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01 Preface

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1-1 SKFH Climate Mindset

The impact of climate change has become a common global risk and connected with capital flows in the capital market. At COP 26 (the 26th United Nations Climate Change Conference) in Glasgow in 2021, world leaders have made a pledge to phase-down the use of fossil fuels, which means that the era of coal burning is coming to an end. All countries must accelerate the transition to a low-carbon economy.

In response to the trend of net-zero and decarbonization, Taiwan's National Development Council officially published "Taiwan's Pathway to Net-Zero Emissions in 2050", which based on the four major transition strategies of "Energy Transition", "Industrial Transition", "Lifestyle Transition", and "Social Transition". Transition requires technological R&D and economic growth, and both require sufficient financial support. Therefore, financial institutions have an important responsibility on the road to achieve net-zero society by 2050. It is the corporate responsibility of Shin Kong Financial Holding (hereinafter referred to as "SKFH") to make good use the power of capital to drive the industry towards a net-zero transition.

In order to enhance climate resilience, strengthen adaptability in the face of extreme climates, and reduce the operational impact caused by disasters, SKFH has introduced the Task Force on Climate-Related Financial Disclosures (TCFD) framework to disclose the financial impact of climate change on companies. In response to the trend of net zero decarbonization of countries around the world after COP26 and effectively achieve the goal of financial decarbonization, SKFH also inventoried the GHG emissions and intensity of investment and lending portfolios to understand the indirect carbon emissions we financed, and established high carbon-intensive industry management guidelines and monitoring mechanism to help the investment and lending department of the subsidiaries to manage climate risks.

SKFH Sustainability Milestone

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1-2 Climate Metrics and Targets

Following the global trend of net-zero emissions, Taiwan's National Development Council announced the "Taiwan's 2050 Net-Zero Emission Pathway" in March 2022, promoting four major transition strategies and building two basic environments, hoping to gradually achieve a sustainable society with net-zero emissions in 2050.

SKFH implements the spirit of sustainable finance, follows the national policy to plan carbon reduction strategies and action plans, and set net-zero emission targets with reference to the guidelines of the Science-Based Targets initiative to achieve the Paris Agreement controlling the global temperature increase within 2°C in the end of this century, and under 1.5°C with ambitions.

Targets	Base year	Short term (2022~2024 year)	Middle term (2025~2031 year)	Long term (2050 year~)	Achievement in 2021
Carbon Reduction Actions: GHG emissions (Scope 1, Scope 2)	2019	 Reduce 2% of carbon emissions per year Headquarter Offices of SKFH will use 100% green power in 2023. 	 Reduce 2% of GHG emissions, water consumption and waste per FTE by 2025. 		GHGs emissions in 2021 Scope 1 : 2,915.24 tCO2e Scope 2 : 27,260.46 tCO2e Carbon emissions were reduced by 4% from the base year
Green Finance	2020	 Shin Kong Life Insurance (hereinafter referred to as "SKL"): Continue to improve sustainable investment procedures to achieve sustainable and stable investment results, and the five-year CAGR of investment in compliance of with SKL's sustainable investment policy reaches 3%. Shin Kong Bank (hereinafter referred to as "SKB"): Sign the Equator Principles. Continue to promote solar power project finance with total outstanding loan growing to \$4 billion by the target year. 	 The investment growth rate of green energy-related businesses is 400%. 	1.5°C net-zero emissions	SKL: Marketable securities in line with the company's sustainable investment principles has increased by 8% in 2021 compared to 2020 SKB: Has completed the signing of the Equator Principles. Based on 2020, the growth rate of the project investments in green energy related businesses in 2021 was 235%.
Decarbonization of investment and lending portfolios	2020	 Complete the carbon emission (tCO2e) and carbon footprint (tCO2e/NT\$ MM) inventory of investment and lending portfolios using PCAF methodology to evaluate the high carbonintensive exposure amount. Engage with investees and borrower companies through questionnaires survey to understand their GHG emissions, climaterelated actions and targets. 	• Engagement Action: Gradually encourage counterparties to the low-carbon transition through funding, the exercise of voting rights, telephone interviews, personal interviews, and questionnaires, etc We will require high carbon-intensive investee and borrower companies to improve energy efficiency, reduce the carbon intensity of products or services, and then reduce the proportion of its related business revenue, and encourage them to introduce relevant negative carbon technologies and increase green products and services.		In 2021, the financed emission of the investment and lending portfolios is 2,948.1 ktCO ₂ e; the financed emission intensity is 1.5 tCO ₂ e/TWDMM Start the engagement questionnaire to the investees and lending companies

02 Sustainable Business



2-1 SDGs Strategy

Originating from the United Nations Sustainable Development Goals (SDGs), SKFH initiates strategic actions such as "innovating digital finance, optimizing customer service quality", "focusing on climate change, practicing low-carbon energy conservation", "expanding social participation and caring for disadvantaged groups", reflecting the value proposition of "low carbon, innovation, and common good", uses our core competencies to respond to issues of concern to internal and external stakeholders, actively meets international standards to implement sustainable projects and responsibility as a corporate citizen, and increase corporate influence.

In response to SDG13 Climate Action, and to fulfill our commitment to low-carbon development, we have introduced the Task Force on Climate-Related Financial Disclosures (TCFD) framework to comprehensively examine potential risks and opportunities, develop relevant climate risk response strategies, and disclose the potential financial impact of climate change, so as to strengthen the SKFH's resilience in extreme climate and reduce the operational impact of disasters. Meanwhile, to implement the SDG17 goal of global partnership, we will develop new business opportunities or business models to move forward steadily with value chain partners underneath the sustainable goals of risk management and value creation.

Low Carbon Caring for life

We promote green and sustainable finance with to make our world better.



