included in A, B, and C real estate classifications and regional scope for use as valuation factors.
- "Information on Corporation Major Pollution Sanctions and Penalties" should be checked when reviewing automobile loans for corporation; if corporations incurred pollution-related penalties, clients are required to provide reasonable explanations and improvement measures, and loan conditions should be adjusted by case.

3.2.3 Climate Engagement

To exert our climate influence on value chains and enhance our reputation, we actively participate in engagement actions, deliver questionnaires on sustainability issues to investees, visit and email our financing targets to explain our ESG concepts, and strengthen awareness of climate and ESG issues in our investment and financing targets. We hope that our investment and financing targets can pursue environmental sustainability and low-carbon transformations while pursuing profitability growth. We also hope to set an example and encourage others to make contributions to environmental sustainability.

Engagement Status

Engagement with Investment Targets

In 2022, Bank SinoPac delivered questionnaires covering environmental, social, corporate governance, and other sustainable issues to investee companies. Surveys relating to sustainable issues were delivered to a total of 30 companies.

Method	Engagement on ESG issues or related information (number of times)	Attendance in shareholders' meeting	Attendance in investor conferences	Send questionnaires on climate change issues	Others
Total Amount	3	81	20	30	75 unscheduled visits

Engagement with Financing Targets

If ESG risks are noted on the "Credit Risk Information Disclosure and Review Items" in credit reports during ESG review processes, Bank SinoPac will perform ESG discussions to gain a full understanding of the situation, assist clients in making improvements, and assess mitigation and compensatory measures and responses. We carefully consider whether to continue business dealings with clients that have severe issues or issues that cannot be improved over the long term. Review processes for corporate finance loans in 2022 were as follows:

Bank SinoPac corporate banking lending ESG review in 2022				
	Conditionally approved after engagement (including reductions, restrictive conditions)		Rejected	
Total Amount (Case/Million NTD)	Number of cases	Amount	Number of cases	Amount
	5	1,185	2	1,658

Involves sensitive industries/ economic activities (e.g. thermal coal, unconventional oil and gas, tobacco)

3.3 Risks from Climate Operations

Apart from the physical and transition risks faced by investment and financing businesses, Bank SinoPac also reviews potential physical risks in its own operations and adopts related mitigation and response actions to reduce possible losses from physical risks.

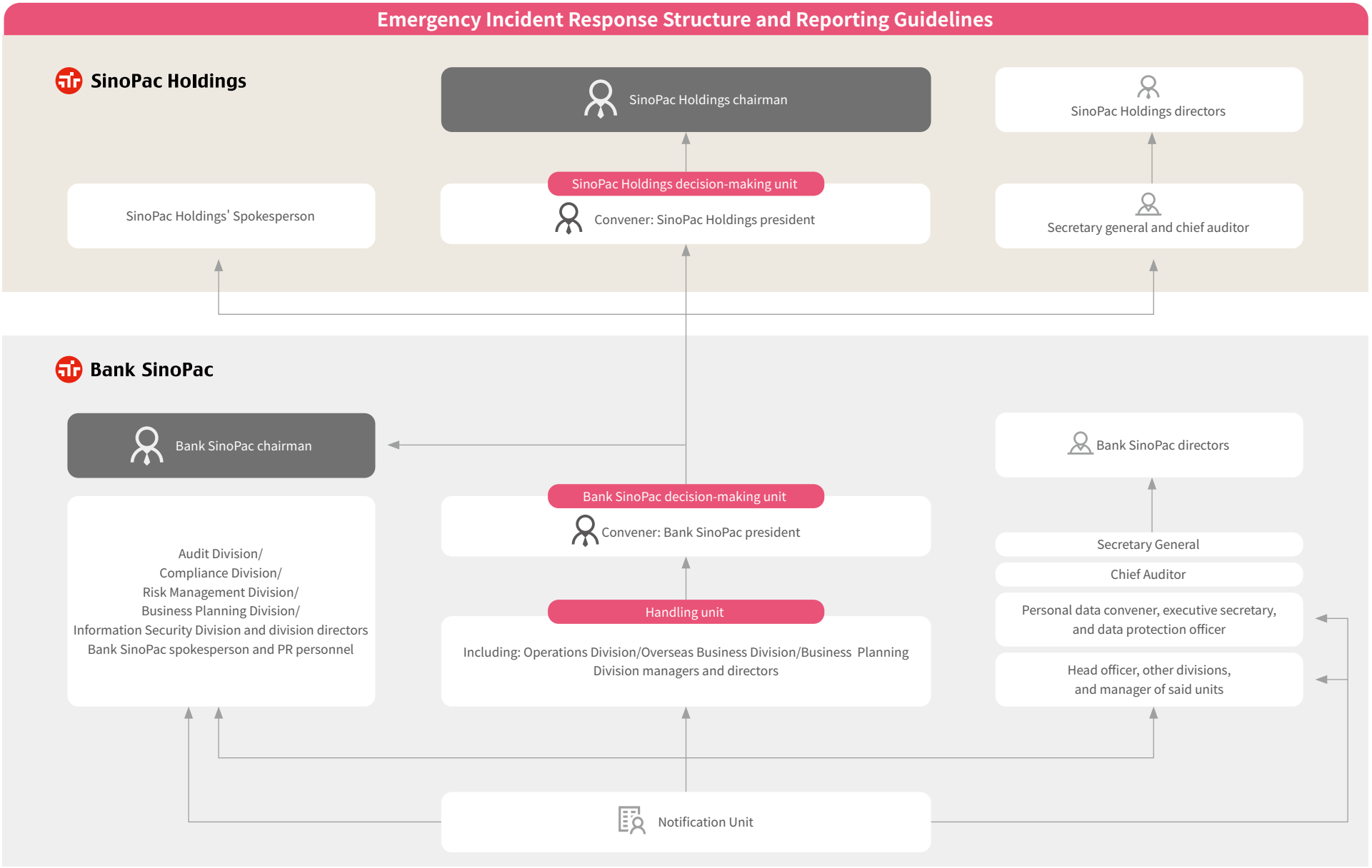
Table 1: Management of physical risks in own operations for Bank SinoPac

Bank SinoPac operational physical risk management measures

Responsible Unit	Item	Implementations
Administration Division	Business locations and real estate for self-use	❶ We obtained "commercial fire insurance" and "comprehensive electronics insurance" (including typhoon and flood insurance) to transfer losses. ❷ We identified offices in high-risk areas. In addition to strengthening dredging pipes, we also inventoried waterproofing and electrical facilities (including wicket gates, uninterruptible power equipment, emergency generators, and machine room locations) to assess their resilience for disaster prevention. We have currently completed inventory of waterproofing and electrical facilities, and will continue to work with our Risk Management Office to refine identification methods for high-risk offices and track transmitted risks.
	Locations of upstream supplier operations	We surveyed operating locations of all suppliers at various time points under various RCP scenarios and found that only one "supplier was located below sea level under RCP8.5 at the end of the century; this supplier was considered to be "high risk." Our procurement amount with the said suppliers is around NT$ 230,000, and we determined it to be highly substitutable and therefore low risk.

Potential risks to corporate operations from climate change include operational interruptions or personnel injury from physical risks and hazards. In order to reduce possible safety concerns and property losses from physical risks, we established "Business Crisis Response Measures" in accordance with Article 6 of the "Key Attributes for Handling Operational Crises at Financial Institutes" issued by the Financial Supervisory Commission. We have also established "Emergency Incident Response Guidelines" in accordance with the "Natural Disaster Emergency Response Guidelines" formulated by our parent company SinoPac Holdings, setting out the responsibilities, emergency notification procedures, and response and handling guidelines for deploying various personnel, materials, and resources at key moments for sudden major incidents that cause business crises. We adopt active and effective response and rescue actions to prevent the scope of damages from expanding, eliminate disaster crises, and help to resume normal operations.

Emergency Incident Response Structure and Reporting Guidelines



CHAPTER 04

Scenario Analyses for Physical and Transition Risks

Safekeeping of Documents Related to Scenario Analyses

Scenario analyses and strategic information, including key assumptions and parameters used during analyses, are documented and stored by the Risk Management Division in accordance with the "Guidelines for Financial Disclosures Related to Climate Risks by Domestic Banks" issued by the Financial Supervisory Commission. If related information needs to be updated due to implementation of climate risk management tasks or after referencing the latest climate science research, the Risk Management Division will also update and regularly report said information to senior management.

4.1 Physical Risks

Bank SinoPac proposes three scenario analyses for physical risks: Heavy rainfall and flooding, droughts, and rising sea levels, with heavy rainfall and flooding and droughts being acute physical risks, and rising sea levels being a chronic physical risk.

Heavy rainfall and flooding may occur as Taiwan is often impacted by typhoons which bring heavy rain and cause flooding in low-lying areas. Impacts from global climate change in recent years have increased the frequency of flooding incidents due to heavy rainfall in some regions, causing financial losses and impacts to real estate assets. We used the RCP 8.5 scenario to analyze various sections of our overall value chain (suppliers, our own operations, investment and financing business) and assess potential financial impacts from heavy rainfall and flooding.

Droughts result from Taiwan's high mountains, short rivers, and high variability in river flows, which make it difficult to retain water. Impacts from global climate change in recent years have increased fluctuations in river flows, causing businesses to cease operations or suffer financial impacts due to additional costs required to obtain water (for example, costs from deploying water trucks). We used the RCP 2.6 and RCP 8.5 climate scenarios to analyze various sections of our overall value chain (suppliers, our own operations, investment and financing business) and assess potential financial impacts from droughts.

In terms of rising sea levels, because of Taiwan's islandy nature, rising sea levels over the long term may impact real estate in low-lying coastal areas and around rivers. We used the RCP 2.6, RCP 4.5, and RCP 8.5 climate scenarios to analyze various sections of our overall value chain (suppliers, our own operations, investment and financing business) and assess potential financial impacts from rising sea levels.

Bank SinoPac analyzed physical risks for various sections of our overall value chain (suppliers, our own operations, investment and financing business) and assessed potential impacts on capital adequacy ratios from expected losses to set five potential impact levels:

Potential Impact Level	Low	Moderately Low	Moderate	Moderately High	High
Capital Adequacy Ratio Reduction (A)	0% ≦ A < 0.11%	0.11% ≦ A < 0.23%	0.23% ≦ A < 0.41%	0.41% ≦ A < 0.59%	A ≧ 0.59%
Equivalent Amount	Under NT$ **1.5** billion	Around NT$ **1.5-3.1** (inclusive) billion	Around NT$ **3.1-5.6** (inclusive) billion	Around NT$ **5.6-8.0** (inclusive) billion	Above NT$ **8.0** billion

Overview of Physical Risk and Scenario Analysis Results

L : Contains description

Risk Factors			Acute Physical Risk: Heavy Rainfall and Flooding	Acute Physical Risk: Droughts	Chronic Physical Risk: Rising Sea Levels
Parameters			Rainfall volumes and parameters in the Climate Change Scenario Analyses Documents for Domestic Banks (including loss ratios for real estate values and revenue impact ratios)	Water conservation alert levels and parameters in the Climate Change Scenario Analyses Documents for Domestic Banks (including revenue impact ratios)	Rising sea levels and parameters in the Climate Change Scenario Analyses Documents for Domestic Banks (including loss ratios for real estate values and revenue impact ratios)
Climate Scenarios			RCP 8.5 Note 1	RCP 2.6 and RCP 8.5 Note 2	RCP 2.6, RCP 4.5, and RCP 8.5 Note 3
Timeline			The lifespan of real estate is around 50-80 years, but mortgage transfers and increases may extend SinoPac's business relationships with clients who have loans secured with real estate. Available data indicates that impacts on real estate are likely to occur after the middle of the century. We have therefore used the following time periods for analysis. **Base period (1976-2005) and mid-century (2036-2065)**	2030, 2050	The lifespan of real estate is around 50-80 years, but mortgage transfers and increases may extend SinoPac's business relationships with clients who have loans secured with real estate. Available data indicates that impacts on real estate are likely to occur after the middle of the century. We have therefore used the following time periods for analysis. **Middle of the century (2050) and end of the century (2100)**
Scenario Analysis Methods			Obtained latitude and longitude values for real estate locations and used QGIS to conduct overlap analysis with areas prone to heavy rainfall and flooding.	Obtained respective drought risk levels based on the counties and cities where real estate are located.	Obtained latitude and longitude values for real estate locations and used QGIS to conduct overlap analysis. Analyzed sea levels at various timepoints under each scenario and identified areas in Taiwan that fall below predicted sea levels.
Value Chain Analysis Note 4	Locations of upstream supplier operations	Operational risks	Low impact L	Low impact L	Low impact L
	Locations of own operations	Operational risks	Low impact L	Low impact L	Low impact L
	Real estate for self use	Operational risks	Low impact L	-	Low impact L
	Downstream – Loan collateral	Credit risks	Low impact L	-	Low impact L
	Downstream – Factory locations of investment and financing clients	Credit risks and market risks	Low impact L	Low impact L	Low impact L
Analysis Results			Under this scenario, the total expected losses from locations of own operations, real estate for self use, loan collateral, and factory locations of investment and financing clients have potentially low impacts on capital adequacy ratios.	At the timepoints for these scenarios, the total expected losses from locations of own operations, collateral, and factory locations of investment and financing clients have potentially low impacts on capital adequacy ratios.	At the timepoints for these scenarios, the total expected losses from locations of own operations and factory locations of investment and financing clients have potentially low impacts on capital adequacy ratios.

Note 1: Assessed according to the latest (2020) "Climate Change Flood Disaster Risk Chart Version 3 (RCP 8.5 only)" released by the "National Science and Technology Center for Disaster Reduction" to determine areas prone to flood and severity levels when daily rainfall volumes exceed 650 mm/day.

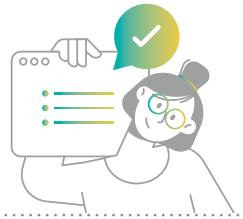
Note 2: Assessed additional costs and revenue impacts to corporations from work stoppages or to obtain water resources based on the Bankers Association of the Republic of China "Climate Change Scenario Analyses Documents for Domestic Banks" drought risk levels for each city or county, and the Ministry of Economic Affairs Water Resources Agency water conservation alert levels.

Note 3: Analyzed using the Climate Central Coastal Risk Screening Tool developed by Climate Central based on a study by Kopp et al. (2014) published in the international academic journal Earth's Future, which contained a model for predicting rising sea levels around the globe.

Note 4: Conducted individual assessments for real estate assets located on the island of Taiwan.

Physical Risk – Mitigation and Adaptation Measures

Analysis Target	Mitigation and Adaption Measures	Risk Factors
Locations of upstream supplier operations	▸ Raise signing rates of supplier statements of commitment. The signing rate for 2022 was 95% and we expect to reach 100% by 2025. We are also considering including climate issues in our statements of commitment. ①②③ ▸ Continue to strengthen supplier awareness of climate change issues and regularly organize supplier communications and exchanges themed around climate issues. We hosted 3 supplier training sessions themed round ESG/climate change issues in 2022. ①②③	① Acute physical risk: Heavy rainfall and flooding
SinoPac's overall operation sites and own real estate	▸ Apart from adhering to the "Natural Disaster Emergency Response Guidelines", SinoPac Holdings and all subsidiaries have formulated business continuity plans and organized remote backup drills to prepare for sudden natural disasters. ①②③ ▸ We take comprehensive commercial fire and electronics insurance for all assets each year which cover typhoon and flooding incidents. With total-mass-based control, our insurance policies entitle us to settlements of approximately 90% of post-disaster recovery costs, so most losses can be offset. ① ▸ Operating sites in drought-prone areas prepare water storage tanks and rent water trucks when necessary to shorten operation interruption times. ② ▸ Enhance waterproofing facilities and drainage pipelines for offices in identified high-risk areas. We plan to complete 100% installation of self-owned buildings in high-risk areas by 2025. ① ▸ Continue to track physical risks identified under scenario analyses and reference historical climate data from the National Science and Technology Center for Disaster Reduction when purchasing real estate for self use. ①	② Acute physical risk: Droughts
Loan collateral	▸ Credit analysis processes include ESG assessments which encompass environmental (and climate change) risks; we also review client action plans for ESG risks. ①③ ▸ Avoid taking on real estate targets prone to flooding, landslides, faults, soil liquefaction, tsunamis, and nuclear disasters. ①③ ▸ Apart from land, guarantees, deposits, securities, and items governed by other regulations, all collateral shall be insured by the borrower (or provider) based on appraised values and loan amounts to reduce risks, and Bank SinoPac shall be listed as designated beneficiaries. ①③ ▸ Major natural disasters should be considered when grading real estate locations, and immediate reviews of associated areas should be conducted during emergency incidents. ①③ ▸ With regard to physical risks of areas where real estate collateral are located, rigorous assessments should be conducted as needed to determine whether said areas may be potential climate disaster sites and the Disaster Risk Adaption Platform should be referenced when determining loan ratios. When listing real estate as collateral, climate-related physical risks should be taken into consideration, and climate risks of heavy rainfall, rising sea levels, and flood-prone areas should be identified. ①③ ▸ We have formulated corresponding short/medium/long-term targets and incorporated climate change risk factors into loan evaluation procedures and regulations to serve as references for determining loan conditions and review levels. ①②③	③ Chronic physical risk: Rising sea levels
Factory locations of investment and financing clients	▸ Credit analysis processes include ESG assessments which encompass environmental (and climate change) risks; we also review client action plans for ESG risks. ①②③ ▸ Determine whether clients have analyzed and established appropriate responses to climate change risks (both physical and transition risks) and opportunities, for example the physical risks associated with their main operational sites or factories. Rigorous assessments should be conducted to determine whether said areas are potential climate disaster sites and to serve as a reference for credit investigations. ①②③ ▸ Prior to investments, we gather information on the environmental, social, and governance aspects of investee companies, and work to understand investee industrial influence and operational impacts associated with climate change through investor conferences, symposiums, and interviews with upstream and downstream vendors/management teams; this information is incorporated into various elements of our investment evaluations. ①②③ ▸ We have formulated corresponding short/medium/long term targets which are incorporated into non-financial risk identifications/assessments for investment and financing client operations. ①②③	



4.1.1 Heavy Rainfall and Flooding

Heavy rainfall and flooding may occur as Taiwan is often impacted by typhoons which bring heavy rain and cause flooding in low-lying areas. Impacts from global climate change in recent years have increased the frequency of flooding incidents due to heavy rainfall in some regions, causing financial losses and impacts to real estate assets. We used the RCP 8.5 scenario to analyze various sections of our overall value chain (suppliers, our own operations, investment and financing business) and assess potential financial impacts from heavy rainfall and flooding.

