



Cathay  
Financial Holdings

2021

# Climate-related Financial Disclosure Report



## CONTENTS

Introduction 02

Message from the Chairman 02

About This Report 03

Cathay's Climate Strategy Blueprint 04

Course of Cathay's Climate Action 05

### 1 Governance 06

1.1 Climate Governance Framework 06

1.2 Climate Ability Building 08

### 2 Strategy 10

2.1 Climate Risks and Opportunities 10

2.2 Climate Strategy Blueprint and Actions 13

2.3 Climate Scenario Analysis 23

### 3 Risk Management 30

3.1 Risk Management Framework 30

3.2 Climate Risk Management 31

### 4 Metrics and Targets 36

4.1 Climate Metrics and Targets 36

4.2 Historical Metric Data 37

### 5 Conclusion 40

# 2021 Highlights



## Investments and Loans

Weighted Average Carbon Intensity (WACI)  
of investment portfolios

**-11 %**

(Compared with 2020)

The engagement of **3** companies for Climate  
Action 100+ **ALL** committed to zero net carbon  
emissions or carbon neutral by 2050

Amount of low-carbon investments/loans

**+20 %**

(Compared with 2020)

The success rate of engagement

**25 %**

(Highest in Asia)



## Insurance

Cathay Century is the **1<sup>st</sup>** property  
insurance company in Taiwan to obtain the  
Carbon Reduction Label

Amount of insurance provided to the  
renewable energy industry reached

NT\$ **31.6** billion



## Operations

Scopes 1+2 carbon emissions

**-6 %**

(Compared with 2020)

Renewable energy use

**+152 %**

(Compared with 2020)



# Introduction

## Message from the Chairman

Climate change has increased the frequency of abnormal weather events around the world. This is something we have experienced first hand in Taiwan. In addition to typhoons, there have been clear wet and dry seasons with sweltering heat and torrential rain in recent years, and the impact brought by extreme weather events has been strongly felt in business operations and the economy. The latest Global Risks Report of the World Economic Forum (WEF) listed "climate action failure" and "extreme weather events" among the top ten global risks in the next decade. There is only one Earth, so actively taking climate action to mitigate global warming is the world's joint responsibility.

The 2021 United Nations Climate Change Conference (COP26) made a commitment to reduce carbon emissions and emphasized leveraging financial influence to assist the development of sustainable finance principles for achieving net zero emissions globally. This shows that the world has high expectations for the financial sector to exert its influence. Cathay FHC was invited to attend peripheral meetings of COP26 and served as a speaker at the World Climate Summit (WCS), sharing Taiwan's experience. We were the only representative of Taiwan's financial sector in official peripheral meetings of COP26 and gave Taiwan's low carbon transition actions an opportunity to be seen by the world.

Cathay FHC's assets surpassed US\$400 billion as of the end of 2021. We provided services to approximately 14.88 million customers, more than 60% of Taiwan's population. Cathay FHC is the largest financial holding company in Taiwan. This year marks the 60th anniversary of Cathay. We have always upheld the core value of "integrity," gaining the trust of the public, employees, and shareholders through sustainable development. Cathay actively pursues low carbon transition through strategies such as renewable energy investments and loans, business engagement, and net zero emissions from operations. Global supply chains are already promoting "No ESG, No Business" and financial institutions are also promoting "No ESG, No Money", in hopes that all industries in Taiwan will make "No ESG, No Taiwan" their mission, harnessing the power of the industry to achieve carbon reduction, mutual prosperity, and sustainability.

Climate action is a key power for responding to climate change. Cathay has always taken climate change seriously and realized the impact of climate change through the climate matrix and scenario analysis. We further set "climate" as one of the three focus areas of Cathay's sustainability strategy and compiled a sustainability strategy blueprint, committing to setting science based targets (SBTs) and implementing projects for "low carbon transition in investments and loans" and "zero carbon operation transition". Cathay became the first financial institution in Taiwan to be a member of RE100 which committed to all business locations in Taiwan using 100% renewable energy by 2030 and promised to achieve net zero emissions by 2050. As the largest institutional investor in Taiwan, Cathay aims to fulfill the spirit of "performing well and then performing even better". We will continue to shoulder our responsibility as a pioneer in sustainable development and lay out the blueprint for future development with foresight based on our past performance, in hopes of mutually prospering with the environment.



## Message from the Chairman

## About This Report

### Cathay's Climate Strategy Blueprint

### Course of Cathay's Climate Actions

#### 1 Governance

#### 2 Strategy

#### 3 Risk Management

#### 4 Metrics and Targets

#### 5 Conclusion

## About This Report





This Report was prepared according to the framework recommended by the Task Force on Climate-related Financial Disclosures (TCFD), Financial Stability Board (FSB), and shows Cathay's resilience and external influence when facing the challenges brought by climate change according to the four core elements and 11 disclosure items. This Report is the first TCFD Report published by Cathay FHC. Please see the [Cathay FHC Corporate Social Responsibility Report](#) for climate-related financial disclosures in previous years.

Scope of Disclosure: Cathay FHC and its major subsidiaries, and mainly focuses on Taiwan, which is the main region of operations.

Disclosure Period: Mainly focuses on TCFD-related measures of Cathay FHC and its major subsidiaries in 2021, and also includes measures over the years.