Be A Trusted Financial Partner

To make positive impact on our environment. To give our clients the best service at every stage of their life. To engage with our stakeholders for sustainable finance development.

Innovation Comprehensive consideration



Our purpose is to stay with our customers throughout their life, providing them the best and suitable solutions at different life Stages.



Common Good Integrity Partnership

To become everyone's trusted financial partner, we provide individuals with access to financial service, building financial inclusive systems.



2-2 Sustainable Development Organization

Corporate Sustainability (CS) Committee

The Company set up the "Corporate Sustainability Committee" (hereinafter referred to as "CS Committee") to promote corporate sustainability development. The CS Committee is a functional committee subordinated to the Board of Directors, and its members are nominated by the Chairman and approved by a resolution of the Board of Directors. The Committee shall consist of at least three board members and two of them are independent Directors. The Committee takes charge of supervising corporate sustainability plans and implementation and reporting the corporate sustainability implementation status to the Board of Directors annually to fulfill the duties and values of corporate sustainability.

The CS Committee oversees a Management Committee. The President of SKFH serves as the convener of the Management Committee and the Presidents of subsidiary companies serve as members of the Management Committee. They are responsible for the formulation, promotion and supervision of sustainable business strategies. The Management Committee includes seven execution teams which are responsible for developing and executing related projects.

Two meetings of the SKFH's CS Committee were convened in 2021, and the attendance rate of the members is 90%. The Committee reported the corporate sustainability performance and future plans, as well as the corporate governance and integrity implementation status. For the Committee's 2021 operations in detail, please refer to the official SKFH website.

SKFH's CS Committee Organization Chart



The Sustainable Finance Group is responsible for the planning and implementation of the group's sustainable finance. The members of the group are composed of SKFH and its subsidiaries' investment, lending, underwriting, credit review and risk management department. The key work tasks are incorporating sustainable responsibilities into the company's strategic development, investment planning and risk management.



2-3 Sustainable Finance

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SKFH uses its core competencies and professionalism to fulfill the "responsible finance" spirit and contribute to the sustainable development of society. We promote SKFH and its subsidiaries as well as outsourced investment institutions to integrate environmental, social and governance (ESG) strategies and ideas into financial operations including investment, financing, lending, insurance, and asset management. They are suggested to cooperate with customers and business partners (including suppliers) and many other stakeholders to provide responsible financial products and services. In the future, we will continue to follow sustainable development trends, gradually increase the proportion of responsible investment, and effectively keep pace with global sustainability and positive opportunities.



The Sustainable Finance Policy

SKFH has actively responded to the Principles for Responsible Investment (PRI) of the United Nations to formulate the "SKFH Sustainable Financial Policy", and incorporate ESG issues into its three major business: investment, financing and life insurance. We have conducted ESG risk due diligence and careful assessment for industries with potentially controversial issues (including human rights risk issues) and intensive-carbon, and no new transaction may be made for the above-mentioned industries which are included in the exclusion list and for which no improvement has been made.

In addition, we also exert influence on the investee companies through our voting policies and engagement actions to enhance the long-term value of our stakeholders, including customers, employees and shareholders. At the same time, SKL, SKB, MLS, and SKIT have all signed a compliance statement for the "Stewardship Principles for Institutional Investors", and announced compliance statements and diligent governance reports on their official websites. In 2021, SKFH's consolidated total assets under management were 100% in line with the sustainable finance policy of the SKFH Group, including listed equity, fixed income and infrastructure, etc.

The Sustainable Lending Policy and Equator Principles

In order to implement sustainable financial development and fulfill corporate social responsibility, Shin Kong Bank officially signed the Equator Principles in October 2021, becoming the 125th financial institution in the world to join the Equator Principles Association (EPA), and actively promoted "Green finance". In addition, SKB references to the United Nations Sustainable Development Goals (SDGs), United Nation's Principles for Responsible Banking (PRB) and other relevant international accreditation to formulate the "Taiwan Shin Kong Commercial Bank Sustainable Lending Policy" to conduct due diligence and Know You Customer (KYC) procedures for credit-granting companies for fully understanding and prudently assessing the possible impacts of ESG on various aspects of the company, and to exercise post-loan review and management.

Sustainable Lending Policy mainly focuses on the following five categories of industries or enterprises, and incorporates ESG into credit collection, review and post-loan management:

- 1. Highly controversial industries or enterprises: should avoid contracting.
- Industries or companies with high ESG risks or high carbon emission: Carefully review the negative impact of loan
 applicants on all aspects regarding ESG and evaluate them in accordance with their respective industry-specific
 guidelines, and loan applicants should be required to take relevant climate change mitigation plans.
- 3. Lending cases applied for the Equator Principles: Environmental and social risk assessment shall be carried out in accordance with the Bank's "Key Points of Equator Principles for Credit Granting Cases".
- 4. Sustainable industries: Those identified as having a positive impact on ESG or contributing to SDGs should be prioritized for evaluation.
- 5. Applicable cases for impact loans: Priority should be given to appropriate financing assistance and preferential conditions to encourage loan applications.



ESG post-loan tracking: Perform routine and ad hoc follow-up management operations in accordance with the "Lending Extension Review and Tracking Management Operation Guidelines" and "Lending Extension Case Review Regulations" to maintain good credit asset quality

Loan application evaluation process



The Principles for Sustainable Insurance (PSI)

SKL follows "Principles for Sustainable Insurance " actively to incorporate ESG issues into the insurance business. In addition to meeting the protection needs of policyholders and creating opportunities for sustainable development of the company, risk management procedures have been established for climate change. From 2022, TCFD has been introduced to identify relevant risks to assess the potential impact of climate change. SKL undertakes social and environmental responsibilities, and jointly seeks solutions to global environmental changes and other challenges.