Locations of upstream supplier operations

Procurement amounts from suppliers located in areas with high climate sensitivity risks.

Evaluation method: Calculated procurement amounts with high climate sensitivity risks from suppliers located in areas prone to heavy rainfall and flooding under RCP 8.5.

Analysis results: Procurement amounts associated with high climate sensitivity risks from suppliers located in areas prone to heavy rainfall and flooding under RCP 8.5 amounted to NT$ 412 million, around 25.22% of total procurement at Bank SinoPac.

Acute Physical Risk: Heavy Rainfall and Flooding

Scenario RCP8.5

Mid-century (2036-2065) Base date: 2022/12/30

Procurement amounts with high climate sensitivity risks: **412** Million NTD

Proportion of total procurement: **25.22%**

Locations of own operations

Revenues and expected losses associated with high climate sensitivity risks from locations of own operations.

Evaluation method: Referenced the "Climate Change Scenario Analyses Documents for Domestic Banks" issued by the Bankers Association of the Republic of China, using the revenue impact ratios of the highest physical risk level (Level 5) to assess expected losses, costs of asset damage repairs, and costs offset by insurance settlements from shutdowns of overall operations located in areas prone to heavy rainfall and flooding under RCP 8.5 to calculate expected losses with high climate sensitivity risks.[Note]

Analysis results: Expected losses associated with high climate sensitivity risks from own operations under the RCP 8.5 heavy rainfall and flooding scenario amounted to NT$ 50 million, with low potential impacts on the capital adequacy ratio of Bank SinoPac.

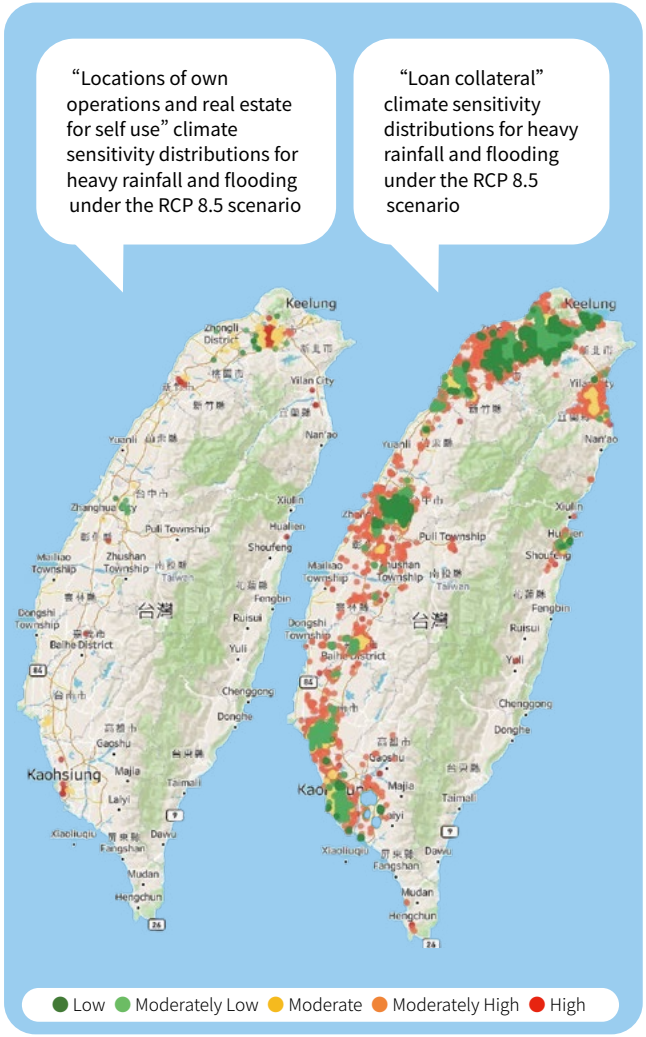
Expected losses: **50** Million NTD

Acute Physical Risk: Heavy Rainfall and Flooding

Scenario RCP8.5

Mid-century (2036-2065) Base date: 2022/12/30

Note: Expected losses = (losses from work stoppage + costs of asset damage repairs) - insurance settlements. (1) "Losses from work stoppage" were calculated as the losses in revenue resulting from one day of work stoppage when rainfall intensity reached the government standard for suspending work and class; (2) "Costs of asset damage repairs" were calculated as the annual revenue for operational locations in 2022 x revenue impact ratios; (3) "Insurance settlements" were calculated as 90% of costs of asset damage repairs.



Real estate for self use

Book value and expected losses associated with high climate sensitivity risks from locations of real estate for self use.

Evaluation method: Referenced the "Climate Change Scenario Analyses Documents for Domestic Banks" issued by the Bankers Association of the Republic of China, using the real estate loss ratios of the highest physical risk level (Level 5) to assess expected losses of real estate for self use located in areas prone to heavy rainfall and flooding under RCP 8.5.[Note]

Analysis results: The total book value of real estate for self use associated with high climate sensitivity risks under the RCP 8.5 heavy rainfall and flooding scenario was NT$ 3,010 million, amounting to 0.13% of total Bank SinoPac asset values; expected losses amounted to NT$ 62 million, with low potential impacts on the capital adequacy ratio of Bank SinoPac.

Real estate for self use book value associated with high climate sensitivity risks: **3,010**

Proportion of total assets: **0.13%**

Expected losses: **62** Million NTD

Acute Physical Risk: Heavy Rainfall and Flooding **Scenario RCP8.5**

Note: Expected losses = book value of real estate for self use x real estate loss ratio x probability of heavy rainfall.

Mid-century (2036-2065)Base date: 2022/12/30

Downstream investment and financing clients

Investment and financing amounts, and expected losses from investments/loans from investment and financing clients with factories located in areas associated with high climate sensitivity risks.

Evaluation method: Calculated expected losses from investment and financing clients with factories located in areas with high climate sensitivity risks under the RCP 8.5 heavy rainfall and flooding scenario.[Note]

Analysis results: The total investment and financing amount of clients with factories located in high climate sensitivity risks under the RCP 8.5 heavy rainfall and flooding scenario was NT$ 8,010 million, amounting to 4.12% of total Bank SinoPac investment and financing amounts; expected losses amounted to NT$ 71 million, with low potential impacts on the capital adequacy ratio of Bank SinoPac.

Investment and financing amounts associated with high climate sensitivity risks: **8,010**

Proportion of overall investment and financing amounts: **4.12%**

Expected losses: **71** Million NTD

Acute Physical Risk: Heavy Rainfall and Flooding **Scenario RCP8.5**

Note: Expected losses = book value of real estate for self use x real estate loss ratio x probability of heavy rainfall.

Mid-century (2036-2065)Base date: 2022/12/30

Loan collateral

Loan amounts and expected losses from real estate collateral associated with high climate sensitivity risks, and estimated potential impacts from interest income when loan ratios were reduced by at least -5.00% or loan applications were rejected based on opinions from internal experts.

Evaluation method: Used the advanced methodology from the "Climate Risk Management Manual for Domestic Banks" to calculate internal ratings for loan clients based on probabilities of default and referenced the LGD estimation method from the "Climate Change Scenario Analyses Documents for Domestic Banks" to evaluate expected losses from real estate collateral associated with high climate sensitivity risks under RCP 8.5 at the middle of the century.[Note]

Analysis results: The total amount of loans with real estate collateral associated with high climate sensitivity risks under the RCP 8.5 heavy rainfall and flooding scenario was NT$ 27,147 million, amounting to 1.97% of total Bank SinoPac loans; expected losses amounted to NT$ 396 million, with low potential impacts on the capital adequacy ratio of Bank SinoPac.

Loan amounts associated with high climate sensitivity risks: **27,147**

Proportion of overall loans: **1.97%**

Expected losses: **396** Million NTD

Acute Physical Risk: Heavy Rainfall and Flooding **Scenario RCP8.5**

Note: Expected losses = default rate x default loss rate x loan amount.

Mid-century (2036-2065)Base date: 2022/12/30

Loan Collateral - Possible Potential Financial Impact of Interest Income

Evaluation method: We estimated possible business volumes for the next five years based on the number of loans with real estate collateral and average interest rates over the past five years, then calculated the amount of real estate collateral associated with high climate sensitivity risks under the RCP 8.5 heavy rainfall and flooding scenario to estimate potential impacts from interest income when loan ratios were reduced by at least -5.00% or loan applications were rejected based on opinions from internal experts.[Note]

Analysis results: Expected interest income and potential financial impacts fell between NT$ 23-464 million under the RCP 8.5 heavy rainfall and flooding scenario, with low potential impacts on the capital adequacy ratio of Bank SinoPac.

Acute Physical Risk: Heavy Rainfall and Flooding

Mid-century (2036-2065) Base date: 2022/12/30 Unit: Million NTD

Climate sensitivity	Scenario	Reduction of loan-to-value ratio based on opinions of internal experts	Average interest rate	Mid-century (2036-2065)	
				Loan amounts associated with high climate sensitivity risks	Impacted interest income
Interest income and potential financial impacts					
High risk	RCP8.5	-5.00%	Average interest rates for past five years for each loan type	25,788	23
		Rejected loan applications			464

Note: Impacts from interest income = assumed impact on loan ratio x average interest rate x loan amount.

4.1.2 Droughts

Droughts result from Taiwan's high mountains, short rivers, and high variability in river flows, which make it difficult to retain water. Impacts from global climate change in recent years have increased fluctuations in river flows, causing businesses to cease operations or suffer financial impacts due to additional costs required to obtain water (for example, costs from deploying water trucks). We used the RCP 2.6 and RCP 8.5 climate scenarios to analyze various sections of our overall value chain (suppliers, our own operations, investment and financing business) and assess potential financial impacts from droughts.

Locations of upstream supplier operations

Procurement amounts from suppliers located in areas with high climate sensitivity risks.

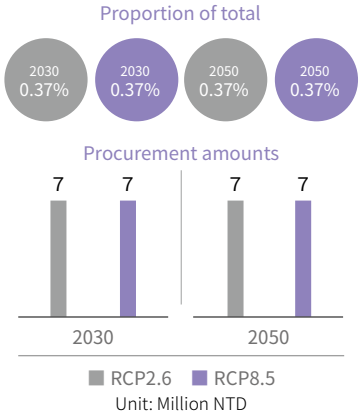
Evaluation method: Calculated procurement amounts with high climate sensitivity risks based on supplier locations at all timepoints under various RCP scenarios.

Analysis results: Procurement amounts associated with high climate sensitivity risks based on supplier locations at all timepoints under various RCP scenarios amounted to NT$ 7 million, around 0.37% of total procurement at Bank SinoPac.

Acute Physical Risk: Droughts

Scenario	2030		2050	
	Procurement amounts with high climate sensitivity risks	Proportion of total procurement amount	Procurement amounts with high climate sensitivity risks	Proportion of total procurement amount
RCP2.6	7	0.37%	7	0.37%
RCP8.5	7	0.37%	7	0.37%

Base date: 2022/12/30 Unit: Million NTD



Locations of own operations

Revenues and expected losses associated with high climate sensitivity risks from locations of own operations.

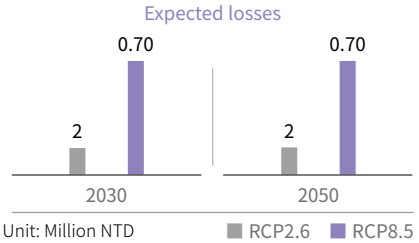
Evaluation method: Referenced the "Climate Change Scenario Analyses Documents for Domestic Banks" issued by the Bankers Association of the Republic of China, using the revenue impact ratios of the highest physical risk levels (Level 5) under the RCP 2.6 and RCP 8.5 scenarios to assess expected losses from high climate sensitivity risks associated with drought at all timepoints under all RCP scenarios[Note]

Analysis results: Expected losses associated with high climate sensitivity risks associated with drought from own operations at all timepoints under all RCP scenarios fell between NT$ 0.7-2 million, with low potential impacts on the capital adequacy ratio of Bank SinoPac.

Acute Physical Risk: Droughts

Scenario	2030	2050
	Expected losses	Expected losses
RCP2.6	0.70	0.70
RCP8.5	2	2

Base date: 2022/12/30 Unit: Million NTD



Note: Expected losses = annual revenues at operational locations in 2022 x revenue impact ratio.

Downstream investment and financing clients

Investment and financing amounts, and expected losses from investments/loans from investment and financing clients with factories located in areas associated with high climate sensitivity risks.

Evaluation method: Calculated expected losses from investment and financing clients with factories located in areas with high climate sensitivity risks associated with drought at all timepoints under all RCP scenarios.[Note]

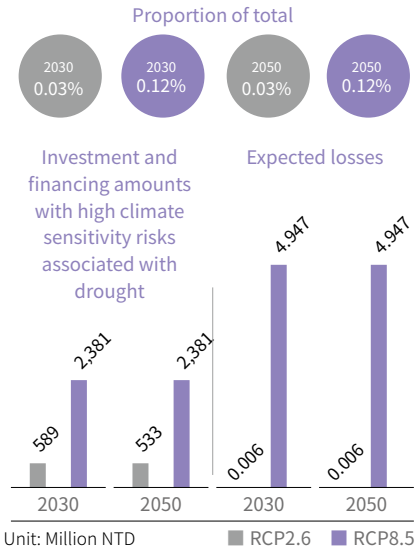
Analysis results: The total investment and financing amount and proportion of all investment and financing amounts at Bank SinoPac of clients with factories located in high climate sensitivity risks associated with drought at all timepoints under all RCP scenarios are shown as follows. Expected losses fell between NT$ 0.006-5 million, with low potential impacts on the capital adequacy ratio of Bank SinoPac.

Acute Physical Risk: Droughts

Base date: 2022/12/30 Unit: Million NTD

Scenario	2030			2050		
	Investment and financing amounts with high climate sensitivity risks associated with drought	Proportion of overall investment and financing amounts	Expected losses	Investment and financing amounts with high climate sensitivity risks associated with drought	Proportion of overall investment and financing amounts	Expected losses
RCP2.6	533	0.03%	0.006	533	0.03%	0.006
RCP8.5	2,381	0.12%	5	2,381	0.12%	5

Note: Expected losses = default rate x default loss rate x investment and financing amount (targets determined to be higher risks on internal credit ratings).



4.1.3 Rising Sea Levels

Because of Taiwan's islandy nature, rising sea levels over the long term may impact real estate in low-lying coastal areas and around rivers. We used the RCP 2.6, RCP 4.5, and RCP 8.5 climate scenarios to analyze various sections of our overall value chain (suppliers, our own operations, investment and financing business) and assess potential financial impacts from rising sea levels.

Locations of upstream supplier operations

Procurement amounts from suppliers located in areas with high climate sensitivity risks.

Evaluation method: Calculated procurement amounts with high climate sensitivity risks based on supplier locations at all timepoints under various RCP scenarios.

Analysis results: Analysis of all timepoints under all RCP scenarios showed that only the RCP 8.5 scenario at the end of the century held high climate sensitivity risks for suppliers located below sea level, with total procurement at risk amounting to NT$ 0.2 million, around 0.01% of total procurement at Bank SinoPac.

Chronic Physical Risk: Rising Sea Levels

Base date: 2022/12/30 Unit: Million NTD

Scenario	2050		2100	
	Procurement amounts with high climate sensitivity risks	Proportion of total procurement amount	Procurement amounts with high climate sensitivity risks	Proportion of total procurement amount
RCP2.6	-	0.00%	-	0.00%
RCP4.5	-	0.00%	-	0.00%
RCP8.5	-	0.00%	0.2	0.01%

Locations of own operations

Revenues and expected losses associated with high climate sensitivity risks from locations of own operations.

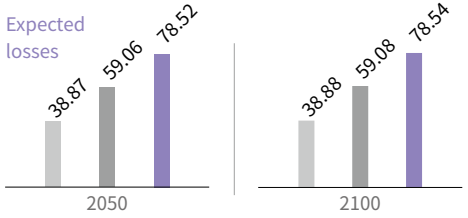
Evaluation method: Referenced the "Climate Change Scenario Analyses Documents for Domestic Banks" issued by the Bankers Association of the Republic of China, using the revenue impact ratios of the highest physical risk level (Level 5) to assess expected losses, costs of asset damage repairs, and costs offset by insurance settlements from shutdowns of overall operations at all timepoints under all RCP scenarios to calculate expected losses with high climate sensitivity risks.[Note]

Analysis results: Expected losses associated with high climate sensitivity risks from own operations at all timepoints under all RCP scenarios fell between NT$ 38.87-78.54 million, with low potential impacts on the capital adequacy ratio of Bank SinoPac.