### FSB TCFD disclosure recommendations index

Elements	Disclosure Items Recommended by TCFD	Corresponding Chapter/Section in This Report	Page
 Governance	a. Supervision of climate-related risks and opportunities by the Board of Directors	1.1 Climate Governance Framework	6-7
	b. Role of management when assessing and managing climate-related risks and opportunities	1.1 Climate Governance Framework	6-7
 Strategy	a. Short-, mid-, and long-term climate related risks and opportunities identified by the organization	2.1 Climate Risks and Opportunities	10-12
	b. The impact of climate-related risks and opportunities on the organization's business, strategy, and financial planning	2.1 Climate Risks and Opportunities 2.2 Climate Strategy Blueprint and Actions	10-12 13-22
	c. Resilience of the organization's strategies, taking into consideration different climate-related scenarios (including 2°C or more severe scenarios)	2.3 Climate Scenario Analysis	23-29
 Risk Management	a. The organization's identification and assessment process for climate-related risks	3.2 Climate Risk Management	31-35
	b. The organization's climate-related risk management process	3.2 Climate Risk Management	31-35
	c. How the identification, assessment, and management processes for climate-related risks are integrated in the organization's overall risk management system	3.1 Risk Management Framework 3.2 Climate Risk Management	30-31 31-35
 Metrics and Targets	a. Metrics used by the organization to assess climate-related risks and opportunities according to the strategy and risk management process	4.1 Climate Metrics and Targets 4.2 Historical Metric Data	36 37-39
	b. Scope 1, Scope 2, and Scope 3 GHG emissions and related risks	4.2 Historical Metric Data	37-39
	c. The organization's management targets for climate-related risks and opportunities, and performance in achieving the targets	4.1 Climate Metrics and Targets 4.2 Historical Metric Data	36 37-39



## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

### 3 Risk Management

### 4 Metrics and Targets

### 5 Conclusion

# Cathay's Climate Strategy Blueprint

Cathay's vision is to become the leading financial institution in the Asia-Pacific region, and takes corporate sustainability into consideration when making business decisions. Over the years, Cathay has steadily moved forward with the goal of achieving sustainability, and "zero carbon transition" is a necessary strategy to exert the influence of finance. We became a supporter of TCFD in June 2018, and further set "climate" as one of the three focus areas of our sustainability strategy in 2020, in response to environmental and social challenges. We also set climate targets in terms of "Low-Carbon Economy" and "Sustainable Environment", respectively. We formed a consensus and compiled a sustainability strategy blueprint for Cathay in 2022. We dedicated further efforts to each focus area and established the direction for sustainable development. (Please see "[Course of Cathay's Climate Actions](#)" for details of the development progress)

## Cathay's Climate Strategy Blueprint



### Low-carbon Economy:

Incorporate climate change and ESG-related risks and opportunities into the investment, loans, products, insurance, and services of the core business and create environmental influence through initiatives and engagement.

#### Ambitious Goals

#### Net Zero Emissions from Financial Assets by 2050

Implement financial asset transformation by setting SBTs to achieve net zero emissions

#### Leader of Climate Engagement Actions

Utilize the influence of dialogue to communicate and cooperate with stakeholders in the financial value chain, so that companies will take concrete actions in response to climate change and strengthen their climate resilience

#### Comprehensive Financial Solutions Provider for Climate Change

Support companies and industries in creating low carbon transition opportunities or mitigating/adapting to climate change through funds or financial products and services, so that industries will become more competitive and society will develop towards a green economy in an orderly manner



### Sustainable Environment:

Incorporate green business management into daily management and promote low-carbon and environmentally friendly services.

#### Ambitious Goals

#### Green operations:

Implement mobile operations, digital services, and shared workplace, and incorporate the concepts of sharing and circulation into workplace planning to create a low carbon workplace

#### Zero Carbon Operations by 2050

#### Green energy:

Promote energy transition so that by 2030, business locations in Taiwan will use 100% renewable energy and business locations worldwide will use 60% renewable energy

#### Green real estate:

Create a low carbon real estate ecosystem and encourage industries to participate in energy transition

## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

### 3 Risk Management

### 4 Metrics and Targets

### 5 Conclusion

# Course of Cathay's Climate Actions

Cathay monitors climate issues and continues to contribute to our environment. Important climate actions and outcomes of Cathay for "Low-Carbon Economy" and "Sustainable Environment" over the years are summarized below:

	Low-Carbon Economy	Sustainable Environment
	Established the Corporate Social Responsibility Committee in 2011 and restructured it into the Corporate Sustainability Committee under the Board of Directors in 2014	
By 2015	<ul style="list-style-type: none"> <li>The only company in Taiwan to participate in the LCI Registry initiative of the Global Investor Coalition (GIC)</li> <li>Became a signatory to the U.K.'s Carbon Disclosure Project (CDP)</li> <li>Cathay United Bank signed the Equator Principles (EPs) and became Taiwan's first Equator Principles financial institution</li> <li>Cathay Life committed to complying with the Principles for Responsible Investment (PRI)</li> </ul>	<ul style="list-style-type: none"> <li>Announced the Cathay FHC Directions Governing Energy Saving and Carbon Reduction</li> <li>Cathay Life was the first financial institution in Taiwan to introduce ISO 14001 Environmental Management System and ISO 50001 Energy Management System</li> <li>Cathay United Bank's Mingcheng Branch was the first branch in Taiwan to install solar panels</li> </ul>
	Set "renewable energy and infrastructure" as one of the four sustainability focus areas of Cathay	
2016	<ul style="list-style-type: none"> <li>Cathay Life committed to complying with the Principles for Sustainable Insurance (PSI)</li> <li>Became one of the founding members of the Asia Investor Group on Climate Change (AIGCC)</li> </ul>	<ul style="list-style-type: none"> <li>Announced the Cathay FHC Environment and Energy Policy</li> <li>All locations adopted ISO 14064 for conducting GHG inventories</li> </ul>
2017	<ul style="list-style-type: none"> <li>The only financial institution in Taiwan to participate in Climate Action 100+ and the CDP Non-Disclosure Campaign</li> <li>Organized the 1st Cathay Climate Change Forum</li> <li>Cathay Century committed to complying with PSI</li> </ul>	<ul style="list-style-type: none"> <li>Cathay FHC and its subsidiaries introduced ISO 14001 Environmental Management System and ISO 50001 Energy Management System</li> <li>Cathay Financial Center obtained LEED certification</li> <li>Among the first group of companies to trade T-RECs</li> <li>Set Cathay FHC's operational carbon reduction targets</li> </ul>
	Signed the TCFD commitment, disclosed measures in the CSR Report, and established the TCFD Task Force at the end of the year	
2018	<ul style="list-style-type: none"> <li>Cathay United Bank committed to complying with the Principles for Responsible Banking (PRB)</li> <li>The first financial institution in Taiwan to review the carbon footprint of investment portfolios according to TCFD recommendations</li> <li>Chief Investment Officer Sophia Cheng was appointed Chair of AIGCC</li> </ul>	<ul style="list-style-type: none"> <li>Cathay FHC and its subsidiaries adopted the method for compiling organizational water footprint</li> </ul>
2019	<ul style="list-style-type: none"> <li>Committed to actively removing "coal" from investments and loans: Cathay Life lists coal-fired power companies that are not actively transitioning to renewable energy as not eligible for investment; Cathay United Bank announced that it would not provide loans to coal-fired power plants</li> </ul>	<ul style="list-style-type: none"> <li>Cathay FHC and its subsidiaries were the first financial institutions in the world to introduce ISO 20400 Sustainable Procurement</li> <li>Inventoried 12 emissions in Cathay's value chain (Categories 3-5)</li> </ul>
	Set "climate" as one of the three focus areas of Cathay's sustainability strategy and established the Corporate Sustainability Office as a department-level unit	
2020	<ul style="list-style-type: none"> <li>Adopted the methodology of the Partnership for Carbon Accounting Financials (PCAF) to calculate the carbon emissions of investment portfolios</li> <li>The only financial institution in Taiwan to participate in the Ceres Valuing Water Finance Task Force</li> <li>Cathay SITE committed to complying with PRI</li> </ul>	<ul style="list-style-type: none"> <li>Cathay Life became the first life insurance company in Taiwan to obtain the Carbon Reduction Label for products</li> <li>Cathay Century established the Product Category Rules (PCR) for the property insurance business</li> <li>Linked GHG reduction targets with KPI for the presidents' remuneration</li> </ul>
	Committed to achieving net zero emissions by 2050	
2021	<ul style="list-style-type: none"> <li>The only financial institution in Taiwan to participate in the Asian Utilities Engagement Program of AIGCC and the Science-Based Targets (SBT) Campaign of CDP</li> <li>Set carbon reduction goals for operations by referencing the methodology of the Science Based Targets initiative (SBTi)</li> <li>Established the policy of "Zero Coal financing"</li> <li>Chief Investment Officer Sophia Cheng was invited to speak at peripheral meetings of COP26 and was as a distinguished guest at 4 peripheral forums and 1 Asia responsible investment forum</li> </ul>	<ul style="list-style-type: none"> <li>Cathay Century became the first property insurance company in Taiwan to obtain the Carbon Reduction Label certification for products</li> <li>Cathay United Bank became the first bank in Taiwan to obtain the Carbon Footprint Label and Carbon Reduction Label certifications for personal unsecured loan services</li> <li>Committed to using 100% renewable energy by 2030 with all business locations in line with RE100</li> </ul>