For investment management, in addition to formulating the "Securities Sustainable Investment Policies and Procedures" to include sustainable investment in the investment process and making ESG-related assessments on potential investment targets, we also signed the "Stewardship Principles for Institutional Investors" and maintained communication with stakeholders in accordance with the six principles, and disclosed the performance of due diligence and management of conflicts of interest.

03 Low-carbon Finance



3-1 The Exposure of High Carbon-intensive Industries

To avoid aggravating climate disasters, global warming must be controlled within 1.5°C. "2050 Net Zero Emissions" has become a global target. The National Development Commission also announced the "2050 Net Zero Emissions Path" in 2022. Therefore, the market will transit to a low-carbon economy, and high GHG emitters will be gradually phased-out. The original investment and credit risk assessment methods will gradually become unsuitable for the low-carbon economy market, which may lead to the risk of loss of investment and financing income.

In view of this, SKFH examines the carbon emission situation of investment and financing portfolios in different asset classes and different industry categories, and further formulates management policies for high-carbon emission industries to assist investment and financing units of subsidiaries to control climate risks. The content covers the definition of high carbon emission industries and monitoring industries, investment and financing limits, monitoring frequency and early warning mechanism, etc. The applicable business scope includes all new and existing investments, financing and project financing, etc., which can be effectively achieved by monitoring high carbon emission industries. Sustainable Finance Decarbonization Goal.

SKFH's high carbon emission industry categories: oil and natural gas production and sales, power utilities, steel industry, chemical industry, building materials industry, transportation and logistics.





3-2 Financed Carbon Emissions of Investment and Lending Portfolios

Applied international PCAF methodology

SKFH is committed to exerting its own influence for driving different industries towards the sustainable development goals. From 2021, in order to realize the intermediate financed carbon emissions of investment and lending activities, SKFH followed the financed carbon emissions calculation guidelines of the Financial Stability Board (FSB), Science Based Targets initiative (SBTi) and Partnerships for Carbon Accounting Financials (PCAF) to calculate them, and the results have been verified by independent third-party SGS Taiwan Ltd. The portfolio coverage is 99.5% of on-balance sheet assets, which includes investments (e.g., listed equity, corporate bonds and financial bonds) and loans (e.g., CKB and MLS.

The financed carbon emissions inventory coverage of SKFH Group's investment and lending portfolios in 2021

Total Assets Inventory	/ Coverage 99.5 %
100%	73 %
Listed equity	Corporate Ioan
100%	100%
Corporate bonds and	Project finance for
financial bonds	power plants

Note: The inventory scope of corporate loan is based on the inventory standards of the SBTi Financial Sector Science- Based Targets Guidelines, and the inventory coverage of listed companies is 100%.

The financed carbon emissions inventory results of investment and lending portfolios in 2021

SKFH reviews the financed carbon emissions by asset class and industries within the investment and lending portfolios, which are represented as total absolute carbon emissions (ktCO₂-e) and carbon footprint (tCO₂-e per TWDMM). Due to the characteristics of the financial industry, bonds investments had the highest financed absolute emissions but corporate loan and project finance had the highest carbon footprint. When the emissions results are classified by industry, the top 3 high carbon emissions industries are observed: Oil & Gas, Electric Utilities, and Steel.



The financed carbon emissions of investment and lending portfolios by asset class in 2021

Percentage of investment			Total absolute carbon emissions (ktCO2e)	Carbon footprint (tCO2e/TWDMM)]
portfolios	12.4%	Listed equity	387.2	1.6	
	85.9%	Corporate bonds and financial bonds	2,367.1	1.4	
	1.7%	Corporate loan (Including power plant project finance	ce) 193.8	7.9	
	100%	Total	2,948.1	1.5	

- Note 1: The source of the financed carbon emissions data is the financial information disclosed by investee companies, Bloomberg estimates and industry average data. The industry average data is based on the CEEIO of international journals and literature, and introduces the "Pricing Table for the 63 Industries in Taiwan in 2019 Announced by the Directorate General of Budget of the Executive Yuan" and "2020 Energy Balance Table Announced by the Bureau of Energy, Ministry of Economic Affairs" for reference. The carbon emissions of investee companies and the asset data was obtained from the latest information as of March 2022, and are updated annually.
- Note 2: The carbon emissions of investment and lending portfolios reference the GHG Protocol Scope 3 Category 15 Investment calculation method and the AA1000ASv3 Type 2 Moderate is used as the verification standard for related data.

Percentage of Carbon footprint total carbon (tCO2e/TWDMM) emissions 28.7% Oil & Gas 9.1 22.6% Electric Utilities (mainly coal-fired power generation) 5.7 5.4% Steel 34.2 **5.1**[%] Chemical 8.9 **Construction Materials** 3.0% 13.2 1.7% Transportation and Logistics 28.6 33.5% Total of non-high carbon emission industries 0.6 100_% Total 1.5

The financed carbon emissions of investment and lending portfolios by industry in 2021

O4 Climate Governance and Strategy _____



4-1 Climate Governance Framework

SKFH has established complete and solid climate risk management mechanisms, covering all businesses that may face climate risks. We regularly assesse and control the potential impact of climate risks to protect shareholder interests.

In order to implement climate risk governance, SKFH has set up the Corporate Sustainability Committee and Risk Management Committee, and the sustainable development department and risk management department are responsible for SKFH Group's climate risk management. The structure is as follows:



4-2 Relevant Measures Practices

SKFH revised the "Sustainable Financial Policy" and "Risk Management Policy" in 2021, and incorporate climate risk management and implementation guidelines into them. In 2022, we continue to improve the interaction between various risk management aspects of the financial industry and climate change risks, update and revise the Group's sustainable financial policies and various risk management methods, define power and responsibility units, risk identification, risk measurement and supervision and control mechanisms, to strengthen climate-related risk management. The Group's climate risk management policy framework is as follows:

Policy Name: Focus specification __

Risk Management Policy

Incorporate climate change risk into group risk management



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Sustainable Finance Policy

For industries with high carbon emissions, such as thermal coal and unconventional oil and gas, the negative impact of climate change on counterparties should be carefully reviewed. For the above-mentioned industries, after inspection, those included in the exclusion list shall not be allowed to add new transactions without any improvement.