Chronic Physical Risk: Rising Sea Levels

Scenario	2050	2100
	Expected losses	Expected losses
RCP2.6	38.87	38.88
RCP4.5	59.06	59.08
RCP8.5	78.52	78.54

Base date: 2022/12/30 Unit: Million NTD



Note: Expected losses = (losses from work stoppage + costs of asset damage repairs) - insurance settlements. (1) "Losses from work stoppage" were calculated as annual revenue required to operate the business at said location in 2022; (2) "Costs of asset damage repairs" were calculated as the annual revenue for said operational location in 2022 x revenue impact ratios; (3) "Insurance settlements" were calculated as 90% of costs of asset damage repairs.

Real estate for self use

Book value and expected losses associated with high climate sensitivity risks from locations of real estate for self use.

Evaluation method: Referenced the "Climate Change Scenario Analyses Documents for Domestic Banks" issued by the Bankers Association of the Republic of China, using the real estate loss ratios of the highest physical risk level (Level 5) to assess expected losses of real estate for self use at all timepoints under all RCP scenarios.[Note]

Analysis results: The total book value of real estate for self use associated with high climate sensitivity risks at all timepoints under all RCP scenarios was NT$ 335 million, amounting to 0.01% of total Bank SinoPac asset values; expected losses amounted to NT$ 7 million, with low potential impacts on the capital adequacy ratio of Bank SinoPac.

Chronic Physical Risk: Rising Sea Levels

Base date: 2022/12/30 Unit: Million NTD

Scenario	2050			2100		
	Real estate for self use book value associated with high climate sensitivity risks	Proportion of total assets	Expected losses	Real estate for self use book value associated with high climate sensitivity risks	Proportion of total assets	Expected losses
RCP2.6	335	0.01%	7	335	0.01%	7
RCP4.5	335	0.01%	7	335	0.01%	7
RCP8.5	335	0.01%	7	335	0.01%	7

Note: Expected losses = book value of real estate for self use x real estate loss ratio x probability of hazard occurrence.

Loan collateral

Loan amounts and expected losses from real estate collateral associated with high climate sensitivity risks, and estimated potential impacts from interest income when loan ratios were reduced by at least -5.00% or loan applications were rejected based on opinions from internal experts.

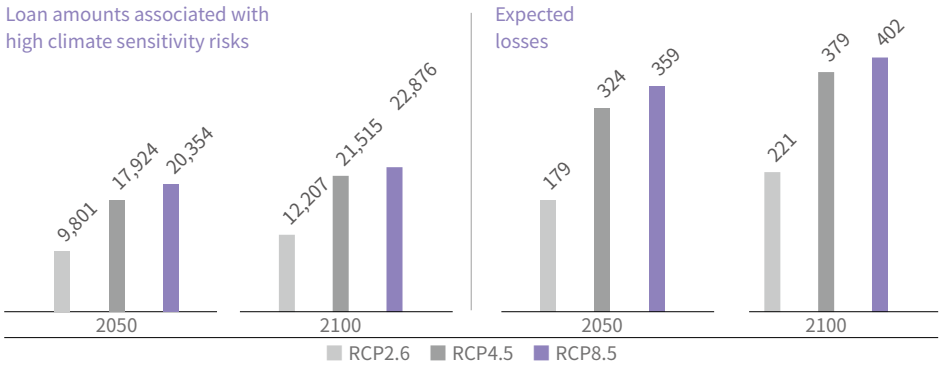
Evaluation method: Used the advanced methodology from the "Climate Risk Management Manual for Domestic Banks" to calculate internal ratings for loan clients based on probabilities of default and referenced the LGD estimation method from the "Climate Change Scenario Analyses Documents for Domestic Banks" to evaluate expected losses from real estate collateral associated with high climate sensitivity risks at all timepoints under all RCP scenarios.[Note]

Analysis results: Total amount of loans associated with high climate sensitivity risks from real estate collateral below sea level at all timepoints under all RCP scenarios, and proportion of total loans are shown in the following table; expected losses fell between NT$ 179-402 million, with low potential impacts on the capital adequacy ratio of Bank SinoPac.

Chronic Physical Risk: Rising Sea Levels

Base date: 2022/12/30 Unit: Million NTD

Scenario	2050			2100		
	Loan amounts associated with high climate sensitivity risks	Proportion of overall loans	Expected losses	Loan amounts associated with high climate sensitivity risks	Proportion of overall loans	Expected losses
RCP2.6	9,801	0.71%	179	12,207	0.89%	221
RCP4.5	17,924	1.30%	324	21,515	1.56%	379
RCP8.5	20,354	1.48%	359	22,876	1.66%	402



Note: Expected losses = default rate x default loss rate x loan amount.

Loan Collateral - Possible Potential Financial Impact of Interest Income

Evaluation method: We estimated possible business volumes for the next five years based on the amount of loans with real estate collateral and average interest rates over the past five years, then calculated the amount of loans with real estate collateral associated with high climate sensitivity risks at all timepoints under all RCP scenarios to estimate potential impacts from interest income when loan ratios were reduced by at least -5.00% or when loan applications were rejected based on opinions from internal experts.[Note]

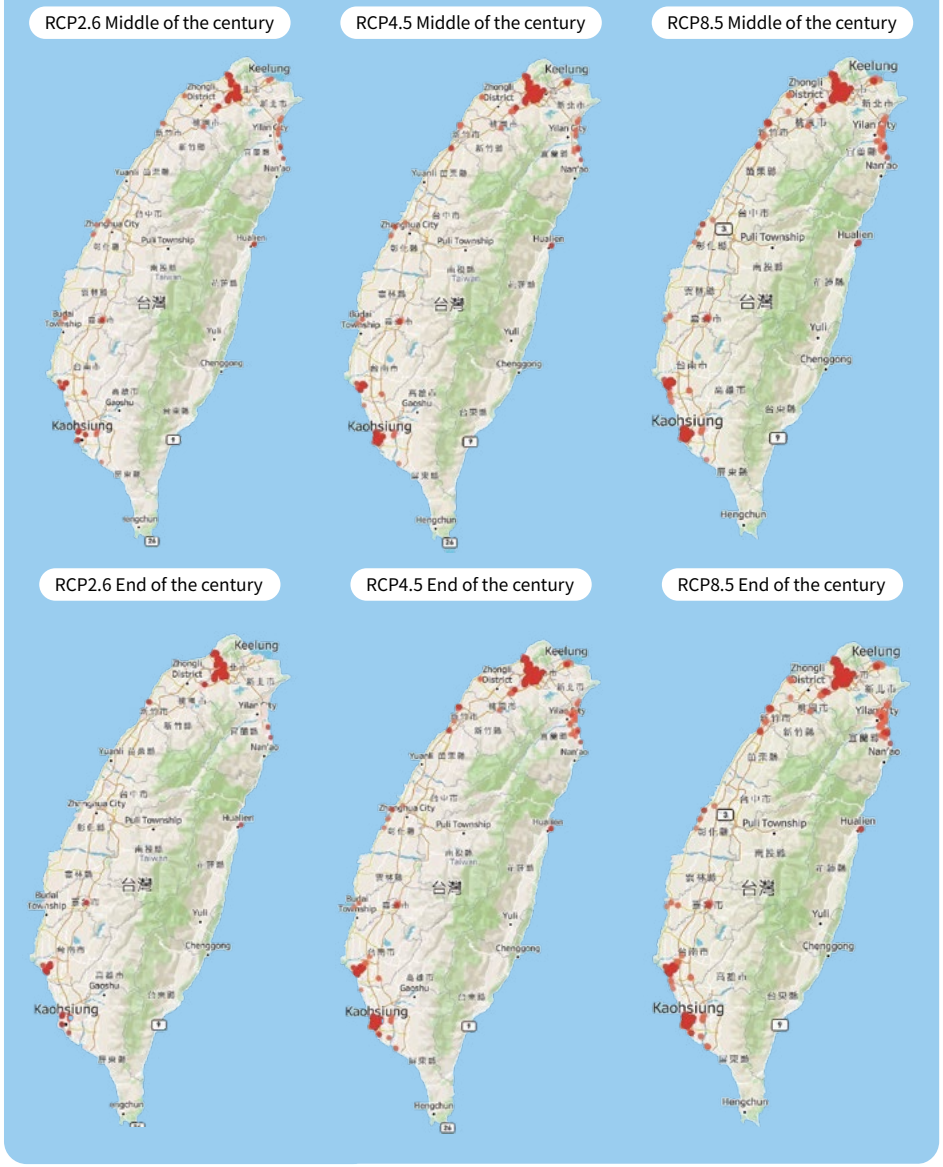
Analysis results: Expected interest income and potential financial impacts fell between NT$ 8-354 million at all timepoints under all RCP scenarios, with low potential impacts on the capital adequacy ratio of Bank SinoPac.

Base date: 2022/12/30 Unit: Million NTD

Climate sensitivity	Scenario	Reduction of loan-to-value ratio based on opinions of internal experts	Average interest rate	2050 年		2100 年	
				Loan amounts associated with high climate sensitivity risks	Impacted interest income	Loan amounts associated with high climate sensitivity risks	Impacted interest income
Interest Income and Potential Financial Impacts							
High risk	RCP2.6	-5.00%	Average interest rates for past five years for each loan type	9,189	8	11,494	10
		Rejected loan applications			155		192
	RCP4.5	-5.00%		16,531	14	19,815	17
		Rejected loan applications			277		330
	RCP8.5	-5.00%		18,850	16	21,105	18
		Rejected loan applications			317		354

Note: Impacts from interest income = assumed impact on loan ratio x average interest rate x loan amount.

Climate sensitivity-Distribution of loan collateral



Downstream investment and financing clients

Investment and financing amounts, and expected losses from investments/loans from investment and financing clients with factories located in areas associated with high climate sensitivity risks.

Evaluation method: Calculated expected losses from investment and financing clients with factories located in areas with high climate sensitivity risks at all timepoints under all RCP scenarios.

Analysis results: The total investment and financing amount and proportion of all investment and financing amounts at Bank SinoPac from clients with factories located in high climate sensitivity risks at all timepoints under all RCP scenarios are shown as follows; expected losses fell between NT$ 10-18 million, with low potential impacts on the capital adequacy ratio of Bank SinoPac.

Chronic Physical Risk: Rising Sea Levels

Base date: 2022/12/30 Unit: Million NTD

Scenario	2050			2100		
	Investment and financing amounts associated with high climate sensitivity risks	Proportion of overall investment and financing amounts	Expected losses	Investment and financing amounts associated with high climate sensitivity risks	Proportion of overall investment and financing amounts	Expected losses
RCP2.6	10,040	0.52%	10	12,393	0.64%	17
RCP4.5	13,315	0.69%	18	17,740	0.91%	18
RCP8.5	18,165	0.93%	18	19,398	1.00%	18

Investment and financing amounts associated with high climate sensitivity risks

Unit: Million NTD

Expected losses

RCP2.6 RCP4.5 RCP8.5

Note: Expected losses = default rate x default loss rate x investment and financing amount (targets determined to be higher risks on internal credit ratings).

4.2 Transition Risks

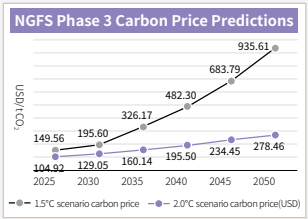
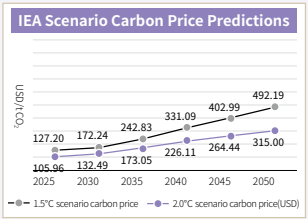
The Glasgow Climate Pact, an agreement reached at the United Nations Climate Change Conference held in November 2021 (COP26), reaffirmed the global consensus to achieve net zero emissions by 2050, promoting all industries to accelerate carbon reduction actions to realize their net zero emissions targets. "Taiwan's Pathway to Net-Zero Emissions in 2050" was announced in March 2023, and the "Climate Change Response Act" was passed by the Legislative Yuan on January 10, 2023 following a third reading, and was promulgated and implemented by the President on February 15. Under these net-zero trends, corporations may need to pay additional costs (procurement, construction, and carbon costs) associated with transformation responses or failure to transform, causing potential impacts on credit, investment, and financing businesses within the financial industry.

Therefore, Bank SinoPac conducted respective analyses on different value chain sections (suppliers, own operations, investment, and financing businesses) to evaluate potential financial impacts from three risk incidents under different climate scenarios and time scales: Possible additional "carbon costs" (such as carbon rights, carbon taxes, and carbon fees); "Energy Transition" from compulsory installed capacity quotas under government low-carbon transformation goals (Nationally Determined Contributions, NDCs); and net zero emissions from own operations by 2030.

Potential financial impacts on Bank SinoPac from transition risks: We analyzed transition risks for various sections of our overall value chain (suppliers, own operations, investment, and financing business) and assessed potential impacts on capital adequacy ratios from incremental expected losses to set five potential impact levels:

Potential Impact Level	Low	Moderately Low	Moderate	Moderately High	High
Capital Adequacy Ratio Reduction (A)	0% ≦ A < 0.11%	0.11% ≦ A < 0.23%	0.23% ≦ A < 0.41%	0.41% ≦ A < 0.59%	A ≧ 0.59%
Equivalent Amount	Under NT$ **1.5** billion	Around NT$ **1.5-3.1** (inclusive) billion	Around NT$ **3.1-5.6** (inclusive) billion	Around NT$ **5.6-8.0** (inclusive) billion	Above NT$ **8.0** billion

Overview of Transition Risk and Scenario Analysis Results

Risk Factors	Carbon Cost Payments	Ministry of Economic Affairs "Regulations for the Management of Setting up Renewable Energy Power Generation Equipment of Power Users above a Certain Contract Capacity"	Net Zero Emissions from Own Operations
Parameters	Carbon Costs	Contract capacities, equipment construction costs, electricity sold per kW of renewable energy, renewable energy certificate costs, monetary substitution per kW, monetary substitution rate.[Note 2]	Equipment replacement costs, green electricity costs, renewable energy certificate costs[Note 4], costs for hiring external consultants.
Climate Scenarios	▸ Network for Greening the Financial System (NGFS) Phase 3 model REMIND-MAgPIE 3.0-4.4 Integrated Physical Damages (95th) predicted carbon prices 1 Below 2 degrees Celsius (equivalent to the SBTi 2.5% annual linear reduction pathway). 2 Net Zero 2050/1.5 degrees Celsius (equivalent to the SBTi 4.2% annual linear reduction pathway). ▸ International Energy Agency (IEA) Predicted carbon prices under the scenarios disclosed by the World Energy Outlook 2021 report 1 Sustainable Development Scenarios (SDS), equivalent to Below 2 degrees Celsius (equivalent to the SBTi 2.5% annual linear reduction pathway). 2 2050 Net Zero Emissions (NZE) scenario, equivalent to Net Zero 2050/1.5 degrees Celsius (equivalent to the SBTi 4.2% annual linear reduction pathway).  	Nationally Determined Contributions (NDC)	Achieve net zero emissions from own operations by 2030
Timeline	2025-2050 (analysis conducted for every five-year period) [Expected average asset holding period is 1-7 years].	2023-2025[Note 3] [Expected average asset holding period is 1-7 years].	Conducted analyses for each year from 2023-2030 based on the SinoPac Holdings target of net zero emissions from own operations by 2030.[Note 5]
Scenario Analysis Methods	▸ As carbon costs affect supplier sale costs, potential financial impacts from suppliers passing on carbon costs were quantified. ▸ Nine high-emission industries (Oil and gas, Power generation, Metal mining, Chemical material manufacturing, Industrial manufacturing-motor vehicle manufacturing, Industrial manufacturing-manufacture of basic metals and fabricated metal products, Cement, Shipping, and Aviation) were selected from industries with high climate risks on a heatmap[Note 1] showing industrial climate risks and taken from a list of high-emission corporations monitored by the Environmental Protection Administration; additional "carbon costs" of investment and financing targets were assessed to quantify potential financial impacts. (Please refer to 5.4 Exposure to Industries with High Climate Risks for the climate risk heatmap and exposure amounts) ▸ Assessed possible additional "carbon costs" for financing targets and quantified potential financial impacts on Bank SinoPac from Industries with loan concentration ratios exceeding 8% (the Real estate industry for this year) and the six major industries with high power consumption and high emissions inspected by the Ministry of Economic Affairs (Chemicals industry, Electrical and electronics industry, Metal manufacturing industry, Non-metal mineral products industry, Textile industry, and Paper industry).[Note 6]	Conducted scenario analyses on investment and financing targets based on a list of heavy electricity users provided by external consultants.	Calculated potential financial impacts from transition risks based on carbon reduction targets and scenarios, and estimated carbon costs from planned reductions of carbon emissions.

Note 1: The scope of assessment for our industrial climate risk heatmap encompassed domestic and foreign investment and financing positions of SinoPac Holdings and all subsidiaries.