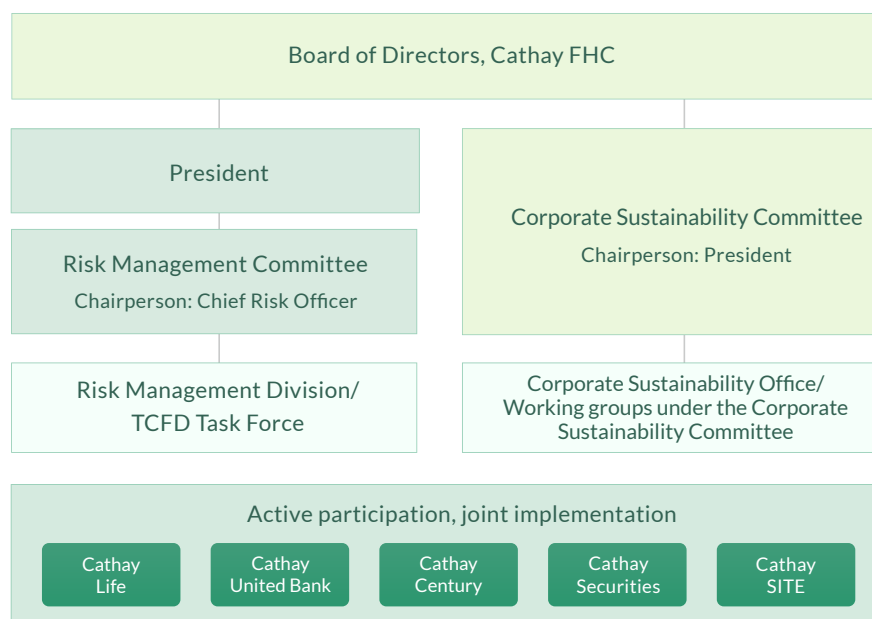
# 1

# Governance

Cathay has established an effective climate governance framework, in which the Board of Directors is the highest governance unit for climate issues group-wide, responsible for supervision and decision-making. Senior managers lead related committees and working groups in the implementation of climate-related strategies and risk management. Cathay continues to enhance climate-related abilities to strengthen its responsiveness and resilience to climate risks and opportunities.








## 1.1 Climate Governance Framework



### TCFD Task Force

Cathay established the TCFD Task Force at the end of 2018 to comply with recommendations of FSB's TCFD. The chief risk officer of Cathay FHC convenes monthly exchange meetings and coordinates the expertise and resources of each subsidiary for the implementation of projects related to climate risks. There are four task forces (real estate investment and mortgages, responsible securities, insurance products, and corporate loan) divided based on the balance sheet. The primary mission of the task forces is to comprehensively review climate-related risks of each business, create scenarios for calculation and simulation analysis, and look into methods for incorporating climate risks into the Company's risk control mechanisms. Cathay FHC's Risk Management Division includes implementation results of the TCFD Task Force in its work reports periodically submitted to the Risk Management Committee for review.

Organization	Chairperson/ Team Leader	Frequency of meetings	Role in Climate Issues
 Board of Directors	Chairman	At least once a quarter	Highest governance unit for climate issues
 Corporate Sustainability Committee	President, Cathay FHC	Quarterly	The core unit for promoting corporate sustainability subordinated to the Board of Directors
 Risk Management Committee	Chief Risk Officer, Cathay FHC	Monthly	The highest level climate risk management unit
 Working groups under the Corporate Sustainability Committee	Senior managers of each working group	Convened irregularly according to practical needs	Climate-related working groups are as follows: <ul style="list-style-type: none"> <li>Responsible Investment Working Group: Responsible for managing 1climate-related risks and opportunities of Cathay's investments and engaging with investees</li> <li>Responsible Products and Services Working Group: Responsible for promoting green financial products and services and managing and responding to risks and opportunities brought by climate change</li> <li>Green Operation Working Group: Responsible for managing the environmental impact of company operations, and is also one of the main contributors to Cathay's Scope 1 and Scope 2 GHG reduction and the use of renewable energy</li> </ul>
 TCFD Task Force	Chief Risk Officer, Cathay FHC	Monthly	Coordinate the expertise and resources of each subsidiary for the implementation of projects related to climate risks

2022 NEW

## Climate Governance Meetings

Cathay considered the growing impact of climate change on its existing services and planned a platform for climate issues among senior managers across subsidiaries and businesses in 2021. We began convening quarterly climate governance meetings in 2022. The meetings are supervised by the president of Cathay FHC and members include the TCFD Task Force and senior managers of Cathay's four core businesses (investment, lending, real estate, and insurance products). In the meetings, participants discuss climate-related issues and strengthen horizontal communication to build a group-wide consensus, which create more diverse development opportunities for Cathay.

## Duties of the Board of Directors

The Board of Directors is the highest level governance unit for ESG and climate risk management, and is responsible for approving climate-related policies, strategies, and targets. The Board considers climate-related risks and opportunities and supervises climate-related risk management and disclosures. The Corporate Sustainability Committee and Risk Management Committee periodically report corporate sustainability and climate risk issues and work to the Board of Directors. Climate-related agenda items of the Board of Directors in 2021 and early 2022 are as follows:

- Key action plans of Cathay's three focus areas (climate, health, and empowerment) for sustainable development
- Science Based Targets initiative (SBTi)
- Cathay's Zero Carbon Operations Transition Program
- Corporate Sustainability KPI Project
- ESG and climate risk work reports
- Identification of material climate risks and opportunities
- Climate scenario analyses
- Cathay's TCFD Phased Approach in 2022



## Duties of Management

The president of Cathay FHC convenes the Corporate Sustainability Committee and subordinate working groups for dealing with climate-related issues. The chief risk officer of Cathay FHC convenes the Risk Management Committee and TCFD Task Force for management and is responsible for Cathay's climate-related strategy planning, while ensuring the implementation of climate management actions.



- Ensures that Cathay takes actions for climate-related risks and opportunities based on the policy and goals approved by the Board of Directors
- As chairperson of the Corporate Sustainability Committee, takes charge of and supervises adjustments to the overall strategies established by subsidiaries according to the Corporate Sustainability Committee recommendations, and provides timely instructions for revision



- Reviews the climate-related risk management policy and guidelines
- Verifies the effectiveness of implementation for the climate-related risk management framework
- As chairperson of the Risk Management Committee, ensures the operation of Cathay's risk management system
- Leads Cathay's TCFD Task Force

## Climate Management Performance and Reward Mechanisms

In 2021, Cathay committed to achieving net zero emissions by 2050. The headquarters of Cathay FHC, Cathay Life, CUB, and Cathay Century expect to use 100% renewable energy by 2025, and all domestic business locations will use 100% renewable energy by 2030. The KPIs for the president of Cathay FHC are linked to carbon reduction effectiveness to achieve this target and drive Cathay's zero carbon operation transition.



## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

### 3 Risk Management

### 4 Metrics and Targets

### 5 Conclusion

## 1.2 Climate Ability Building

Cathay's emphasis on climate issues is deeply embedded in our core corporate culture. We link internal education and training, topic presentations, and exchanges with external institutions to internal and external resources and technologies, in order to raise the climate awareness of Cathay employees and strengthen Cathay's climate risk management and abilities to build climate finance.



### Deeply Rooted Climate Risk Culture

- Cathay continually invites external consultants to provide climate-related education and training for the Board of Directors. Cathay FHC has included climate risk issues into the required risk management course for all employees each year, and completion has reached 100% every year, raising the climate change risk awareness and enhancing competencies of all employees.
- The cross-company and cross-business Corporate Sustainability Committee working groups and TCFD Task Force implement Cathay's overall climate strategies and climate-related risk management through periodical meetings and project cooperation.





## ■ Monitor Climate Trends in Real Time

- Cathay helps management monitor international trends and regulatory changes through diverse channels, such as periodically inviting external consultants, experts, and scholars to share about climate topics during management meetings, and irregularly sending personnel to participate in external climate-related seminars. Chief Investment Officer Sophia Cheng serving as the Chair of AIGCC for a long period of time will help Cathay stay up-to-date on international financial trends in response to climate change.

## ■ Improve Climate Risk Assessment Skills

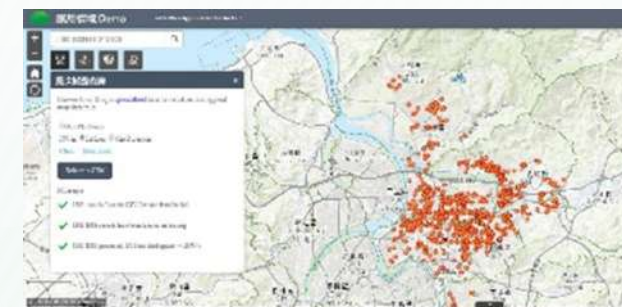
- Cathay is actively cooperating with industry, government, academia, and research institutes in introducing or developing climate-related data and tools, including the geographic information system (GIS) and numerical models for climate risk developed by MSCI. These are all indispensable assessment tools when making business decisions. Furthermore, Cathay has worked with scholars in developing scenario-based analysis for insurance product, such as the model for assessing the impact of temperature rise on claims for death benefits. Please refer to "[Climate Scenario Analysis](#)", [Chapter Strategy](#) for details.
- Cathay has recruited climate professionals and actively trained internal professionals. For example, Cathay Century assigned 3 employees from the loss control, underwriting, and claims departments to receive training in 2018, who obtained basic safety training certification from the Global Wind Organization (GWO) to improve their underwriting skills.

## ■ Develop Abilities to Build Climate Finance

- Cathay is actively seeking to cooperate with external teams that specialize in low carbon transition solutions in response to the global trend of carbon reduction and Cathay's climate strategy, engaging in cross-industry exchanges and learning to help Cathay develop financial services in response to climate change. For example, Cathay Life began working with solar power companies in 2014, and not only provided funding for industrial development, but also seized renewable energy related business opportunities through cross-industry collaboration, further facilitating the attainment of Cathay's strategic targets for zero carbon transition.



External experts were invited to Cathay Life's work meetings to share about climate topics



■ Using GIS to examine the impact of natural disasters







# 2 Strategy


Cathay planned the climate strategy blueprint from the perspectives of "low-carbon economy" and "environmental sustainability." Besides setting the group-wide target for net zero emissions by 2050, Cathay implements concrete action plans to counter material climate issues that were identified, actively utilizes internal and external resources to develop climate scenario-based analysis for the core businesses, and uses it to assess the resilience of climate strategies and to further improve the group-wide climate actions.

## 2.1 Climate Risks and Opportunities

According to classification by the FSB TCFD, climate-related risks can be divided into two categories: "physical risks" related to climate changes and "transition risks" related to low-carbon economy. In the process of mitigation and adaptation to climate change, the actions corporates take would also create opportunities. Cathay inventoried and identified material climate risks and opportunities across the group, and further formulated corresponding climate strategies and actions.

### ■ Climate-related risks, opportunities and examples of financial impact

Type	Climate-Related Risks	Example of Financial Impact
 Transition Risks	Policy and Legal	Pricing of GHG emissions increases cost of operations and fines
	Technology	Increase in cost due to low carbon transition of products or services
	Market	Changes in consumer preferences lower demand on products/services
	Reputation	Stigmatization of specific industries or economic behaviors lowers demand on products/services
 Physical Risks	Acute	More severe extreme weather events, such as typhoons and floods, cause decline or suspension of production
	Chronic	The impact of average temperature rise and sea level rise causes sales/output to decrease and results in lower income

Type	Climate-Related Opportunities	Example of Financial Impact
 Opportunities	Resource Efficiency	Moving to more efficient buildings lowers operating cost
	Energy Source	The use of low carbon energy reduces exposure to the risk of fossil fuel price hikes in the future
	Products and Services	Develop or increase low-carbon products and services in response to demand to increase income
	Markets	Enter new and emerging markets to increase income
	Resilience	Increase market cap through resilience planning (e.g., infrastructure, buildings)

## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

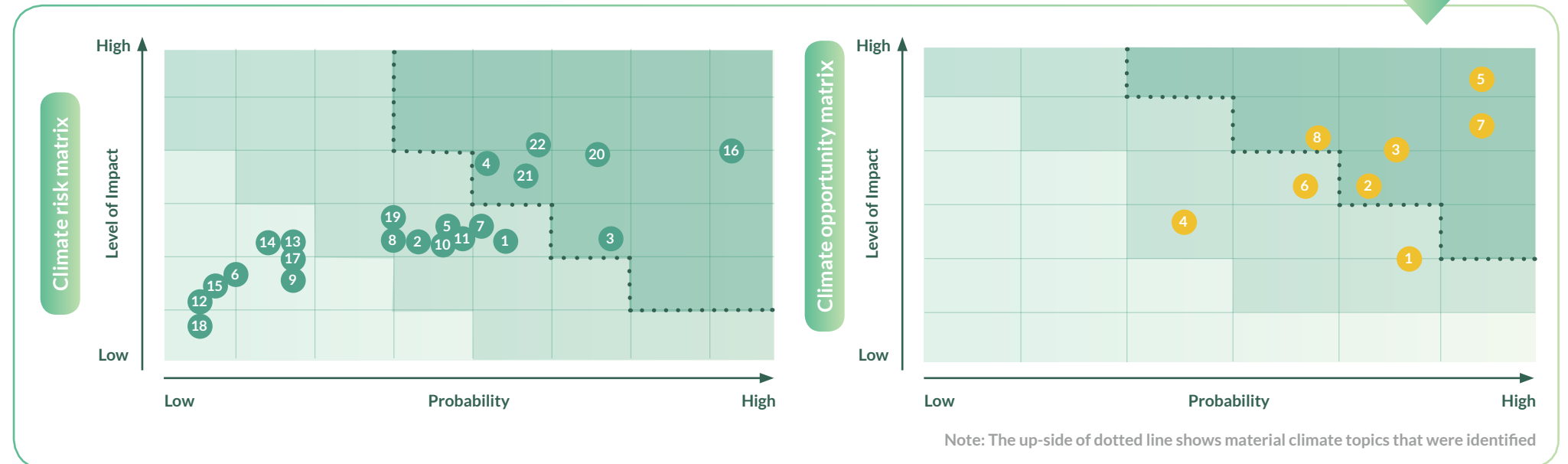
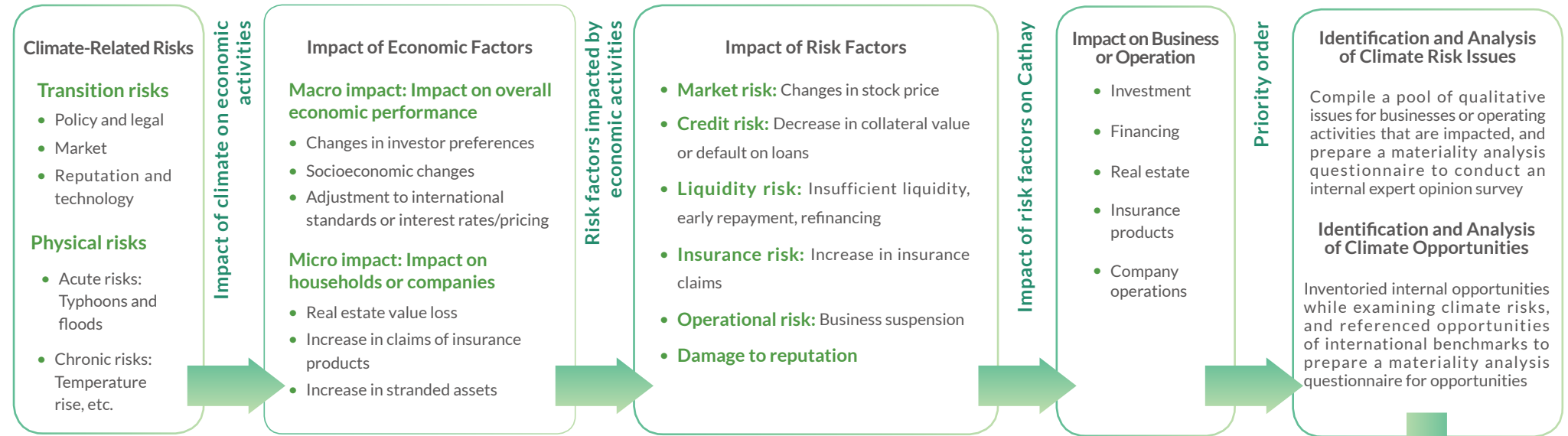
### 3 Risk Management

### 4 Metrics and Targets

### 5 Conclusion

## Identification Process for Climate Risks and Opportunities

Cathay assesses the impact on micro and macro economic activities through different types and characteristics of climate-related risks, and links it to conventional risks to identify the potential financial impact on Cathay. Cathay identifies relevant climate risks and opportunities in this process. For example, frequent flooding will cause the value of residential or corporate real estate to decrease. If this causes the value of real estate to become too low, it may create credit risk for customers and further cause companies to sustain financial losses. Finally, Cathay uses the approach of internal experts to create climate matrixes, and ranks issues based on "level of impact" and "probability of occurrence."





## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

### 3 Risk Management

### 4 Metrics and Targets

### 5 Conclusion

## Material Topics Relating to Climate Risks and Opportunities

Cathay selected 6 material climate risks and 5 material climate opportunities based on the climate risk and opportunity ranking results, identifying the duration and potential of financial impact, as well as the association with traditional risks. This is used as the basis for response measures and risk management.



### Overview of material climate risks

Priority Order	Risks	Potential Financial Impact	Duration of Impact <sup>1</sup>	Corresponding Traditional Risks
1	<b>16</b> GHG reduction	Increased energy prices or GHG emission costs lead to increased routine costs for business locations	Short- and mid-term	Operational risk
2	<b>20</b> Increased risks from investment and loan positions in high-emissions industries	The arrival of the low carbon era will cause governments around the world to impose carbon taxes or carbon fees on high-emission industries, forcing a change in the expenditure structure of particular companies and resulting in reduced profits from investments and loans or increased risk in lending	Short- and mid-term (long-term)	Market risk Credit risk
3	<b>22</b> Changes in consumer preferences	Consumer demand for companies with better performance in climate change adaptation has increased, and there are additional concerns when dealing with companies that have poor performance in such regard, making it difficult to attract new customers and retain old ones	Mid- and long-term	Reputation risk Credit risk
4	<b>3</b> Increase in typhoon and flood insurance claims	Climate change leads to more frequent and more intense natural disasters and may subsequently cause additional losses to the underwritten portfolios associated with property insurance	Short- and mid-term	Insurance risk
5	<b>21</b> Market uncertainty	The future operation and service transition of Cathay may be affected by global or regional carbon reduction and uncertainty in energy policies, which may subsequently lead to worsened financial situations for Cathay	Short-term	Reputation risk Credit risk
6	<b>4</b> Business suspension due to extreme weather events	Extreme temperature will cause damage to operational equipment, resulting in reduced profits or increased maintenance costs	Mid- and long-term	Operational risk



### Overview of material climate opportunities

Priority Order	Opportunities	Potential Financial Impact	Duration of Impact <sup>1</sup>
1	<b>5</b> Digital finance trends	Promote operational efficiency and reduce costs through digital technology	Short- and mid-term (long-term)
2	<b>7</b> Sustainable operation	Improve various sustainability or ESG rankings of Cathay and respond to the expectations of stakeholders for Cathay to create mutual benefits and promote long-term sustainable value	Mid- and long-term
3	<b>3</b> Investing and lending for transition to a low-carbon economy	Actively search for prospective investment/lending targets during the global transition to a low-carbon economy and thereby increase profits from investments and loans	Short- and mid-term (long-term)
4	<b>8</b> Climate resilience	Cultivate the adaptability to respond to climate change and identify as well as manage climate change risks beforehand to reduce the financial impact of physical risks and transition risks on operations	Mid- and long-term
5	<b>2</b> Developing green products/ services and climate adaptation solutions	Invest in research and innovation development, and increase the supply of various green products, services and climate adaptation solutions to satisfy customers' needs and improve company revenues	Short- and mid-term (long-term)

<sup>1</sup> Definition of durations: Periods of 3 years (inclusive) or less are classified as short-term, periods longer than 3 years to 10 years (inclusive) are classified as mid-term, and periods longer than 10 years are classified as long-term.

## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy



### 3 Risk Management

### 4 Metrics and Targets

### 5 Conclusion

## 2.2 Climate Strategy Blueprint and Actions

Cathay focuses on directions for implementing the sustainability strategy and builds a consensus for the sustainability strategy blueprint (including the climate strategy blueprint) in 2022 based on three focus areas of sustainability: "climate," "health," and "empowerment." When facing the challenge of climate-related risks and opportunities, Cathay implements concrete action plans in response to material climate issues and further achieves the commitment of net zero emissions by 2050.