Guideline Name: Focus specification —

Risk Management Guideline

State the definition of climate-related risks

· Identify, measure, monitor and control principles



Financed Emissions Management Guideline

Regularly review the counterparties of thermal and unconventional oil and gas transactions every year, and the related business revenue exceeding 50% of the total revenue will be prioritized for engagement.

B

Large Exposure Management Guideline for Single Country, Region and Industry

Set the exposure limits for investment and lending positions in high carbon-intensive industries, and monitor them monthly.

4-3 Decarbonization Strategy

In order to effectively achieve the goal of financial decarbonization, apart from complying with the Principles for Responsible Investment and Equator Principles. SKFH has established high carbon-intensive industry management guidelines to help the investment and lending department of the subsidiaries to manage climate risks. The content defines the scope of high carbon-intensive industries and high climate-risk industries, investment and lending exposure limits, monitoring frequency, and early warning mechanisms. The applicable business scope includes all new and existing investments, corporate loans, and project finance. The subsidiaries shall implement "Know Your Customer" through pre-investment and pre-loan due diligence, and assess the transaction according to the carbon emissions of the counterparty and industry. After the transaction, we also shall adjust the transaction strategy based on regularly monitoring the improvements of the investee and lending companies for effectively achieving the goal of financial decarbonization.



Management policy of high carbon-intensive industries



Note 1 : Thermal coal and unconventional oil and gas industries, include coal mining, coal-fired power plant, coal infrastructure; refining and marketing, exploration and production, and infrastructure of tar sands, shale oil and gas, Arctic oil and gas resources, unconventional liquefied natural gas, ultra-deep-water oil and gas.

Note 2 : Electric Utilities include coal-fired power plant, and electric transmission & distribution.

Note 3 : Construction Materials include cement and construction aggregate.

05 Climate-Related Risks and Opportunities



The Green Swan report published by the Bank for International Settlements (BIS) also pointed out that climate shocks will create the next systemic financial risk; the International Monetary Fund (IMF) even stated that climate change poses a serious threat to the stability of the financial system, and the climate crisis will definitely trigger a financial crisis. Therefore, predicting the impact and risks of climate change on the financial industry as a whole, and effectively gaining insight into possible financial risks, are very important for SKFH Group to adjust its risk control and operation strategies. According to the Task Force on Climate-related Financial Disclosures (TCFD) proposed by the International Financial Stability Board (FSB) in 2017, climate-related risks are classified as "physical risks" related to the impacts of climate change. "Transition risks" associated with a transition to low-carbon economy, and list potential climate-related "opportunities" for mitigating and adapting to climate change.

5-1 Climate-related risk transmission pathways

SKFH regularly considers climate-related risk factors, including acute extreme weather events, chronic changes in climate patterns, new policies and regulations, technological innovation, market preference, and reputational damage, etc. and apply for expert method, which is according to "occurrence " and "severity ", to rank the SKFH Group's materiality issues. Based on the result, we made a climate risks matrix to assess the financial impact of the company's businesses further formulated climate response management countermeasures.

Type of Climate Risks : Physical Risks > Transition Risks



5-2 Identify the Sources of Climate-related Risks and Opportunities

After fully communicating about defining and identifying climate-related risks and opportunities, SKFH and its subsidiaries have reached a sufficient consensus on the timing of potential impact of climate risks and opportunities in the short, medium and long term, and to formulate climate risk response strategies.



SKFH Group established a climate risk database by researching domestic and foreign climate-related literature and reports, and created a climate risk and opportunity questionnaire based on our business model for collecting the opinions from several departments of SKFH, such as sustainable development department, risk management department, energy resource management department, investment department, lending department and customer relations department. The results of the questionnaire were used to analyze SKFH Group's climate risk matrix as shown in the figure belowed. A total of 12 risk issues, including four physical risks and eight transition risks, were identified, and business activities were linked and analyzed in sequence according to the risk issues. The relevant qualitative analysis descriptions are as follows:

Climate Risk Matrix



Description of Climate-related Risks

(Transition Risks

Short	term	Middle term	Long term							
Description of Risks										
Technology Risk: In response to the low-carbon development trend, the company has to increase operating expenses and investment costs in order to improve the energy and resource efficiency of various assets.	Reputation Risk : The world is actively moving towards sustainable development. If Shin Kong Group does not take positive and sustainable actions, we may lose the favor of stakeholders such as investors, customers and consumers.	Policy and Legal Risks: In response to the "Climate Change Response Act", the "Renewable Energy Development Regulations" and other regulations, there may be an increase in the company's operating expenses for controlling the total amount of its internal greenhouse gas as well as emission and transaction systems. In response to regulations, customers, and international initiatives, the use of renewable energy is increased.	Market risk : The market is transitioning towards a low-carbon economy, and high-carbon industries will be eliminated gradually. The existing investment and credit risk evaluation methods for the low-carbon economy market will be failure, which will cause risks of investment and lending loss.							
	Financia	ू≡ 9 I Impact								
Increase operating expenses	 Decrease revenue Investors are pouring less money 	Increase operating expenses	 Decrease revenue Decrease asset value 							
	Response	Strategy								
 Shin Kong Group regularly inspects and replaces high-energy-consuming assets at each operating locations for improving the efficiency of energy resources. 	 Following the global sustainability trend, Shin Kong Group actively participates in sustainable actions by incorporating climate risk management into its existing risk policies and revising relevant regulations on investment, lending and real estate. Actively participate in international sustainability- related initiatives and alliances and international / domestic sustainability ratings to enhance stakeholder trust. 	 To improve the efficiency of energy resources and reduce greenhouse gas emissions, SKFH and its subsidiaries inspect greenhouse gas every year. We have fully implemented ISO 14064:2018 GHG inventory standard since 2020 to further understand the greenhouse gas emissions caused by our own operations as well as upstream and downstream activities, so as to facilitate the establishment of carbon reduction strategies and goals. Actively invest in renewable energy power plants and purchase green power and green power certificates to support the development of renewable energy. 	 Subsidiaries formulate ESG investment and lending guidelines in accordance with the "Sustainable Finance Policy" revised by SKFH in 2021. Conduct due diligence on ESG risks for the industries with potentially controversial issues and high carbon emissions from 2021, and formulate industry-specific guidelines to reallocate of assets as appropriate. Continue to identify the risks of financial product investments, as well as loan and other business operations, so as to facilitate control on the overall risks. 							