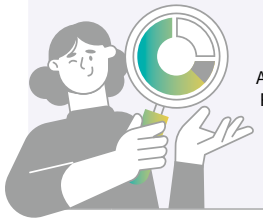
Note 2: "Contract capacities" were estimated using the indirect emission volumes disclosed by the Environmental Protection Administration on the National Greenhouse Gas Registry Platform; "equipment construction costs" were based on the "Renewable energy bulk purchase rate table" released by the Ministry of Economic Affairs, which set preliminary (phase 1) construction costs for rooftop solar photovoltaic equipment with installed capacity of more than 500 kW as NT$ 42,700/KW; "electricity sold per kW of renewable energy" was based on the "Regulations for the Management of Setting up Renewable Energy Power Generation Equipment of Power Users above a Certain Contract Capacity" and set at annual levels of 1,250 kWh/KW for solar photovoltaic power; "renewable energy certificate costs" were calculated using the recommended maximum price of NT$ 1-2.2/kWh released by the National Renewable Energy Certification Center, using 2025 as a calculation basis; "monetary substitution per kW" was set at 2,500 kWh/KW based on the "Regulations for the Management of Setting up Renewable Energy Power Generation Equipment of Power Users above a Certain Contract Capacity"; "monetary substitution rate" was set at NT$ 4/kWh based on the Ministry of Economic Affairs "Fee rate of monetary substitution payment for consumers of renewable energy obligation."

Note 3: The "Regulations for the Management of Setting up Renewable Energy Power Generation Equipment of Power Users above a Certain Contract Capacity" stipulates that specified targets are required to complete installations by 2025, and therefore we have used the years listed in these Regulations for analysis. Compulsory installed capacities for renewable energy were calculated as 10% of said user's average contract capacities for the previous year. If renewable energy equipment was installed prior to 2023, 20% of central competent authority notified compulsory installed capacities were deducted; for installations completed before 2024, 10% of central competent authority notified compulsory installed capacities were deducted.

Note 4: The National Renewable Energy Certification Center states that "renewable energy certificate costs" are determined by buyers and sellers through market mechanisms, and we have therefore estimated market prices for 2030 to be NT$ 4/kWh.

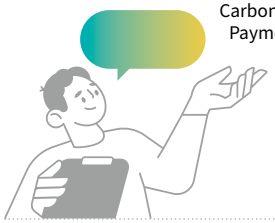
Note 5: Please refer to the SinoPac Holdings corporate website for more details on our net zero targets.

Note 6: The six major industries with high power consumption and high emissions inspected by the Ministry of Economic Affairs include seven industries for Bank SinoPac: Chemical materials manufacturing industry, Power generation industry, Industrial manufacturing-manufacture of basic metals and fabricated metal products, Industrial manufacturing-other manufacturing, Other materials manufacturing industry, Industrial manufacturing-manufacturing of textiles and apparel, and Paper making. The Chemical materials manufacturing industry and Industrial manufacturing-manufacture of basic metals and fabricated metal products overlap with the nine high-emission industries identified by our climate risk heatmap.

Risk Factors			Carbon Cost Payments	Ministry of Economic Affairs "Regulations for the Management of Setting up Renewable Energy Power Generation Equipment of Power Users above a Certain Contract Capacity"	Net Zero Emissions from Own Operations
Value Chain Analysis	Own operations	Operational risks	-	-	Low potential impacts on the capital adequacy ratio of Bank SinoPac at all timepoints under all scenarios.
	Costs transferred from upstream suppliers	Operational risks	▸ Low potential impacts on the capital adequacy ratio of Bank SinoPac at all timepoints under all scenarios. ▸ Analysis results revealed that only 2 suppliers were listed as high-emission enterprises by the Environmental Protection Administration, with low impacts on Bank SinoPac.	Analysis results revealed that only 2 suppliers were heavy electricity users, with low impacts on Bank SinoPac.	-
	Downstream investment and financing clients	Credit risks and market risks	Credit risks and market risks hold low potential impacts on the capital adequacy ratio of Bank SinoPac at all timepoints under all scenarios.	Low potential impacts on the capital adequacy ratio of Bank SinoPac at all timepoints under all scenarios.	-
		Analysis Results	▸ Assessments of expected carbon costs transferred from suppliers revealed low potential impacts on the capital adequacy ratio of Bank SinoPac at all timepoints under all scenarios. ▸ Assessments of our investment and financing positions in "high-emission industries" and "high-emissions enterprises listed by the Environmental Protection Administration" revealed that combined expected losses from credit risks and market risks hold low potential impacts on the capital adequacy ratio of Bank SinoPac at all timepoints under all scenarios. ▸ Assessments of possible additional "carbon costs" for financing targets and quantified potential financial impacts on Bank SinoPac from Industries with loan exposures concentration ratios exceeding 8% (the Real estate industry for this year) and the six major industries with high power consumption and high emissions inspected by the Ministry of Economic Affairs (Chemicals industry, Electrical and electronics industry, Metal manufacturing industry, Non-metal mineral products industry, Textile industry, and Paper industry)[Note] revealed that combined expected losses from credit risks hold low potential impacts on the capital adequacy ratio of Bank SinoPac at all timepoints under all scenarios.	Assessments of our investment and financing positions in "high electricity users" revealed that combined expected losses from credit risks and market risks hold low potential impacts on the capital adequacy ratio of Bank SinoPac at all timepoints under all scenarios.	Assessments of the costs required to achieve our net zero emissions target revealed low potential impacts on the capital adequacy ratio of Bank SinoPac at all timepoints under all scenarios.

Note: The six major industries with high power consumption and high emissions inspected by the Ministry of Economic Affairs include seven industries for Bank SinoPac: Chemical materials manufacturing industry, Power generation industry, Industrial manufacturing-manufacture of basic metals and fabricated metal products, Industrial manufacturing-other manufacturing, Other materials manufacturing industry, Industrial manufacturing-manufacturing of textiles and apparel, and Paper making. The Chemical materials manufacturing industry and Industrial manufacturing-manufacture of basic metals and fabricated metal products overlap with the nine high-emission industries identified by our climate risk heatmap.

Transition Risk - Mitigation and Adaptation Measures

Risk Factors	Analysis Target	Mitigation and Adaption Measures
 Carbon Cost Payments	▸ Costs transferred from suppliers ▸ Investment and financing clients in high-emission industries ▸ Investment and financing clients listed as high-emission enterprises by the Environmental Protection Administration ▸ Industries with loan concentration ratios exceeding 8% ▸ Six major industries with high power consumption and high emissions inspected by the Ministry of Economic Affairs	▸ Use the "Responsible Investment Management Guidelines" as a guideline for promoting and implementing responsible investment. ▸ Adhere to the "Responsible Investment Management Guidelines," "Corporate Banking Manual Equator Principles Section," and "Financial Markets Manual" for rigorous evaluation of the environmental, social, and corporate governance impacts of businesses operated by investment and financing clients when making investment and financing decisions. ▸ Formulate limits for "high-risk industries" in consideration of overall business developments, risk capacity, future industrial developments, and economic cycles. High-emission industries (such as non-ferrous metals, shipping, oil & gas exploration and wholesale, coal chemicals, and aviation) have been included in quota controls for high-risk industries. ▸ Strengthen management of sustainable supply chains, optimize supplier grading systems, and continue to survey high-emission suppliers. Further expand green procurement items, such that 60% of procured items are government certified green procurement and finance items. Increase usage ratios of green building materials for renovation and decoration to more than 96%. ▸ SinoPac Holdings' pledge to achieve net zero emissions across our entire asset portfolio by 2050 was approved by the Board in March 2022. SinoPac Holdings joined SBTi in August 2022 and submitted completed SBTs to SBTi for verification in December of that same year to initiate low-carbon transformations alongside stakeholders and "use sustainable finance to achieve net zero emissions in Taiwan." Bank SinoPac works with SinoPac Holdings to advance net zero progress through the Net Zero Project Management Office (PMO) and regularly reports on implementations and adjusts net zero plans on a rolling basis. ▸ We pledged to stop providing financing for projects related to steam coal and unconventional oil and gas starting on July 1, 2022 in line with SinoPac Holdings commitments. Financing for existing projects will not be renewed upon maturity.
Ministry of Economic Affairs "Regulations for the Management of Setting up Renewable Energy Power Generation Equipment of Power Users above a Certain Contract Capacity"	▸ Investment and financing clients who are heavy electricity users affected by these Regulations	
Net Zero Emissions from Own Operations	▸ Own operations	▸ Achieve net zero emissions by 2030 in accordance with SinoPac Holdings SBT carbon reduction targets. ▸ Implement internal carbon pricing mechanisms: Review/adjust internal carbon pricing mechanisms for Beigao building (own operations). ▸ Raise renewable energy usage ratios: Continue to raise annual targets for renewable energy usage ratios. ▸ Promote energy and carbon reduction programs: Expand inventory scope and certification rate of our own buildings under ISO14001 and ISO50001 management systems.

4.2.1 Carbon Cost Payments

Carbon costs transferred from upstream suppliers

Estimate carbon costs transferred from suppliers to assess potential financial impacts from procurement costs.

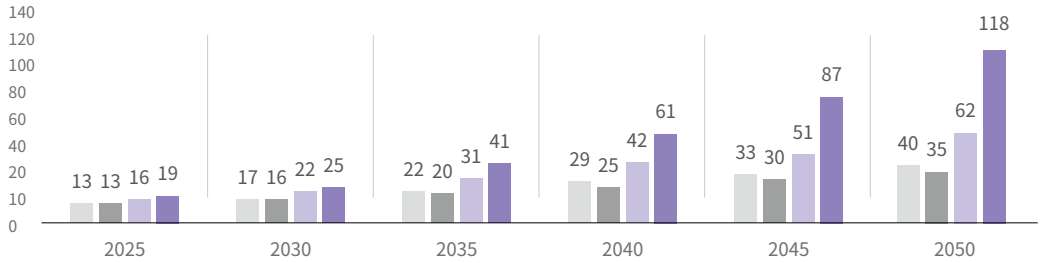
Evaluation method: Referenced the "Climate Risk Management Manual for Domestic Banks" to assess advanced practices for climate resilience, using predicted carbon price scenarios under NGFS (Below 2 degrees and 1.5 degrees Celsius) and IEA (Below 2 degrees and 1.5 degrees Celsius) to estimate potential financial impacts of expected carbon cost transfers. Note 1

Analysis results: Carbon costs transferred from suppliers are shown in the chart below, with low potential impacts on the capital adequacy ratio of Bank SinoPac at all timepoints under all scenarios.

Risk factor: Carbon cost payments

Base date: 2022/12/30 Unit: Million NTD

Scenario	Data Source	Business Scope	Procurement Costs	Carbon costs transferred from suppliers					
				2025	2030	2035	2040	2045	2050
< 2° C	IEA	Procurement	1,634	13	17	22	29	33	40
	NGFS	Procurement	1,634	13	16	20	25	30	35
1.5° C	IEA	Procurement	1,634	16	22	31	42	51	62
	NGFS	Procurement	1,634	19	25	41	61	87	118



Note 1: Expected carbon cost transfers=Procurement amounts from said supplier x estimated carbon emission intensity x carbon prices under warming scenario. (1) "Estimated carbon emission intensity" was estimated using the 2021 fuel combustion carbon emission data and analysis results as well as GDP values released by the Executive Yuan Directorate General of Budget, Accounting and Statistics; (2) "Carbon prices under warming scenario" used predicted carbon prices under the NGFS or IEA 1.5° C and 2° C scenarios.

Downstream investment and financing clients

Assessment of the nine "high-emission industries" and "high-emission corporations monitored by the Environmental Protection Administration" in industrial climate risk heatmap (Please refer to 5.4 Exposure to Industries with High Climate Risks for the climate risk heatmap)

Evaluation method: Referenced the "Climate Risk Management Manual for Domestic Banks" to assess advanced practices for climate resilience, using predicted carbon price scenarios under NGFS (Below 2 degrees and 1.5 degrees Celsius) and IEA (Below 2 degrees and 1.5 degrees Celsius) and estimated carbon costs [Note 1] to analyze incremental changes in expected losses [Note 2] from climate risks on loan, bill, and bond positions, and incremental losses from price declines [Note 3] in stock investment positions from climate risks.

Credit risks (loans, bills, and bonds): Calculated accentuating change ratios of financial factors in existing models/evaluation tables using estimated carbon costs to analyze credit risks, probabilities of default, internal ratings, and expected losses.

Market risks (stock investments): Calculated impacts on company net values using estimated carbon costs and analyzed relative stock prices and losses from price declines.

Analysis results: Our investment and financing positions in "high-emission industries" and "high-emission enterprises listed by the Environmental Protection Administration" are shown in the chart below and hold low potential impacts on the capital adequacy ratio of Bank SinoPac at all timepoints under all scenarios.

Risk factor: Carbon cost payments

Base date: 2022/12/30 Unit: Million NTD Data Source：IEA、NGFS

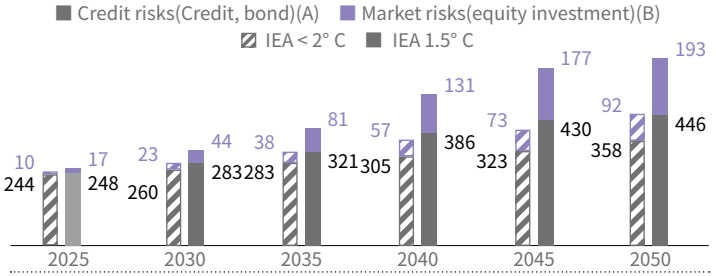
Scenario	Data Source	Business Scope	Investment and Financing Amounts	Credit risks: incremental expected losses from climate risks Market risks: Incremental losses from price declines from climate risks					
				2025	2030	2035	2040	2045	2050
< 2° C	IEA	Credit risks (loans, bills, and bonds)(A)	144,228	244	260	283	305	323	358
		Market risks (stock investments)(B)	12,293	10	23	38	57	73	92
		Overall investment and financing positions (=A+B)	146,520	254	282	321	362	396	450
	NGFS	Credit risks (loans, bills, and bonds)(A)	44,228	212	227	247	265	280	296
		Market risks (stock investments)(B)	2,293	10	22	35	49	65	81
		Overall investment and financing positions (=A+B)	146,520	221	248	282	314	345	377
1.5° C	IEA	Credit risks (loans, bills, and bonds)(A)	144,228	248	283	321	386	430	446
		Market risks (stock investments)(B)	2,293	17	44	81	131	177	193
		Overall investment and financing positions (=A+B)	146,520	265	326	402	517	606	639
	NGFS	Credit risks (loans, bills, and bonds)(A)	144,228	251	289	359	452	590	662
		Market risks (stock investments)(B)	2,293	20	49	109	191	299	367
		Overall investment and financing positions (=A+B)	146,520	271	338	468	643	890	1,029

Note 1: Additional carbon costs = (BAU carbon emissions - carbon emissions under warming scenario) x carbon prices under warming scenario. (1) "BAU carbon emissions" were estimated using IEA predicted carbon emission growth rates under "do nothing" scenario; (2) "Carbon emissions under warming scenario" were estimated using the SBT 1.5° C and 2° C carbon reduction pathways and carbon reduction targets of 2.5% and 4.2%; (3) "Carbon prices under warming scenario" were estimated using the NGFS or IEA 1.5° C and 2° C scenarios.

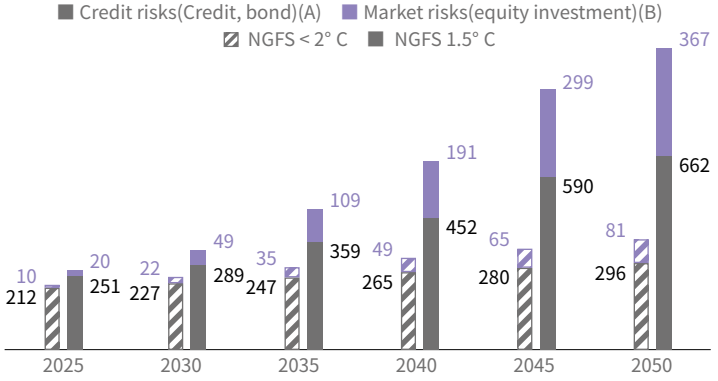
Note 2: Incremental changes in expected losses (ΔEL) = ΔPD × LGD × EAD. ΔPD is based on financial impacts from additional carbon costs. Changes from original PD values were calculated after using existing modes/assessment tools to calculate PD values under warming scenarios.

Note 3: Incremental losses from price declines = investment amount x loss ratio from price decline. (1) "Loss ratio from price decline" = impact on net value/predicted net value; (2) Impact on net value = additional carbon costs x (1 - tax rate).

Incremental expected losses by using predicted carbon price scenarios under IEA (Below 2°C and 1.5°C)



Incremental expected losses by using predicted carbon price scenarios under NGFS (Below 2°C and 1.5°C)



Downstream investment and financing clients: Industries with high loan exposures concentration ratios (Real Estate Industry for this year)

Assess the loan exposures concentration ratios exceeding 8% (Real estate industry for this year)

Credit risks (loans): Calculated accentuating change ratios of financial factors in existing models/evaluation tables using estimated carbon costs to analyze credit risks, probabilities of default, internal ratings, and expected losses.

Evaluation method: Referenced the "Climate Risk Management Manual for Domestic Banks" to assess advanced practices for climate resilience, using predicted carbon price scenarios under NGFS (Below 2 degrees and 1.5 degrees Celsius) and IEA (Below 2 degrees and 1.5 degrees Celsius) and estimated carbon costs[Note 1] to analyze incremental changes in expected losses[Note 2] from climate risks on loan bond positions.

Analysis results: Loan amounts for industries with high loan concentration ratios are shown in the chart below, with low potential impacts on the capital adequacy ratio of Bank SinoPac at all timepoints under all scenarios.

Risk factor: Carbon cost payments

Base date: 2022/12/30 Unit: Million NTD

Scenario	Data Source	Business Scope	Loan amounts	Credit risks: incremental expected losses from climate risks					
				2025	2030	2035	2040	2045	2050
< 2° C	IEA	Credit risks (loans)	634	37	37	37	37	38	38
	NGFS	Credit risks (loans)	634	34	34	34	35	35	35
1.5° C	IEA	Credit risks (loans)	634	37	37	37	38	38	38
	NGFS	Credit risks (loans)	634	37	37	37	38	39	39

Note 1: Additional carbon costs = (BAU carbon emissions - carbon emissions under warming scenario) x carbon prices under warming scenario. (1) "BAU carbon emissions" were estimated using IEA predicted carbon emission growth rates under "do nothing" scenario; (2) "Carbon emissions under warming scenario" were estimated using the SBT 1.5° C and 2° C carbon reduction pathways and carbon reduction targets of 2.5% and 4.2%; (3) "Carbon prices under warming scenario" were estimated using the NGFS or IEA 1.5° C and 2° C scenarios.

Note 2: Incremental changes in expected losses (ΔEL) = ΔPD × LGD × EAD. ΔPD is based on financial impacts from additional carbon costs. Changes from original PD values were calculated after using existing modes/assessment tools to calculate PD values under warming scenarios.

Downstream investment and financing clients: High power consumption and high emissions inspected by the Ministry of Economic Affairs

Assess the six major industries with high power consumption and high emissions inspected by the Ministry of Economic Affairs (Chemicals industry, Electrical and electronics industry, Metal manufacturing industry, Non-metal mineral products industry, Textile industry, and Paper industry)

Credit risks (loans): Calculated accentuating change ratios of financial factors in existing models/evaluation tables using estimated carbon costs to analyze credit risks, probabilities of default, internal ratings, and expected losses.

Evaluation method: Referenced the "Climate Risk Management Manual for Domestic Banks" to assess advanced practices for climate resilience, using predicted carbon price scenarios under NGFS (Below 2 degrees and 1.5 degrees Celsius) and IEA (Below 2 degrees and 1.5 degrees Celsius) and estimated carbon costs (Note 1) to analyze incremental changes in expected losses (Note 2) from climate risks on loan bond positions.

Analysis results: Loan amounts for the six major industries with high power consumption and high emissions inspected by the Ministry of Economic Affairs are shown in the chart below, with low potential impacts on the capital adequacy ratio of Bank SinoPac at all timepoints under all scenarios.

Risk factor: Carbon cost payments

Base date: 2022/12/30 Unit: Million NTD

Scenario	Data Source	Business Scope	Loan amounts	Credit risks: incremental expected losses from climate risks					
				2025	2030	2035	2040	2045	2050
< 2° C	IEA	Credit risks (loans)	159,314	211	220	229	237	243	259
	NGFS	Credit risks (loans)	159,314	155	164	172	179	185	194
1.5° C	IEA	Credit risks (loans)	159,314	221	229	244	268	284	294
	NGFS	Credit risks (loans)	159,314	221	231	259	287	332	360

Note 1: Additional carbon costs = (BAU carbon emissions - carbon emissions under warming scenario) x carbon prices under warming scenario. (1) "BAU carbon emissions" were estimated using IEA predicted carbon emission growth rates under "do nothing" scenario; (2) "Carbon emissions under warming scenario" were estimated using the SBT 1.5° C and 2° C carbon reduction pathways and carbon reduction targets of 2.5% and 4.2%; (3) "Carbon prices under warming scenario" were estimated using the NGFS or IEA 1.5° C and 2° C scenarios.

Note 2: Incremental changes in expected losses (ΔEL) = ΔPD × LGD × EAD. ΔPD is based on financial impacts from additional carbon costs. Changes from original PD values were calculated after using existing modes/assessment tools to calculate PD values under warming scenarios.

4.2.2 Energy Transition

Base date: 2022/12/30

Upstream suppliers

Procurement amounts from suppliers that are heavy electricity users.

Evaluation method: Compiled a list of suppliers for 2022 and identified the number of heavy electricity users and procurement amounts.

Analysis results: Carbon costs transferred from suppliers are shown in the chart below, around 0.0031% of total procurement at Bank SinoPac.

Risk factor: Ministry of Economic Affairs "Regulations for the Management of Setting up Renewable Energy Power Generation Equipment of Power Users above a Certain Contract Capacity"

Heavy electricity users	1	Procurement amounts	0.05 Million NTD	Proportion of total procurement	0.0031%

Downstream investment and financing clients

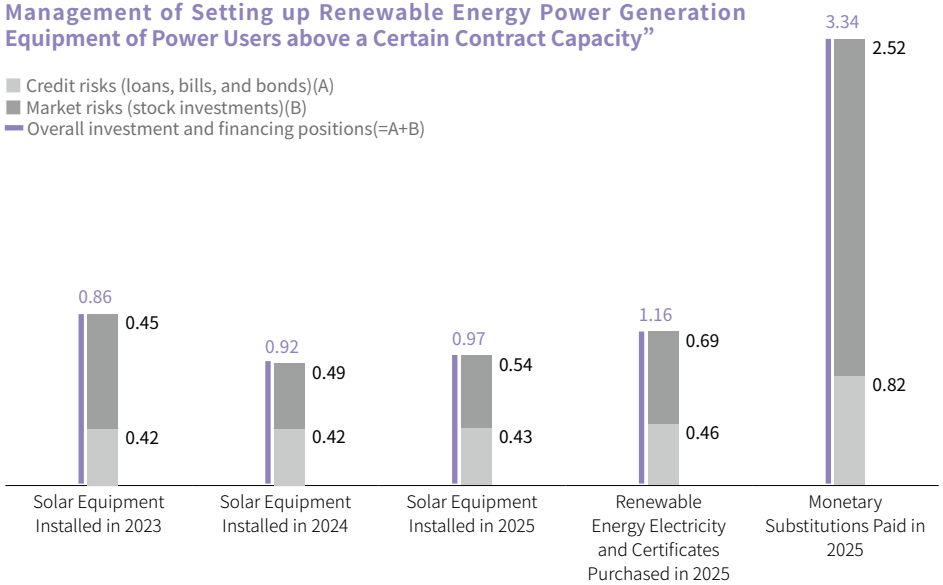
Evaluation method: Referenced the "Climate Risk Management Manual for Domestic Banks" to assess advanced practices for climate resilience, and evaluated additional procurement or construction costs [Note 1] from investment and financing clients from our list of heavy electricity users to determine incremental changes in expected losses [Note 2] on loan, bill, and bond positions from climate risks and incremental losses from price declines [Note 3] in stock investment positions from climate risks.

Credit risks (loans, bills, and bonds): Calculate accentuating change ratios of financial factors in existing model/evaluation table using estimated energy transformation costs to analyze credit risks, probabilities of default, internal ratings, and expected losses.

Market risks (stock investments): Calculate impacts on company net values using estimated energy transformation costs and analyze relative stock prices and losses from price declines.

Analysis results: Investment and financing amounts are shown in the chart below, with low potential impacts on the capital adequacy ratio of Bank SinoPac at all timepoints under all scenarios.

Risk factor: Ministry of Economic Affairs "Regulations for the Management of Setting up Renewable Energy Power Generation Equipment of Power Users above a Certain Contract Capacity"



Investment and Financing Amounts	Credit risks (loans, bills, and bonds)(A)	Market risks (stock investments)(B)	Overall investment and financing positions(=A+B)
	51,788	7,576	59,364

Base date: 2022/12/30 Unit: Million NTD

Note 1: Additional costs from energy transformation were calculated as 10% of said user's average contract capacities for the previous year. (1) Additional costs to install solar power equipment = (contract capacity x 10% x deductions for advance installations x solar equipment installation costs)/average cost amortization over 20 years; (2) Additional costs for purchasing renewable energy electricity and certificates = contract capacity x 10% x annual amount of electricity sold per KW of solar photovoltaic energy x price of solar photovoltaic certificates; (3) Additional costs for monetary substitutions = contract capacity x 10% x kWh/KW for monetary substitution x monetary substitution rate.

Note 2: Incremental changes in expected losses (ΔEL) = ΔPD × LGD × EAD. ΔPD is based on financial impacts from additional energy transformation costs. Changes from original PD values were calculated after using existing modes/assessment tools to calculate PD values under warming scenarios.

Note 3: Losses from price declines = investment amount x loss ratio from price decline. (1) "Loss ratio from price decline" = impact on net value/predicted net value; (2) Impact on net value = additional energy transformation costs x (1 - tax rate).

4.2.3 Net Zero Own Operations

Own operations

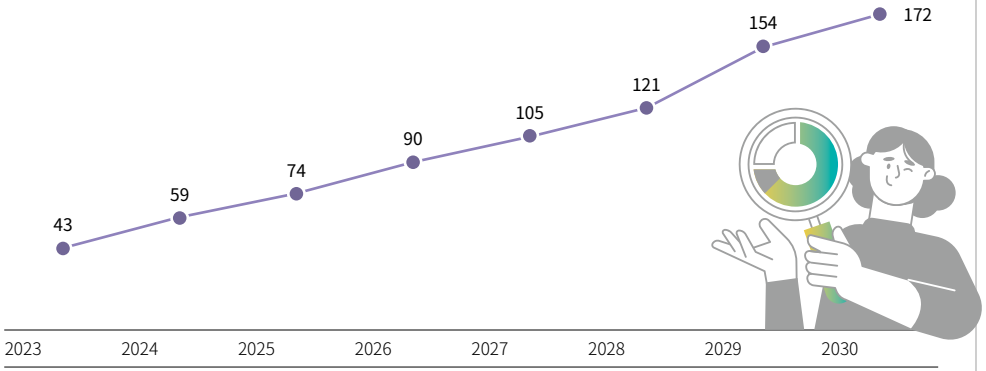
Own operations: Estimate potential financial impacts on own operations from low-carbon transformation risks based on the SinoPac Holdings target of net zero emissions from own operations by 2030.

Evaluation method: Referenced the "Climate Risk Management Manual for Domestic Banks" to assess advanced practices for climate resilience, evaluating potential financial impacts to Bank SinoPac from increased equipment replacement costs, green electricity procurement costs, renewable energy certificate costs, and external consulting costs for carbon reduction.

Analysis results: Low potential impacts on the capital adequacy ratio of Bank SinoPac at all timepoints.

Risk factor: Net zero own operations

Achieve net zero emissions from own operations by 2030



Potential Financial Impacts Unit: Million NTD

4.3 Scenario Analyses for Climate Opportunities

The net zero trend has spread from general industries to the financial industry. The Financial Supervisory Commission worked with the Environmental Protection Administration to release a sustainable development roadmap for exchange-listed and OTC-listed companies which stipulates that, starting in 2023, all exchange-listed and OTC-listed companies should disclose greenhouse gas inventory data in stages and complete verification by 2029. The financial industry launched the Green Finance Action Plan 3.0 to guide financial institutes in handling sustainable investment and financing, signing international sustainable principles or initiatives, and conducting sustainable finance evaluations; encourage corporations to focus on and implement ESG aspects; and build sustainable financial ecosystems. Bank SinoPac cooperates with SinoPac Holdings in actively promoting net zero actions and assisting collaborating vendors in establishing carbon reduction strategies. Our multifaceted developments include the following items:

Green related products and services

Services of Carbon Footprint Verification for core manufacturer	In response to supplier carbon management requirements, Bank SinoPac worked with external institutions to organize training for internal personnel supporting corporate carbon management processes, including Carbon Footprint Verification, verification services, and fulfillment of subsequent green energy-related needs, thereby reducing frictions of the clients during our process of achieving net zero emissions and smooth our carbon reduction transition.
Financing for emerging renewable energies	Taiwan is making every effort to promote renewable energy and aims to achieve 20% renewable energy electricity usage by 2025. Apart from solar energy, SinoPac has also developed projects and credit services related to energy storage equipment, geothermal energy, and biomass energy to provide corporations with comprehensive renewable energy options and energy plans.
Green power trading trust platform	To resolve corporation difficulties in obtaining green electricity, we utilized our own advantages in solar energy financing to establish a green electricity trading platform with payment trust mechanisms to actively match the needs of buyers, sellers, and power producers.
Green finance consulting services	In response to renewable energy installations and mergers, we actively develop and match buyer and seller needs in the market.
Promotion of green deposits	The Financial Supervisory Commission Green Finance Action Plan 3.0 hopes to fully exert financial energies and guide positive ESG actions. SinoPac provides green deposit services to corporations focused on ESG and Corporate Governance Evaluations. In the future, said funds will be invested in green industrial developments to achieve mutually beneficial outcomes that enable corporations to move toward green and carbon reduction actions and the financial industry will assist corporations with carbon reduction.

We exert our financial strength and use practical actions to make contributions to environmental sustainability. Please refer to our corporate website for more information on green products and services。

Global climate change risk management and net zero trends continue to accelerate. Taiwan issued "Taiwan's Pathway to Net-Zero Emissions in 2050" in March 2022, and the "Climate Change Response Act" was passed by the Legislative Yuan in January 2023 after a third reading; important stipulations include official incorporation of 2050 net zero targets in laws and levying of carbon fees on heavy carbon emitters with annual carbon emissions of more than 25,000 metric tons starting in 2024. Apart from domestic carbon cost risks, corporations will also be faced with carbon taxes and carbon inventory requirements under the Carbon Border Adjustment Mechanism (CBAM) for exported goods. In 2021, Bank SinoPac followed the example of SinoPac Holdings and used an industrial climate risk heatmap to target the "Industrial manufacturing –manufacture of basic metals and fabricated metal products " industry—which has moderate to high climate risks and the highest investment and financing amounts—for a trial program. In 2022, we expanded the scope of said program to nine high-emission industries and high-emission industries listed by the Environmental Protection Administration to simulate and estimate the additional costs required by investment and financing enterprises to respond to climate change risks; these costs were considered to be potential capital needs for said companies and business opportunities for Bank SinoPac. Estimates suggest that the overall market will be a 100-billion-dollar transformation business opportunity by 2025. We exert our industrial influence to act as a financer and plan to provide low-carbon transformation capital to our clients through issuing and investing in green bonds, or by providing loans to work with corporations on low-carbon transformations by exerting our financial strengths.

4.4 Analysis of Climate Scenarios

Under the directive of the Financial Supervisory Commission, the Bankers Association of the Republic of China (BAROC), the Joint Credit Information Center (JCIC), and 14 banks formed a task force to compile practices from different countries and develop scenario timelines and settings for three scenarios. Parameters for scenario settings were taken from the "Operational Plans for Climate Change Scenario Analyses by Domestic Banks" to determine changes on pre-tax profits and net values from corporate and individual expected losses at different timepoints under different scenario settings. Scenario timelines were set at 2030 and 2050. Three scenarios are as follows: "orderly" transition, "disorderly" transition, and "no policy." Orderly transition refers to an advance formulation of related policies to assist corporations in mitigating and responding to climate-related risks, and is a scenario with high transition risks and low physical risks. Disorderly transition is a scenario where effective climate risk policies are not formulated in advance; corporations have low transition risks during the earlier stages, but high physical risks in later stages due to delays in timely transition. The no policy scenario is a scenario where no climate risk policies were set at any time. Corporations have no transition risks, but are faced with higher physical risks.

Scenario Analysis Results from BAROC

		Orderly scenario		Disorderly scenario		No policy scenario	
		2030	2050	2030	2050	2030	2050
Proportion of expected losses to pre-tax profits	Corporations	42.44%	56.05%	39.61%	65.81%	38.57%	43.12%
	Individuals	5.42%	6.30%	8.13%	5.31%	5.93%	7.58%
Proportion of expected losses to net values	Corporations	5.32%	7.03%	4.97%	8.25%	4.84%	5.41%
	Individuals	0.68%	0.79%	1.02%	0.67%	0.74%	0.95%

Note : This figure is excluded the State-owned Enterprise.

CHAPTER 05

05

Climate Metrics and Targets

We at SinoPac are well aware of our responsibilities to local and global environments: We not only actively promote sustainable strategies and related targets, regularly review progress, and make rolling adjustments according to external environmental trends, but also hope to implement climate change mitigation and adaption processes as well as maintain normal and stable operations by setting climate-related metrics and targets. Furthermore, we strengthened links between incentives and climate performance to encourage contributions to climate commitments by our senior managers.

5.1 Climate Metrics and Targets

Faced with challenges from climate-related risks and opportunities, we adopted a pragmatic approach that begins with lowering our own carbon emissions through setting SBTs, gradually increasing use of green electricity, expanding financing for alternative energies, and issuing green bonds while gradually adjusting our investment and financing business strategies (for example, by focusing on and tracking financing for industries with high carbon emissions, supporting clean energies and innovative technologies, and assisting clients in reducing carbon emissions and facilitating low-carbon transformations) to expand coverage, discover climate-related opportunities, promote low-carbon transformations throughout our entire value chain, and achieve "net-zero emissions in own operations by 2030 and across all financial portfolios by 2050."

The SinoPac Group actively completed the submission of Science Based Targets (SBTs) and continues to implement internal carbon pricing mechanisms.