Physical Risk



In addition, according to the results of the questionnaire survey, SKFH Group identified the types of climate-related opportunities, covering operations, investment, lending and product services. The following table was showed the impact on SKFH's financial performance and response strategy.

Descriptions of Climate-related Opportunities

Description of Opportunities	Financial Impact	Response Strategy
Resources Efficiency		Time horizon : Short term
Opportunities for Cost Optimization : Increasing the proportion of digitized products and services, implementing paperless internal documents, and inventorying of internal operating equipment further increasing the use of energy-saving equipment are expected to bring benefits in reducing operating expenses.	Decrease operating expenses	Inventory of internal operating processes for paperless optimization, and update the equipment at self-owned operating locations in order to improve the efficiency of resources in operating activities.
Services and Products	Time	e horizon : Short term to Middle term
Investment Opportunities : As the market transitions to a low-carbon economy, long-term investments in green finance and renewable energy industries are expinsurance claims.	Increase revenue	Continue to observe the sustainability trends, and increase the investment in green finance and renewable energy industries.
Services and Products	Time	e horizon : Short term to Middle term
Market Opportunities : There are increasing demands in the market for the investment in companies with good environmental reputations, and thus the development of green finance-related products is expected to bring positive benefits.	Increase revenue	From 2021, green bonds and green funds have been issued and ESG sustainability linked loans have been implemented.
Services and Products		Time horizon : Short term
Market Opportunities : In response to the diseases, natural disasters and accidents that may be caused by extreme weather, the development of related insurance products is expected to bring positive benefits.	Increase revenue	From 2020, "Air Pollution Insurance Policy" for respiratory and circulatory diseases has been launched. Shin Kong Group will continue to develop related products to grasp the advantages in the market.

06 Scenario Analysis and Financial Impact



Global climate and environmental risks have become increasingly apparent in recent years. A UBS research report pointed out that if financial institutions cannot effectively manage climate risks, climate change may cause a loss of more than 17% of it's asset value. As the risks of climate change increase rapidly, financial supervisory authorities in various countries have also conducted overall stress tests for the financial industry or issued guidelines to require financial institutions to assess potential losses under different climate change scenarios. For example, the Bank of England (BoE) released a biennial exploratory scenario guidance document this year.

In 1998, the United Nations Environment Programme and the World Meteorological Organization jointly established the Intergovernmental Panel on Climate Changes to assist policymakers in various countries in formulating response strategies for climate change, and publish a comprehensive assessment report on changes related to science and technology, socio-economic cognition, climate change causes, potential impacts, and coping strategies irregularly.

In 2014, IPCC proposed four representative concentration pathways (RCPs) in the Fifth Assessment Report (AR5) as future climate scenarios analysis, including RCP2.6, RCP4.5, RCP6.0 and RCP8.5. On the other hands, IPCC also proposed five Shared Socioeconomic Pathways (SSPs) in the Sixth Assessment Report (AR6) in 2022. The difference between AR5 and AR6 is added two scenarios, RCP1.9 and RCP7.0, as the basis for comprehensive scenarios analysis, In June 2021, The Network for Greening the Financial System (NGFS), established by central banks and financial regulators around the world, also released the latest climate change scenarios and provided consistent scenarios across countries.

6-1 Scenario Analysis Setting Instructions

Since 2021, SKFH has followed the climate change stress test framework and the methodology of the International Sustainability Initiative announced by the supervisory authorities in various countries, and refer to the IPCC Fifth Assessment Report, Sixth Assessment Report and NGFS and other climate change reports to conduct a systematic assessment process of climate physiccal risks and transition risk scenarios for strengthening our strategic planning and response actions.

Based on the four scenarios of AR5, RCP2.6, RCP4.5, RCP6.0, and RCP8.5, SKFH simulated the financial impact of the physical risks faced by our own operating bases, investment properties, upstream suppliers, downstream products and services (mortgage) over time. In addition, two scenarios of AR6, SSP1-1.9, SSP1-2.6, and three scenarios of NGFS, Net Zero 2050, NDCs, and Current Policy transition risk parameters are used to assess the transition risks faced by SKFH Group's upstream suppliers under different regulations and GHG reduction targets, and the impact of portfolio default rates.

The scenario parameters released by the NGFS in June 2021 reflect the commitment of countries to net zero emissions, and expand to provide macroeconomic variables at the national level; based on SSP, according to the degree of future low-carbon transition and implementation efficiency, Six climate change scenarios are proposed.

According to the recent international climate policy trends and the country's low-carbon transition goals, SKFH has selected three different climate change scenarios, of which individual scenarios represent different degrees of transition risks, and selected carbon price (or carbon tax) as the main climate risk parameters:



Scenario 1

Net Zero 2050: The world will reach a net zero target by 2050 and limit global warming to 1.5°C; in order to achieve this target, countries or regions will gradually increase carbon prices or carbon taxes, etc. starting in 2021. However, considering the differences in carbon reduction commitments and economic development of countries in different regions, the intensity of relevant policies such as carbon pricing varies.

Scenario 2

NDCs: This scenario assumes that the NDC targets that countries have committed to now are fully implemented, and that all countries' energy and emissions targets will be met by 2025 and 2030. So far, 193 countries around the world have ratified the Paris Agreement, and 194 countries have submitted Nationally Determined Contributions (NDCs). Taking into account the updated NDC targets and the net zero targets declared by various countries, it is expected that by 2030, a more aggressive carbon reduction will be achieved than the original NDC targets, and the temperature increase will be reduced from 2.8°C to 2.1°C.

Scenario 3

Current Policy: This scenario assumes that countries are only guided by existing policies and laws that have already been formulated. Except for current policies, countries have no new carbon reduction behaviors, and there are differences between countries. For example, carbon prices in Greater China and the United States remain close to no cost. The price of carbon in the European Union is decreasing year by year; in this scenario, the temperature rise will exceed 3°C by the end of the century.

The scenarios analyses were summarized as follows:

Operating locations and investment property Disaster risk analysis	Mortgage Disaster risk analysis	Investment Default rate for credit risks analysis	前 Portfolios Default rate for financial risks analysis	Upstream Disaster risk analysis	Suppliers Carbon price for market risk analysis
		Risk	Туре		
Physical risk Acute risk and Chronic risk	Physical risk Acute risk	Transition Risk Policy and Legal Risk	Transition Risk Policy and Legal Risk	Physical risk Acute risk and Chronic risk	Transition Risk Policy and legal risk and Market risk
		Climate	Scenario		
RCP 2.6 \ RCP 8.5	RCP 2.6 \ RCP8.5	NGFSs-Net Zero 2050 \ NDCs \ Current Policy (STEPs)	SSP1-2.6 SSP1-1.9	RCP4.5 \ RCP6.0 \ RCP8.5	NGFSs-Net Zero 2050 \ NDCs \ Current Policy (STEPs)

6-2 Physical Risk Scenario Analysis

Operating locations and investment property - Disaster risk analysis

Taiwan is an island country and is located in the subtropical monsoon region. In addition to the complex terrain, different weather changes often occur in different regions, and severe weather phenomena also occur from time to time. During the typhoon season, Taiwan is hit by torrential rain brought by typhoons, causing flooding in low-lying areas and urban areas, and even flooding of rivers which destroy embankments and bridges.

SKFH's operating locations and investment property are distributed throughout Taiwan. In order to understand the possible financial impact under different climate situations, we use two scenarios of RCP2.6 and RCP8.5 to simulate the risks faced by each operating location and investment property from 2020 to 2100 under the influence of various types of climate risk factors, including surface flooding, land subsidence, river flooding, coastal flooding, wildfires, extreme heat and extreme winds and other physical risks. The analysis results of the impact of the maximum climate risk value Max Climate Value at Risk% are as follows:



Hazard	By what standard is the impact of the disaster measured
Riverine flooding	Annual maximum rainfall within 24-hour
Coastal inundation	Global sea level
Extreme Heat	Annual average maximum temperature
Forest fire	Forest Fire Weather Index
Wind damage	Annual maximum wind speed
Soil movement due to drought	Total annual rainfall
Freeze-thaw damage	Days of Ice melting
Surfacewater flooding	Total annual rainfall
Heat-related work hours lost	Total lost hours per year
Heat-related excess mortality	The number of Excess Heat Factor (EHF) under RCP2.6/8.5

The Max Climate Value at Risk under RCP 2.6 and RCP 8.5 scenarios.





The Maximum Climate Value at Risk means the maximum loss value caused by certain type of climate disaster in that year. Through the analysis results, it is found that no matter in the RCP2.6 or RCP8.5 scenarios, the subsidence caused by the drought will become the most significant climate risk for real estate distributed in Taiwan's counties and cities from 2020 to 2100.

The results show that the Max Climate Value at Risk in 2100 will be about 0.42% under the RCP2.6 scenarios. On other hands, under the RCP8.5 scenarios with worse warming and high greenhouse gas emissions, the Max Climate Value at Risk in 2100 will be about 0.54%, which has only a slight impact on the Company.

Changes in Max Climate Value at Risk under scenario simulation



Note 1: Max Climate Value at Risk% means the maximum loss value caused by the type of climate disaster in that year.

Mortgage- Disaster Risk Analysis

In order to avoid the asset value of the collateral located in high-risk areas suffering from climate disasters resulting in the loss of the company's mortgage business, SKFH estimates that the loss rate to housing prices under RCP8.5 is 6.32% based on Taipei City and New Taipei City, which has the highest exposure ratio of the company's overall mortgage balance. At the end of 2021, SKL's loan-to-value (LTV) ratio was 18.1%, and SKB's loan-to-value (LTV) ratio was 55.89%. Therefore, in the extreme climate of RCP8.5, the Group's overall mortgage will increase the LTV of SKL to 19.31% and the LTV of SKB to 59.66%. The real estate value can still match the balance of the mortgage. Therefore, under the extreme climate scenario, the loss of the mortgage business of SKFH's subsidiaries is 0.



6-3 Transition Risk Scenario Analysis

Investment Portfolios- Credit Risk Analysis

In order to better understand the potential financial losses of SKFH's investment portfolios under different carbon reduction paths, the Company conducted climate factor stress tests for the three main bond investment targets. The stress test model utilizes international data from three scenarios, namely the Network for Greening the Financial System (NGFS) Current Policy, NDCs and Net Zero 2050, to measure the change in the rating of the investment target. The stress test results are as follows: Taking 2050 as the review year as an example, under the Current Policy scenario, the increased default rate of bond investment target is between 0.040%~0.173%; Under the NDCs scenario, the increased default rate of bond investment target is between 0.080%~0.173%; Under the Net Zero 2050 scenario, the increased default rate of bond investment target is between 0.113%~0.200%. SKFH will actively engage and assist investee to transition, and will adjust the proportion of high climate sensitivity in investment portfolios moderately.