Climate-Related Indicators		Short-Term Targets (1 Year)	Mid-Term Targets (2-3 Years)	Long-Term Targets (3-5 Years)
Climate Governance	Establishment of remuneration linkage mechanism	▸ Incorporate ESG net zero and carbon reduction targets into the president's annual performance objective and formulate related proportion.	▸ Strengthen the connection between remuneration and sustainable performance for executive managers, and formulate related proportion.	▸ Strengthen the connection between connection between and sustainable performance, and expand implementation targets to executives.
	Climate-related education and training for Board members	▸ Require Board members to undergo at least 3 hours of annual climate education and training each year.	▸ Require Board members to undergo at least 3 hours of annual climate education and training each year.	▸ Require Board members to undergo at least 5 hours of annual climate education and training each year.
Climate Opportunities	Balance of renewable energy financing loans at Bank SinoPac	▸ NT$ 90 billion	▸ NT$ 110 billion	▸ Continue to increase the scope of business related to renewable energy industries and related climate targets.
Green Operations		▸ Set a reduction target of 2% for carbon reductions and other material environmental topics, using 2021 as base year. ▸ Complete inventory of 8 Scope 3 items and obtain external verification	▸ Set a reduction target of 4% for carbon reductions and other material environmental topics, using 2021 as base year. ▸ Complete inventory of 10 Scope 3 items and obtain external verification	▸ Set a reduction target of 6% for carbon reductions and other material environmental topics, using 2021 as base year. ▸ Complete 100% inventory of 10 Scope 3 items and obtain external verification
Capital Allocation	Issue green, social responsibility, and sustainability bonds (GSS bonds)	▸ Continue to evaluate GSS bond issues and aim to increase issuance by NT$ 2 billion each year.	▸ Continue to evaluate GSS bond issues and aim to increase issuance by NT$ 2 billion each year.	▸ Become leading GSS bond issuer in the financial industry.

Climate-Related Indicators		Short-Term Targets (1 Year)	Mid-Term Targets (2-3 Years)	Long-Term Targets (3-5 Years)
Internal Carbon Pricing		▸ Review/adjust internal carbon pricing mechanisms.	▸ Review/adjust internal carbon pricing mechanisms.	▸ Continue to implement internal carbon pricing mechanisms.
Climate Risk Management	Control and monitor risk appetite for stranded asset risks	▸ Establish mechanisms to control and monitor risk appetite for stranded asset risks-Inventory internal data sources and definitions for stranded assets.	▸ Establish mechanisms to control and monitor risk appetite for stranded asset risks-Build database of stranded assets to establish mechanisms for controlling and monitoring risk appetite for stranded asset risks. ▸ Establish risk appetite limits and targets for stranded asset risks-Work with all subsidiaries to establish risk appetite limits for stranded asset risks, and use these limits to formulate key metrics and short/medium/long-term targets.	▸ Establish integrated climate risk management dashboards and continue to manage and monitor metrics and targets.
Climate Risk Management	Incorporate and continue to strengthen climate risk management	▸ Continue to strengthen disclosures of climate-related metrics for TCFD governance/strategy/risk management.	▸ Set short/medium/long-term targets for investment and financing portfolios based on risk appetite to strengthen the three lines of defense for risk management.	▸ Establish integrated climate risk management dashboards and continue to manage and monitor metrics and targets. ▸ Incorporate climate risk considerations into other risk management mechanisms, including stress tests for credit risks, market risks (such as Climate VaR), liquidity risks, and operational risks.
Physical Risks	Real estate collateral	▸ Incorporate potential climate disaster risks for areas where collateral are located into our "Financial Business Manual-Valuation Section" and confirm physical risk information and climate risk levels under different climate change scenarios for each case.	▸ Incorporate risk information and risk levels into credit assessment processes and regulations to serve as a basis for setting credit conditions and review levels, formulating differentiated management measures, establishing monitoring mechanisms for physical risks, and aiding understanding of collateral risk level distributions.	▸ Monitor collateral risk distributions for all cases, set limits for high-risk areas based on climate change conditions, and continue to make refinements and adjustments.
	Locations of investment and financing operations	▸ Include physical risks in review processes and work with SinoPac Holdings to plan and establish a climate risk database to serve as a timely reference for loan approvals and loan ratios.	▸ Continue to refine analyses of quantitative impacts from physical risk hazards, vulnerabilities, and exposures using the climate risk database, set risk levels based on potential disaster risk information, and formulate ratios and limits for high-risk investments.	
Transition Risks	High-emission industries	▸ Formulate a list of group-level high climate risks and high-emission industries and revise guidelines for SinoPac Holdings and all subsidiaries to complete business standards and statistical systems.	▸ Disclose client carbon emissions/carbon intensities in credit reports for listed high-emission industries/enterprises, check whether clients have signed SBTs, and confirm client response strategies to transition risks and low-carbon transformation strategic plans. ▸ Continue to be attentive to client response strategies to transition risks and low-carbon transformation strategic plans to strengthen client engagement regarding carbon reduction actions.	
Climate Engagement	1 Internal Engagement			
	Strengthen employee ESG awareness	▸ Develop and launch one pilot net zero awareness testing mechanism. ▸ Organize at least 2 training events on topics related to climate awareness and links to net zero initiatives. The participation rate of employees is 100%.	▸ Launch one net zero awareness testing mechanism. ▸ Promote net zero awareness training courses and online courses to extend employee understanding of net zero awareness and strengthen fundamental capabilities. Conduct at least 2 classes on net zero related knowledge / concepts / new trends, etc.	▸ Enhance net zero testing scores by 20%. ▸ Promote net zero awareness training courses and online courses to extend employee understanding of net zero awareness and strengthen fundamental capabilities.
	ESG training courses	▸ Design and implement thematic courses that can be incorporated into training courses of all levels and positions. Incorporate net zero themes in new employee training courses for 2023, with a coverage rate of 70% at Bank SinoPac.	▸ Implement thematic courses that can be incorporated into training courses of all levels and positions continuously, and plan ESG program covering international sustainability issues such as net zero, carbon reduction, and climate risk.	▸ Implement thematic courses that can be incorporated into training courses of all levels and positions continuously, launch ESG program to encourage employees study independently , with a coverage rate of 20% per year.
	Daily ESG implementations	▸ Organize public welfare events and idea competition which is related to net zero target promotion, carbon reduction to enhance employee awareness and actions in daily life. ▸ Host 1 activity.	▸ Organize public welfare events and idea competition which is related to net zero target promotion, carbon reduction to enhance employee awareness and actions in daily life. ▸ Plan and implement Sustainable Education Day activities before 2025, and achieve participation from more than 700 employees and their family members.	▸ Organize public welfare events and idea competition which is related to net zero target promotion, carbon reduction to enhance employee awareness and actions in daily life. ▸ Implement Sustainable Education Day activities before 2027, and achieve participation from more than 1,400 employees and their family members.

Climate-Related Indicators		Short-Term Targets (1 Year)	Mid-Term Targets (2-3 Years)	Long-Term Targets (3-5 Years)
Climate Engagement	② Client engagement			
	Investment target communication	▸ Communicate with investment targets and learn about carbon emissions; plan to complete engagement with 3 targets. ▸ Establish target carbon risk grading, management, and due diligence mechanisms.	▸ Select targets for trial engagement and communication, then compile information on industrial carbon emissions, carbon reduction plans, and capital requirements. ▸ Implement carbon risk grading mechanisms for targets and clients.	▸ Ongoing net zero communication program
	Enhance climate awareness of investment targets	▸ Enhance sustainability awareness by requiring investment targets to fill out climate awareness surveys. ▸ Communicate climate-related issues through investor conferences/shareholders meetings of investment targets ▸ Strengthen climate awareness education and training for internal employees	▸ Continue to strengthen communication on climate issues with investment targets ▸ Strengthen climate awareness education and training for internal employees	▸ Continue to strengthen communication on climate issues, and organize external forums/symposiums and internal employee training
	Communicate with credit clients	▸ Establish assessment/due diligence mechanisms for carbon risks and opportunities of projects and clients.	▸ Establish assessment/due diligence mechanisms for carbon risks and opportunities of projects and clients; select trial projects; compile information on industrial carbon emissions, carbon reduction plans, and capital requirements; and initiate net zero communication program for high-emission industries. ▸ Achieve communication rate (communicated clients/total number of clients requiring communication) of 25% for credit clients in high-emission industries based on implementation conditions and adjust targets on a rolling basis.	▸ Extend due diligence mechanisms to establish carbon risk grading mechanisms for targets and clients, and establish a net zero communication program. ▸ Achieve communication rate (communicated clients/total number of clients requiring communication) of 50% for credit clients in high-emission industries based on implementation conditions and adjust targets on a rolling basis.
	Raise climate awareness of credit clients	▸ Continue to implement carbon inventory services in collaboration with BSI and other external institutes, and survey specific SME industries based on SBTs and consultant assessments of carbon risks and opportunities.	▸ Establish appropriate SME investigation mechanisms and conduct rolling adjustments of SME engagement interview survey content based on carbon inventory and communication program implementations for exchange-listed and OTC-listed companies in high-carbon industries. ▸ Establish corresponding notation fields within the system to record client climate awareness levels for future reviews of interview survey completion.	▸ Promote interview surveys, inventory SME clients in high-emission industries, and formulate progress and proportions of annual interviews. ▸ Expand promotions of carbon-reducing financial services for high-carbon SME clients, assess the feasibility of developing consulting services, and encourage the formulation of carbon reduction plans.
	Number of ESG lectures/forums	▸ 2 sessions	▸ 2 events a year	▸ 2 events a year
	Establish green financing standards and credit rating models	① Complete incorporation of TESG training and plans into credit investigation systems. ② Check model validity based on collected ESG data.	▸ Continue to calibrate model validity based on collected ESG data, and establish comparability, verifiability, and reliability of ESG risk quantitative assessment tools.	▸ Integrate ESG risk quantitative assessment scores and traditional credit rating indicators (TCRI) into risk matrices to build green credit rating models.
	Prevalence of "Carbon Footprint Calculator" functions	▸ Implement functions for 5% active debit cards.	▸ Expand functions to designated credit cards; implement functions for 5% active debit cards and active specific credit cards.	▸ Expand functions to Mastercard credit cards; implement functions for 5% active debit cards and active Mastercard credit cards.
	Enhance ESG knowledge of retail clients	▸ Strengthen information disclosures and marketing activities related to ESG/green products for retail clients.	▸ Promote ESG/green financial knowledge in retail clients.	▸ Strengthen ESG/green financial knowledge in retail clients.
	Number of wealth management clients who participated in lectures	▸ 300 participants	▸ 5% growth compared with the previous year	
Greenhouse Gas Emissions and Energy Usage	Incorporate greenhouse gas inventories and verification scope into overseas locations	▸ Achieve 100% greenhouse gas inventory and verification coverage rate at overseas locations.	▸ Continue to maintain 100% greenhouse gas inventory and verification coverage rate at domestic and overseas locations.	▸ Continue to maintain 100% greenhouse gas inventory and verification coverage rate at domestic and overseas locations.
	Energy Usage	▸ Achieve 10% renewable energy use in own operations.	▸ Achieve 25% renewable energy use in own operations.	▸ Achieve 45% renewable energy use in own operations.

5.2 Climate Performance and Remuneration Systems

The enhancement of corporate values is not only focus on financial performance, but also becomes an important way to enhance corporate value by incorporating climate performance into corporate operations. Therefore, Bank SinoPac has incorporated the implementation and deepening of climate risks into bonus indicators and long-term remuneration system for executive managers. These measures not only motivate managers to actively respond to climate change, but also enhance awareness and response capabilities to climate risks.

Bank SinoPac understands the importance of climate performance, and believes that this is not a short-term or phase target, but a mission. To achieve sustainable development goals, Bank SinoPac have implemented practical sustainability strategies, set specific short, medium, and long-term targets and review and track the implementations of various indicators and targets quarterly. To ensure constant progress toward our sustainable development targets through continuous iteration.

Related indicators and ratios are shown in the following table:

Climate Performance Targets

Management Indicators	Weight Ratio	Description
Achievement of net zero promotion targets	**10%**	▸ The annual performance target of president for 2022 was indicator of the setting of net zero economy(10%); this indicator was connect to bonuses for the year.
Climate change mitigation and adaption	**9.5~10%**	▸ To promote climate change mitigation and adaption, climate-related KPIs are included in executive manager with related responsibilities: 1 Practice responsible loaning and sustainable finance (9.5%) 2 Practice responsible investment and promote issuance of GSS bonds (10%) 3 Expand green procurement, expand scope of greenhouse gases and environmental/energy management systems, and establish systemic collection and application of environmental sustainability data (10%)

5.3 Greenhouse Gas Emissions

Bank SinoPac follows the GHG emission reduction target of SinoPac Holdings (base year: 2021) and conducts GHG emission inventory. Scope 1 emissions mainly include GHG generated by refrigerants of air-conditioners, water dispensers, dehumidifiers, refrigerators, and emissions from gasoline, and diesel of self-owned vehicles (official vehicles), generator diesel fuel, and septic manure. The main Scope 2 emission is mainly purchased electricity.

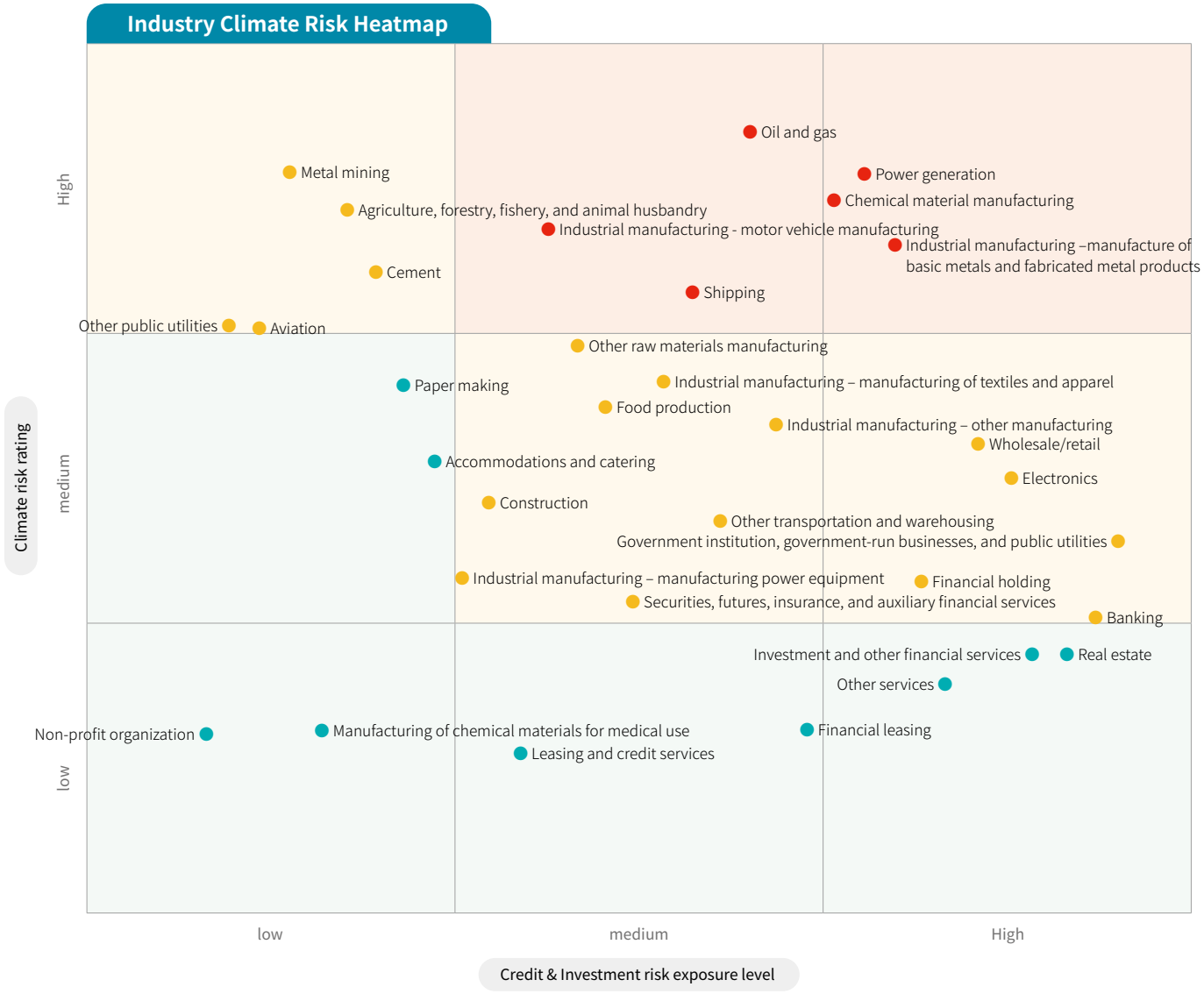
Category	2021		2022	
	Scope 1	Scope 2	Scope 1	Scope 2
GHG emissions (t-CO_2e)	835.51	13,196.85	826.43	12,739.34
Emission intensity (NT$, per million of revenue)	0.03	0.43	0.02	0.35

Note :
- Externally verified Scope 1 and 2 emissions for domestic sites amounted to 12,956.44 tCO_2e. The remainder were estimated from non-verified emissions from overseas sites, which amounted to 1,075.92 tCO_2e (7.67%).
- Scope 1 and 2 emissions for domestic and foreign sites have been 100% verified by external parties.

5.4 Exposure to Industries with High Climate Risks

Bank SinoPac inventoried the credit and investment businesses of subsidiaries over the past two years to assess the balance of risk exposures for high-risk industries. We compiled individual climate risk assessment reports released by Moody's and SASB and referenced TCFD and government regulations to evaluate the impacts of transition and physical risks on individual industries, classify industrial climate risk levels, and determine overall industrial investment and financing exposures (not including securities financing/green energy loans/green bonds/sustainability bonds/social responsibility bonds) to establish a climate risk heatmap (as shown in the right figure).

The industrial climate risk heatmap established by SinoPac Holdings includes 11 industries with high climate risks, 9 of which were high-emission industries (Oil & gas, Power generation, Metal mining, Chemical material manufacturing, Industrial manufacturing - motor vehicle manufacturing, Industrial manufacturing - manufacture of basic metals and fabricated metal products, Cement, Shipping, and Aviation), and 2 of which were industries with high physical risks (Agriculture, forestry, fishing, and animal husbandry; and Other public utility services). Additionally, we also analyzed the balance of industrial exposures for high-emission enterprises listed by the Environmental Protection Administration. Exposures for heatmap industries and high-emission enterprises listed by the Environmental Protection Administration are disclosed as follows.



Exposures for heatmap industries and high-emission enterprises listed by the Environmental Protection Administration are disclosed as follows (not including green energy loans/green bonds/ sustainability bonds/social responsibility bonds). Exposures and ratios for each industry are shown in the table below.

Heatmap industries with high climate risks

According to the industrial climate risk heatmap established by SinoPac Holdings, overall investment and financing amounts in the 11 industries with high climate risks at year-end 2022 was NT$ 130,461 million, around 11.13% of overall investment and financing amounts at Bank SinoPac (not including green energy loans/green bonds/sustainability bonds/social responsibility bonds).

Our exposures to the oil & gas industry and power generation industry in 2022 increased over the previous year, mainly as we provided short-term loans to public enterprises such as Chinese Petroleum Corporation and Taiwan Power Company. We have therefore separately disclosed our exposures to industries with high climate risks after deducting the investment and financing amounts of Chinese Petroleum Corporation and Taiwan Power Company.

Heatmap industries with high climate risks	Industries	Heatmap industries with high climate risks (excluding Taiwan Power Company and Chinese Petroleum Corporation)
8,378 17,516	Oil & gas industry	8,377 8,717
20,665 32,826	Power generation industry	15,656 19,519
927 1,298	Metal mining industry	927 1,298
26,109 22,306	Chemical material manufacturing industry	26,109 22,306
2,034 2,262	Agriculture, forestry, fishing, and animal husbandry industry	2,034 2,262
9,120 9,749	Industrial manufacturing - motor vehicle manufacturing industry	9,120 9,749
35,011 26,769	Industrial manufacturing - manufacture of basic metals and fabricated metal products industry	35,011 26,769
2,929 3,137	Cement industry	2,929 3,137
16,216 13,325	Shipping industry	16,216 13,325
1,352 994	Aviation industry	1,352 994
494 279	Other public utilities industry	494 279
123,234 130,461	Total exposures	118,225 108,355

Credit (including FA) and investments in 2021 Credit (including FA) and investments in 2022

Unit: Million NTD

High-emission enterprises listed by the Environmental Protection Administration

Overall investment and financing amounts in the high-emission enterprises listed by the Environmental Protection Administration at year-end 2022 was NT$ 48,652 million, around 4.15% of overall investment and financing amounts at Bank SinoPac (not including green energy loans/green bonds/sustainability bonds/social responsibility bonds).

Our exposures to the oil & gas industry and electricity industry in 2022 increased over the previous year, mainly as we provided short-term loans to public enterprises such as Chinese Petroleum Corporation and Taiwan Power Company. We have therefore separately disclosed our exposures to high-emission enterprises listed by the Environmental Protection Administration after deducting the investment and financing amounts provided to Chinese Petroleum Corporation and Taiwan Power Company.

Heatmap industries with high climate risks	Industries	High-emission enterprises listed by the Environmental Protection Administration (excluding Taiwan Power Company and Chinese Petroleum Corporation):
2,695 4,143	Chemical material manufacturing industry	2,695 4,142
2,019 1,669	Cement industry	2,019 1,669
39 218	Wholesale/retail industry	39 218
500 1,418	Other raw materials manufacturing industries	500 1,418
0 9,446	Oil & gas industry	0 648
150 150	Food Production industry	150 150
5,503 13,790	Power generation industry	494 483
4,018 1,575	Industrial manufacturing - manufacture of basic metals and fabricated metal products industry	4,018 1,575
631 3,282	Industrial manufacturing - textiles and garment manufacturing industry	631 3,282
7,565 11,964	Electronics industry	7,565 11,964
869 999	Construction industry	869 999
23,988 48,652	Total exposures	18,979 26,546

Credit (including FA) and investments in 2021 Credit (including FA) and investments in 2022

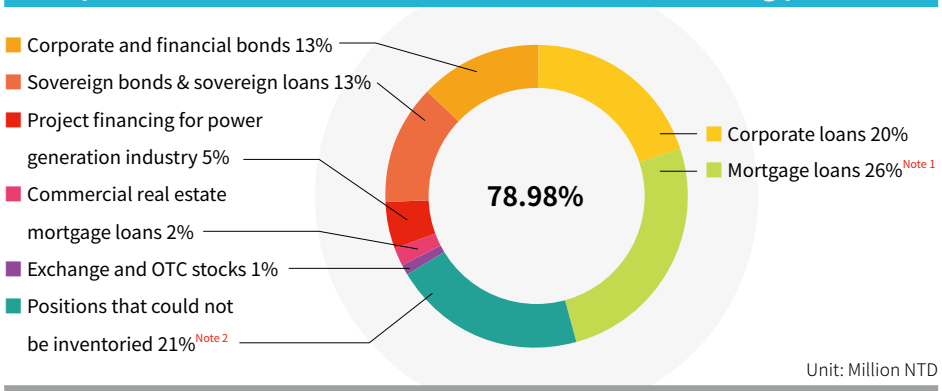
Unit: Million NTD

5.5 Emissions from Investment and Financing Portfolio

Bank SinoPac calculated emissions using the methodology of the Global GHG Accounting and Reporting Standard released by the international organization "Partnership for Carbon Accounting Financials (PCAF)" to inventory asset classes, achieving an inventory coverage scope of 78.98% (proportion of inventoried positions to overall investment and financing positions).

We conducted Scope 3 inventories on our investment and financing positions as of 2022/12/30. The financed emissions of our investment and financing positions were 4.83 million tCO_2e and our overall carbon footprint was 3.3 tCO_2e/million investment and financing.

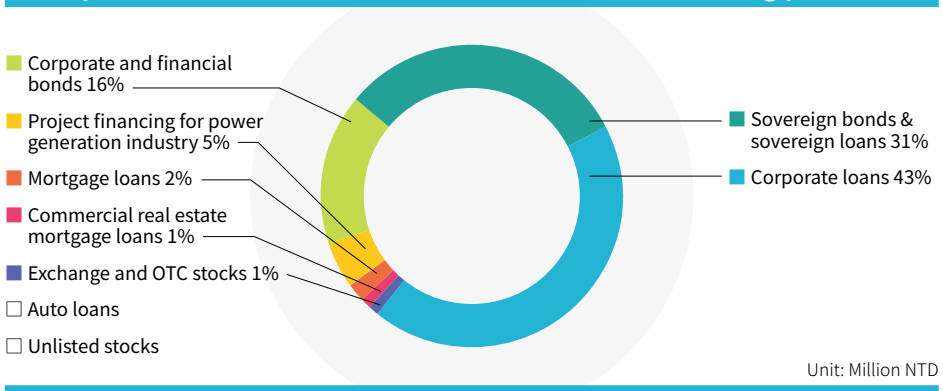
Scope 3 financed emissions for investment and financing positions



Unit: Million NTD

Asset Class	Investment and Financing Amounts	Proportion of Overall Investment and Financing Amounts
Mortgage loans[Note 1]	480,402	25.6%
Corporate loans	378,092	20.1%
Corporate and financial bonds	236,918	12.6%
Sovereign bonds & sovereign loans	246,469	13.1%
Project financing for power generation industry	84,936	4.5%
Commercial real estate mortgage loans	32,240	1.7%
Exchange and OTC stocks	16,503	0.9%
Auto loans	6,961	0.4%
Unlisted stocks	1,187	0.1%
Inventoried positions	**1,483,708**	**79.0%**
Positions that could not be inventoried[Note 2]	**394,826**	**21.0%**
Overall investment and financing amounts	**1,878,534**	**100.0%**

Scope 3 financed emissions for investment and financing positions



Unit: Million NTD

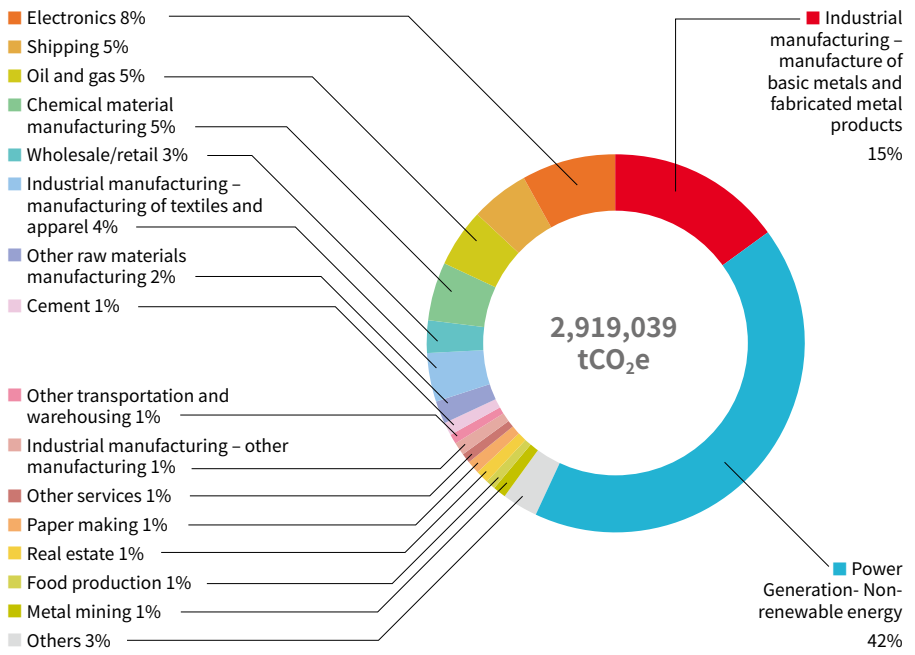
Asset Class	Investment and Financing Amounts (Million NTD)	Financed Emissions (tCO_2e)	Carbon Footprint (tCO_2e/million investment and financing)	Data Quality Score (1: best, 5: worst)
Corporate loans	378,092	2,092,570	5.5	3.5
Sovereign bonds & sovereign loans	246,469	1,489,477	6.0	2.0
Corporate and financial bonds	236,918	794,013	3.4	2.2
Project financing for power generation industry	84,936	265,097	3.1	3.0
Mortgage loans	480,402	109,187	0.2	4.0
Commercial real estate mortgage loans	32,240	41,104	1.3	4.0
Exchange and OTC stocks	16,503	30,522	1.8	1.0
Auto loans	6,961	8,464	1.2	3.4
Unlisted stocks	1,187	1,934	1.6	3.4
Total	**1,483,708**	**4,832,369**	**3.3**	**3.2**

Note 1: According to international PCAF standards, mortgage loans include mortgages for house purchases and refinancing, but not mortgages that were not used for house purchases, or loans for housing construction and renovations.
Note 2: These positions could not be inventoried as PCAF has not released related technical documents (including green investment and financing, personal loans, derivatives, funds, REITs, and MBS) or because some inventory information was unavailable.

Financed emissions for specific investment and financing assets

By industry

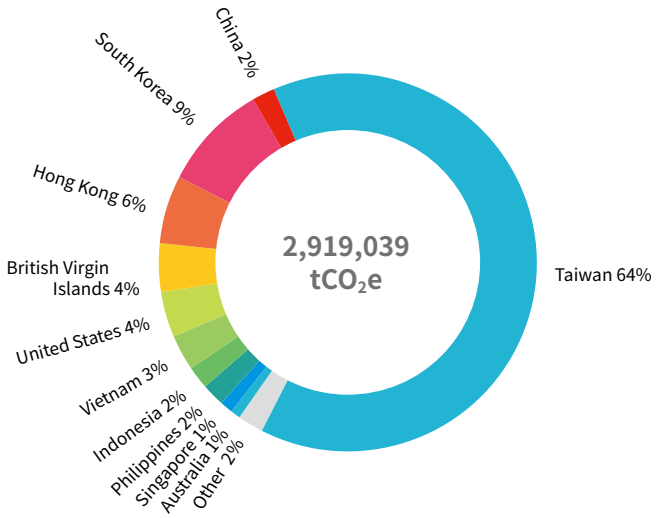
corporate loans, exchange and OTC stocks, unlisted stocks, and corporate and financial bonds



- Power Generation- Non-renewable energy
- Industrial manufacturing –manufacture of basic metals and fabricated metal products
- Electronics
- Shipping
- Oil and gas
- Chemical material manufacturing
- Wholesale/retail
- Industrial manufacturing – manufacturing of textiles and apparel
- Other raw materials
- manufacturing
- Cement
- Other transportation and warehousing
- Industrial manufacturing – other manufacturing
- Other services
- Paper making
- Real estate
- Food production
- Metal mining
- Industrial manufacturing - motor vehicle manufacturing
- Aviation
- Construction
- Agriculture, forestry, fishery, and animal husbandry
- Power Generation – Renewable energy
- Industrial manufacturing – manufacturing power equipment
- Investment and other financial services
- Accommodations and catering
- Leasing and credit services
- Banking
- Financial holding
- Manufacturing of chemical materials for medical use
- Financial leasing
- Securities, futures, insurance, and auxiliary financial services
- Government institution, government-run businesses, and public utilities
- Other public utilities
- Non-profit organization

By country

corporate loans, exchange and OTC stocks, unlisted stocks, and corporate and financial bonds



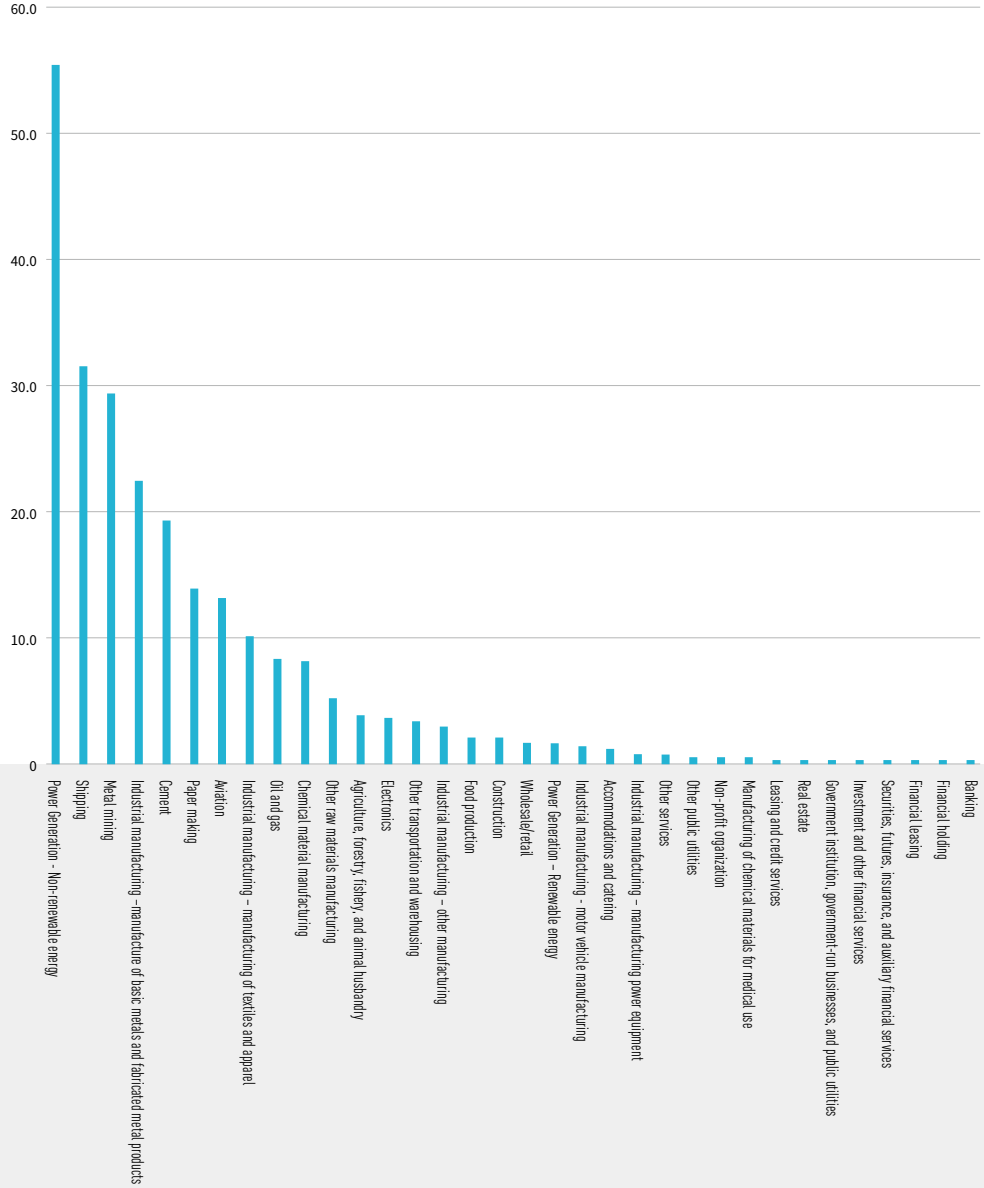
- Taiwan
- China
- South Korea
- Hong Kong
- British Virgin Islands
- United States
- Vietnam
- Indonesia
- Philippines
- Singapore
- Australia
- India
- Canada
- Japan
- Cayman Islands
- Malaysia
- Thailand
- Seychelles
- Netherlands
- Panama
- Cambodia
- United Arab Emirates
- Switzerland
- Cyprus
- Denmark
- United Kingdom
- Jersey Island
- Mexico
- Ireland
- Samoa
- Saint Vincent
- Germany
- New Zealand
- Saudi Arabia
- Spain
- Macau
- France
- Italy
- International Organization
- Luxembourg
- Chile
- Marshall Islands
- Myanmar
- Bahrain
- Qatar
- Anguilla
- Vanuatu
- Laos
- Liberia