Company Number	Industry	Country		lssuer 2021 Ratings		2030 Rating Changes		2040 Rating Changes		2050 Rating Changes
Current	Current Policy/STEPs Scenario									
1	Power Generation	France		A3		-3		-3		-4
2	Power Generation	Italy		A3		-1		-3		-3
3	Oil and Gas	Saudi Arabia		A1		-1		-3		-3
NDCs s	NDCs scenario									
1	Power Generation	France		A3		-3		-4		-4
2	Power Generation	Italy		A3		-2		-3		-3
3	Oil and Gas	Saudi Arabia		A1		-1		-4		-4
Net Zero 2050 scenario										
1	Power Generation	France		A3		-3		-4		-4
2	Power Generation	Italy		A3		-2		-3		-3
3	Oil and Gas	Saudi Arabia		A1		-2		-5		-6

Note 1 The main sources of model parameters for the changes in the ratings of bond investment targets under Current Policy/STEPs, NDCs, Net Zero 2050 scenarios are the NGFS database, and the simulation results of NDCs scenarios are based on the key risk factor correlating with NDCs, Current Policy and Net Zero 2050 to evaluate comprehensively.

Changes in the default rate of the bonds investment targets under different scenarios.

Company Number	Scenario	2030	Changes in the Default 2040	Rate (PD,%) 2050
1	Current Policy/STEPs	+0.113%	+0.113%	+0.173%
	NDCs	+0.113%	+0.173%	+0.173%
	Net Zero 2050	+0.113%	+0.173%	+0.173%
2	Current Policy/STEPs	+0.013%	+0.113%	+0.113%
	NDCs	+0.053%	+0.113%	+0.113%
	Net Zero 2050	+0.053%	+0.113%	+0.113%
3	Current Policy/STEPs	+0.013%	+0.040%	+0.040%
	NDCs	+0.013%	+0.080%	+0.080%
	Net Zero 2050	+0.027%	+0.140%	+0.200%

Note 1:The base year for the increase or decrease of the default rate of the bonds is 2021.

Investment Portfolios- Financial Risk Analysis

SKFH selected three investee companies in Taiwan to conduct the financial risks analysis. We took the SSP and RCP combination scenarios of the AR6, the regulatory requirements of the investee companies and GHG reduction commitment targets themselves as the main parameters to carry out the assessment about the changes in costs and expenditures of themselves on different transition scenarios.

According to the carbon tax of SSP1-1.9 and SSP1-2.6 scenarios of the International Institute for Applied Systems Analysis (IIASA) SSP Public Database, the "Climate Change Response Act" in Taiwan with drafted at NT\$1,500 per metric ton, and the upper limit of carbon fines adjusted by the scenario, SKFH evaluated the impact of carbon emission costs on the financial risk of the investment target. The analysis results show that under the carbon tax and carbon penalty regulations, the revenue of the investee companies will decrease. Although the carbon emission cost does not account for a high ratio of its profit after tax, it will still affect SKFH's investment return. Therefore, SKFH will continue to engage with investee companies to encourage them low-carbon transition and move towards the 2050 net-zero goal.

6-4 Supply Chain Risks

Disaster Risk Analysis

In order to understand the operating impact of suppliers under climate change to help Shin Kong Group assess the impact on procurement management, we conduct flood and landslide disaster risk identification in RCP4.5, RCP6.0 and RCP8.5 scenarios for upstream suppliers. The analysis results show that under the scenarios of RCP4.5 and RCP6.0, the number of suppliers located in high climate risk areas is minority, and the ratio of their purchase amount to the total purchase amount is only about 1.9%. While under RCP8.5, the number of suppliers with high risk of flooding and landslides increased, and the ratio of their purchase amount to the total purchase amount rose to 9.7%. After assessment, most of the physical climate risks have no significant financial impacts on our company's upstream suppliers under the above three scenarios, and only the flooding risk under the RCP8.5 scenario has a slight impact on the Company. The Company will conduct supplier on-site audits and supplier conferences to recommend suppliers with higher flooding risks to install flood control equipment, establish business continuity planning, etc., to avoid possible losses caused by climate risks.

The ratio of the purchase amount of suppliers with high risk of flooding and landslides to the total purchase amount of SKFH under the scenario simulation

Disaster Risks \ Scenarios	RCP 4.5	RCP 6.0	RCP 8.5
Flooding	0%	1.5%	8.5%
Landslide	0%	0.4%	1.2%

Landslide Flooding 淹水 ●1 ●2 ●3 ●4 山崩 ●1 ●2 ●3 ●4 青田田安小田 -## 四井

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Carbon Price for Market Risk Analysis