Carbon footprints for specific investment and financing assets

By industry

tCO_2e/investment and financing amounts (Million NTD)

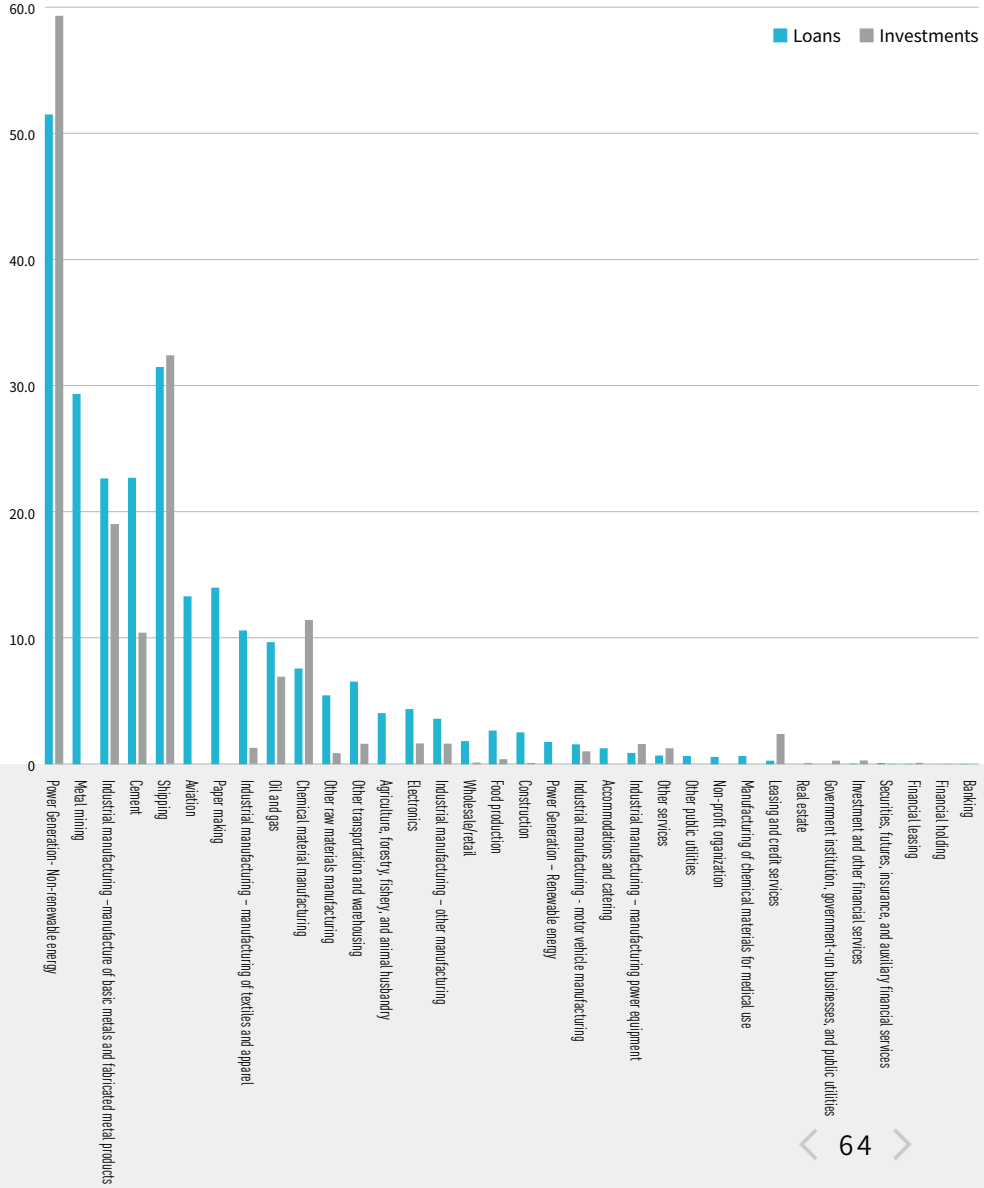
corporate loans, exchange and OTC stocks, unlisted stocks, and corporate and financial bonds



By asset and industry

tCO_2e/investment and financing amounts (Million NTD)

corporate loans, exchange and OTC stocks, unlisted stocks, and corporate and financial bonds



5.6 Internal Carbon Pricing

Bank SinoPac adheres to the SinoPac Holdings principle of raising climate awareness and promoting low-carbon transformations" and supports sustainable trends, while implementing carbon reduction management mechanisms. The company introduced ICP in 2022, by improving energy efficiency and reducing carbon emissions, it raises carbon reduction awareness and changes internal behaviors within the company.

As a financial institution, our (Scope 2) carbon emissions mainly include greenhouse gases from electricity consumption. SinoPac Holdings referenced the ICP of domestic and foreign companies to benchmark Scope 2 emissions to evaluate the effectiveness of energy and carbon reduction activities at all operating sites, while also considering hidden carbon costs and benefits. In recent years, our average cost to reduce 1 ton of carbon emissions was NT$ 5,000/tCO_2e. We used this price as a reference for internal carbon pricing and calculated our shadow price. Our ICP mechanisms were piloted in a Bank SinoPac building and evaluated our electricity reduction efficiency based on our carbon reduction targets to calculate carbon prices for items that fell below standards and carbon income for items that exceeded standards. Each year, we use the carbon reduction progress of our subsidiaries to calculate our carbon costs and income to determine the best action plans, formulate carbon reduction plans, and achieve actual carbon reduction effects. Bank SinoPac will continue to work with SinoPac Holdings, as well as adhere to SBTs and international carbon pricing trends, to make rolling adjustments to internal carbon prices so that we can gradually establish links to our net-zero operation strategies, and expand our the scope of application.

5.7 Water Usage and Waste Management

Water Resource Management

The water resources consumed at Bank SinoPac were all sourced from tap water, and mainly used for drinking, air-conditioning, and cleaning. There is no groundwater or other sources of water supply. In 2022, the overall water consumption was 131,506 cubic meters. Water consumption per capita was 20.07 cubic meters. After replacing air-conditioner cooling towers, adding sensor-activated faucets, and adjusting air-conditioner condensate temperatures, we continued to promote water conservation measures to achieve our target of reducing water consumption.

Water Resource Management Criteria	2022
Total water consumption	131,506 cubic meters
Per-capita Water consumption (water consumption intensity) Note	20.07 cubic meters/person
Data coverage	100%

Note: The number of employees refers to full-time domestic and overseas employees, excluding dispatched employees.

Waste Management

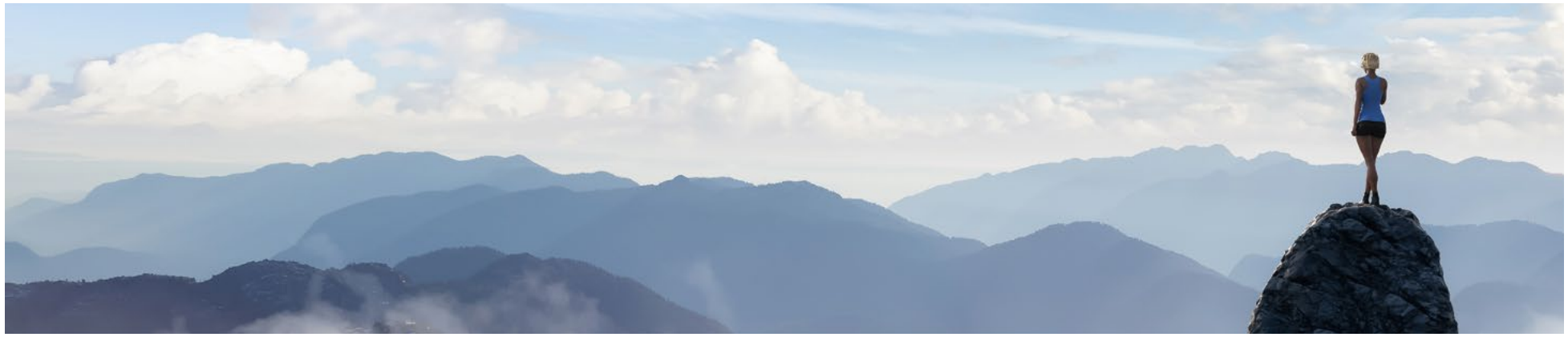
The main type of waste generated by Bank SinoPac is domestic waste. Recyclable waste is divided into four categories: paper, bottles, iron and aluminum cans, and IT equipment. All general and recyclable waste is shipped by qualified contractors to incinerators or recycling sites for disposal . The paper waste is collected and managed by the responsible units of the Company and handled under the document destruction rules before being handed over to the paper manufacturer for disposal as recycled paper raw material. The waste of electronic product waste is handled under internal information safety rules, and any digital data related to customer information is also kept secure and confidential and destroyed in accordance with the internal rules and procedures. Starting in 2019, all waste generated in our five self-owned buildings is weighed. An additional building, the Xingda food safety building was included in 2020, and coverage was expanded to all domestic operational sites in 2021 to achieve a coverage rate of 100%. Bank SinoPac is working with SinoPac Holdings to actively set specific waste reduction goals and implement relevant actions.

Type of Waste (Metric Tons)		2022
Recyclable waste [Note 1]	Paper/bottles/iron and aluminum cans	117.63 (18.45+99.18)
	Electronic waste (Computers/monitors/printers)	0.19
General industrial waste [Note 2]	Incineration process volume	233.19
	Landfill volume	0
Total waste [Note 3]		351.01
Data coverage rate (Calculated using employee numbers) [Note 4]		100%

Note 1: Recyclable waste was handled by qualified vendors. Starting in 2021, SinoPac Holdings began tracking recyclable waste. Paper waste (18.45 tons in 2022) was delivered to paper manufacturers for pulping and reuse, and we will continue to track other types of recyclable waste.
Note 2: General industrial waste was handled mainly by qualified vendors and incinerated by locally outsourced vendors. All incineration plants are equipped with waste heat recovery power generation devices.
Note 3: Waste amounts for 2022 included total waste from all domestic operational sites.
Note 4: Calculated using only domestic full-time employees for 2022; temporary employees and overseas employees were excluded.

CHAPTER 06

Future Outlook



Future Outlook

Bank SinoPac adheres to the sustainable vision and development blueprint of our parent company, SinoPac Holdings. We have established a "Sustainable Development Taskforce" which continues to be attentive to operational risks and opportunities caused by climate change, and sets targets to achieve our sustainability commitment to "Mitigation and Adaptation to Climate Change." This report is the first TCFD report issued by Bank SinoPac, disclosing climate-related financial information based on the four fundamental TCFD principles (Governance, Strategy, Risk Management, and Metrics and Targets) to provide more detailed information for all stakeholders.

During the process of implementing the four TCFD aspects, we realized that the impacts of climate change on corporate operations and financial institutes cannot be underestimated. Therefore, we exerted our influence in green finance to establish assessment mechanisms and periodically review impacts to predict possible operational risks. Our product and business manuals have incorporated ESG issues into analysis and decision-making processes, include inspection conditions for clients and principles for corresponding preferential interest rates, encourage clients to enhance carbon reduction technologies and maintain market competitiveness, avoid improper use, strengthen engagement with investment and financing targets, review whether clients have formulated transformation plans, and encourage and assist our clients in disclosing carbon emissions. Internally, we proactively develop and promote green products and services, continue to strengthen links between personnel appraisal standards and climate performance, commit to and set SBTs, implement internal carbon pricing mechanisms, raise renewable energy ratios, and calculate scope 3 carbon inventories for our investment and financing portfolios. We established our corporate net zero targets in March 2022, pledged to achieve net zero emissions in our own operations by 2030 and across our entire asset portfolios by 2050, and formulated many net zero policies, contributing to environmental sustainability through practical actions.

In line with global net zero trends and targets, we constantly refine our climate risk management methods and continue to revise our investment and financing structure to achieve low-carbon economic developments. We also analyze short, medium, and long-term impacts and responses to accelerate mitigation and adaption actions, increase climate resilience, and provide a diverse variety of low-carbon financial products to become the best support for our clients in sustainable transformations. As a citizen of the Earth, we actively respond to domestic and foreign institutes and initiatives, and were one of the founding members of the Taiwan Business Council for Sustainable Development of the Republic of China (BCSD Taiwan) "Taiwan Nature Positive Initiative." Through the participation and promotion of all parties, as well as collaboration with financial peers, industrial parties, governments, and academia, we are making strides toward a better future.

APPENDIX

07

Appendix

Task Force on Climate-Related Financial Disclosures (TCFD) Index
TCFD Compliance Assurance Statement

Task Force on Climate-Related Financial Disclosures (TCFD) Index

The four major TCFD aspects (according to the Task Force on Climate-Related Financial Disclosures released by the Financial Stability Board in 2017) and corresponding public disclosures are shown in the table below:

Aspect	Guidance for All Sectors	Corresponding Sections
Governance	Describe the board's oversight of climate-related risks and opportunities.	1.2 Board of Directors Responsibilities
	Describe management's role in assessing and managing climate-related risks and opportunities.	1.3 Senior Management Responsibilities
Strategy	Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	2.1 Climate Risks and Opportunities
	Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	2.1.1 Identified Climate Risks 2.1.1 Identified Climate Opportunities
	Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2° C or lower scenario.	2.1.1 Identified Climate Risks 2.1.1 Identified Climate Opportunities
Risk Management	Describe the organization's processes for identifying and assessing climate-related risks.	3.1 Climate Policy Framework
	Describe the organization's processes for managing climate-related risks.	2.1 Climate Risks and Opportunities
	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	3.1 Climate Policy Framework
Metrics and Targets	Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	5.1 Climate Metrics and Targets
	Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks.	5.3 Greenhouse Gas Emissions 5.4 Emissions from Investment and Financing Portfolio
	Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	5.1 Climate Metrics and Targets

Aspect	Supplemental Guidance for Banks	Corresponding Sections
Strategy	Banks should describe significant concentrations of credit exposure to carbon-related assets.	5.5 Exposure of Carbon Assets
Risk Management	Banks should consider characterizing their climate-related risks in the context of traditional banking industry risk categories such as credit risk, market risk, liquidity risk, and operational risk.	2.1 Climate Risks and Opportunities
Metrics and Targets	Banks should provide the metrics used to assess the impact of (transition and physical) climate-related risks on their lending and other financial intermediary business activities in the short, medium, and long term.	5.1 Climate Metrics and Targets
	Banks should disclose GHG emissions for their lending and other financial intermediary business activities where data and methodologies allow.	5.4 Emissions from Investment and Financing Portfolio

TCFD Compliance Assurance Statement

bsi.

bsi By Royal Charter

Conformity Statement

Climate related Financial Disclosure

This is to conform that

Bank SinoPac Company Limited
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南京東路三段 36 號
104503

Holds Statement Number CFD 790198-1

As a result of carrying out conformity check process based on TCFD requirement, BSI declares that:

- Bank SinoPac Company Limited follows Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) for the Banks sector to disclose climate-related financial information which is clear, comparable and consistent about the risks and opportunities and its financial impact. The disclosures cover four core elements and have been prepared by seven principles for effective disclosures.
- 依據 TCFD 準則(含銀行補充指引)要求及永豐商業銀行股份有限公司氣候相關財務揭露報告書，進行符合性及成熟度查核，其結論如下：
- 永豐商業銀行股份有限公司遵循氣候相關財務揭露（TCFD）相關建議與要求，揭露與氣候相關的財務訊息，這些訊息在風險和機會及其財務影響方面清晰，可比較且一致。揭露內容涵蓋四個核心要素，並已根據有效揭露的七個原則進行了準備。
- The maturity model for the Climate-related Financial Disclosures is **Level-5+: Excellence** grade.
- 與氣候相關的財務揭露的成熟度模型為[**第五級 Plus：優秀**]等級。

For and on behalf of BSI

Managing Director BSI Taiwan, Peter Pu

Latest issue: 2023-06-16 Expiry date: 2024-06-15

Page 1 of 2

...making excellence a habit.™

Statement number: CFD 790198-1

Location:	**Conformity Check Overall Result:**
Bank SinoPac Company Limited No. 36, Sec. 3, Nanking East Rd. Zhongshan Dist. Taipei City 104503 Taiwan 永豐商業銀行股份有限公司 臺灣 台北市 中山區 南京東路三段 36 號 104503	The maturity model for the Climate-related Financial Disclosures is **Level-5+: Excellence** grade. 與氣候相關的財務揭露的成熟度模型為[**第五級 Plus：優秀**]等級。

Latest issue: 2023-06-16 Expiry date: 2024-06-15

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