In response to the international trend of promoting net zero emissions, many countries have successively indicated that they will implement a carbon pricing system in the future, and Taiwan is predicted to implement a carbon fee mechanism from 2024. In order to understand the financial impact of the suppliers that we cooperate with under the carbon tax or carbon fee collection policy in the future, and to evaluate the company's potential transition risks, we simulate the failure of major suppliers to develop new energy-saving and carbon-reduction technologies based on three scenarios of the Network for Greening the Financial System (NGFS). As the implementation of the policy leads to the increase of carbon costs and the increase of suppliers' operating expenses, we assume that suppliers will transfer all the carbon costs to Shin Kong Group's purchase expenses, and the analysis results show that: Taking 2050 as the year to review the increase in Shin Kong Group's purchase expenses, it can be found that if the government does not implement new active carbon reduction measures (Current Policy), we may have to pay 0.02% more of the purchase expenses. If the government follows the Nationally Determined Contributions (NDCs) commitment to transition, we may have to pay 0.16% more of the purchase expenses. if government undertakes a gradual transition to achieve net-zero emissions by 2050 (Net Zero 2050), we may have to pay 3.43% more of the purchase expenses. Under different scenarios, the Company may not only pay higher purchase expenses due to suppliers passing on the carbon cost in exchange for the goods and services they provided, but also may face the situation of changing suppliers. For mitigating the above situation, the Company requires all suppliers to sign a letter of commitment to sustainability and conduct regular supplier risk assessments. In the future, we will continue to strengthen supplier communication, so that suppliers understand the need for low-carbon transition, so as to jointly strengthen climate governance and achieve sustainable value chain.

The increased ratio of Shin Kong Group's purchase expenses to suppliers under the NGFS scenario

Scenario	Carbon fee	The increased	d ratio of	f purchase exp 2040	oenses t 	o suppliers (%) 2050
Current Policy	TWN	+0.01%		+0.01%		+0.02%
NDCs	TWN	+0.01%		+0.09%		+0.16%
Net Zero 2050	TWN	+1.71%		+2.43%		+3.43%

Note 1 : The data source of carbon fee region and carbon fee is the NGFS database.

Note 2: The base year for the increase in purchase expenses to suppliers is the total purchase expenses of Shin Kong Group's suppliers in 2021.

07 Conclusion



Towards a Net-zero Future

In recent years, the frequency and intensity of global extreme climate events has increased. The World Economic Forum (WEF) has listed climate action failure, extreme weather event risks and biodiversity loss as major global risks by severity. SKFH realized that climate change is an imminent risk to financial institutions, so we conducted climate sensitivity assessment of operations and investment and lending portfolios in 2020. After the internal assessment, we established climate governance mechanism and formulated short-, medium- and long-term climate strategies in 2021. Through quantitative data collection, scenario analysis and stress testing, as well as investment and lending activities carbon emissions inventory, we specifically understand the financed carbon exposure from our investment and lending portfolios and the impact of climate on our company, and further incorporate climate-related risk into SKFH's risk management scope.

The assessment results of this report help SKFH establish a comprehensive measurement and outline for climate risk, and prompt us to raise the level of governance on climate issues. In the process of climate risk and carbon emission assessment of investment and lending portfolios, SKFH also observed that the current carbon emission data disclosure is insufficient, and the general methodology still needs to be developed. We look forward to working with stakeholders to improve the data quality and methodological research of climate change assessment, and bring more scientific and innovative thinking to the promotion of climate action in the future. "Low-carbon", "innovation", and "common good" are the sustainable values guarded by SKFH. On the pathway of low-carbon economic transition, SKFH will continue to practice and pursue progress, and join hands with the industries to move towards net-zero society, so as to achieve Paris The agreement aims to limit the long-term temperature rise to no more than 1.5°C, and at the same time actively negotiate with upstream and downstream stakeholders to develop diversified ESG products and become a leader company in sustainable finance.



O8 Appendix



8-1 TCFD Recommended Disclosures Index Comparison Table

According to the TCFD disclosure framework issued by the Financial Stability Board (FSB) in 2021 (revised edition), its four major aspects are oriented to the TCFD report publicly disclosed by Shin Kong Financial Holding. The comparison table is as follows :

TCFD Framework	General Guidance	chapter	page
Covernance	Describe the board's oversight of climate-related risks and opportunities	CH2-2	P.5
Governance	Describe management's role in assessing and managing climate-related risks and opportunities.	CH2-2	P.5
	Describe the climate-related risks and opportunities the company has identified over the short, medium, and long term.	CH5	P.14-17
Strategy	Describe the impact of climate-related risks and opportunities on the company's businesses, strategy, and financial planning	CH5	P.14-17
	Describe the resilience of the company's strategy, taking into consideration different climate-related scenarios.	CH6	P.18-24
	Describe the company's processes for identifying and assessing climate-related risks.	CH5	P.14-17
Risk Management	Describe the company's processes for managing climate-related risks	CH4-1	P.11
	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the company's overall risk management	CH2-3 \ CH4-2 \ CH4-3	P.6-8 \ P.12-13
	Disclose the metrics used by the company's to assess climate-related risks and opportunities in line with its strategy and risk management process.	CH1-2	P.3
Metrics and Targets	Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 category 15 greenhouse gas (GHG) emissions, and the related risks	CH1-2 \ CH3	P.3 \ P.9-10
Ň	Describe the targets used by the company to manage climate-related risks and opportunities and performance against targets.	CH1-2	P3

8-2 Investment Portfolios- Financial Risk Analysis Method

Model framework

The credit risk of corporate bonds has a significant impact on the value of the investment portfolio. Changes in climate risks and carbon emission policies will affect the company's credit risk assessment, and make investment returns subject to huge uncertainties.

In order to assess the climate-related risks and opportunities under global environmental changes, we first used the discounted free cash flow model to calculate the market value of investee companies, and then adopted carbon density provided by The Transition Pathway Initiative (TPI) and carbon price provided by NGFS under three scenarios of Below 2°C, NDCs and Net Zero 2050 to recalculate the companies' market value considering the carbon cost. Based on the result to calculate the carbon impact index of each company, and bring it into the Merton Model to calculate the company's expected default rate change. The analysis results show that under the influence of carbon costs in different scenarios, the decreases in market value and increases in default rate of the investee companies are slightly. However, if the investee companies don't clearly plan the carbon reduction path, the default rate may increase significantly.

Comparison of emission intensity under three scenarios



Comparison of carbon price in different regions under three scenarios





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