Aspect	Ambitious Goals		Related Stakeholders	Corresponding Material Risks and Opportunities	Action Plans
 Low-Carbon Economy	Net zero emissions from financial assets by 2050	Implement financial asset transition by setting SBTs to achieve net zero emissions	Corporate customers, Government	20 22 3 7 8	1. Set SBTs: Use emission-based and impact-based methods to set the decarbonization roadmap for investment and loan portfolios. 2. Coal-Exit Actions: (1) Suspend loans to coal-fired power plants, focus on loans for carbon reduction transition and loans for renewable energy, and set the target to reduce the credit facility for the coal industry to zero by the end of 2027 Q1. (2) Withdraw investments in coal-fired power generation companies that do not actively engage in transition and the coal value chain. 3. Plan investments and loans for low carbon transition plans: Monitor industries with high climate risk and gradually lower the carbon footprint of investments and loans each year.
	Leader of climate engagement actions	Utilize the influence of dialogue to communicate and cooperate with stakeholders in the financial value chain, so that companies will take actions in response to climate change and strengthen their climate resilience.	Corporate customers, Government, Associations	20 22 8	1. Communicate with investees and borrowers and encourage them to disclose their carbon inventory results, set more concrete mid- and long-term decarbonization targets, or join international organizations calling for carbon reduction such as SBTi/RE100. 2. Continue to expand participation in international initiatives, and jointly exert influence alongside international investors (CDP NDC, CA 100+, and AUEP).
	Comprehensive financial solutions provider for climate change	Support companies and industries in creating low carbon transition opportunities or mitigating/adapting to climate change through funds or financial products and services, so that industries will become more competitive and society will develop towards a green economy in an orderly manner.	Customers	3 22 2 3 8	1. Green Capital: Increase low-carbon investments. 2. Green Product: (1) Green lending and sustainability-linked loans (2) Personal sustainable financial services (3) Low carbon transition fund products (4) Green insurance (renewable energy industry insurance/solar power/offshore wind power/green vehicle insurance) (5) Issue green bonds and provide green warrants and structured products 3. Green Services : Provide customers with natural disaster loss control services and low carbon investment research information to raise stakeholders' climate awareness and promote the concept of zero carbon.
 Sustainable Environment	Zero carbon operations by 2050	1. Green Operation : Implement mobile operations, digital services, and shared workspaces, and incorporate the concepts of sharing and circularity into workplace planning to create a low carbon workplace	Employees, Customers	16 21 22 5 7	1. Internal and external workplace transformation plan: Create a flexible, shared office space through new ways of transformation into multi-functional spaces, and increase the efficiency of office space through measures such as remote work. 2. Paperless operations/services: Reduce carbon footprint through digital/paperless services and operating procedures. (Carbon Reduction Label/Carbon Label)
		2. Green Energy : Promote energy transition so that by 2030, business locations in Taiwan will use 100% renewable energy and business locations worldwide will use 60% renewable energy.	Employees, Customers	16 21 22 7	1. Business locations use 100% renewable energy: Optimize arrangements of type and density of renewable energy, inquire prices for purchasing renewable energy from different sources, and plan the renewable energy procurement strategy for each business location. 2. Digital management of energy data: Manage electricity use for gray energy and renewable energy and optimize energy usage.
		3. Green Real Estate : Create a low carbon property ecosystem and encourage industries to participate in energy transition	Employees, Customers	4 16 2 8	1. Green landlord project: Utilize renewable energy to meet sustainability goals of corporate customers, encourage customers to transition, and make it convenient to use local renewable energy. 2. Build low carbon buildings: Construct buildings with even lower carbon emissions through the development of an onsite self-use PV system, purchase of renewable energy, and construction of green buildings.



## Promotion of Low-Carbon Economy

Cathay exerts influence through financial assets and urges industries to reduce carbon emissions to reach the target of net zero emissions. We have not only made a commitment to net zero emissions from our financial assets, but also influenced companies through engagement and provided financial solutions for climate change to assist customers creating opportunities for low carbon transition or mitigating/adapting climate change.

### Net Zero Emissions from Financial Assets

- **Set decarbonization targets based on the SBTi methodology**

Cathay committed to setting SBTs in January 2022 used impact-based method to lay out the carbon reduction pathway for investment and loan portfolios.

- **Gradually withdraw from coal industries**

Cathay committed to no longer providing loans to any coal-fired power plants in 2019, and listed coal-fired power companies that had not actively transitioned to renewable energy as not eligible for investment. CUB established the policy of "Zero Coal financing" in 2021: Zero the credit facility for the coal industry in 2027 Q1. Cathay Life has listed the entire coal value chain as a sensitive industry and participated in AIGCC's Asian Utilities Engagement Program to assist the low carbon transition of coal-fired power plants (the companies engaged have already committed to phasing out coal-fired power generation assets before the end of 2040).

- **Investment in the development of the renewable energy industry**

#### Investment

Cathay Life has been jointly investing in Galaxy Energy with AU Optronics since 2014. In 2016, we initiated a model of joint venture with solar energy service providers in the form of special projects. Under this model, we have successively formed joint investments in the following companies: Taixu Energy (with Sino-American Silicon Products); Xinritai Co., Ltd. (with Neo Solar Power); and Solar Master Energy (with Power Master Group), thus promoting solar power industrial clusters and setting an example for our peers. Cathay Life and SPower Master Group jointly developed and built Yunlin Mailiao Tienji Solar Power Plant in October 2021, creating a model example of "utilizing the funds of a life insurance company for renewable energy public constructions" and "revitalizing public land", thereby creating a win-win situation for government, companies, and local communities. The total investment amount as of 2021 that was approved by the FSC beforehand or reported afterwards reached NT\$7 billion, the installed capacity of investments in solar power exceeded 247.8 MW.

#### Financing

CUB provided loans for Taiwan's first solar power generation project which was the first project complying with the Equator Principles, as well as joined the first loan syndication for offshore wind power in Taiwan. CUB also served as the arranger of the syndicated loan for the largest offshore wind farm in the Asia Pacific in 2019. CUB financed 325 solar power stations in Taiwan in 2021 with a total installed capacity reaching 184 MW. As of the end of 2021, CUB had financed over 2,500 domestic and foreign solar power plants with a total installed capacity of 758 MW, reducing nearly 393 thousand MTCO<sub>2</sub>e a year, which is roughly 1,023 Da'an Forest Park made. For offshore wind farms, CUB joined the first loan syndication for offshore wind power in Taiwan, a 128 MW offshore wind farm, and also participated in the project financing for the 640 MW Yunlin Offshore Wind Farm and 605 MW Greater Changhua 1 Offshore Wind Farm.



## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

### 3 Risk Management

### 4 Metrics and Targets

### 5 Conclusion

## Leader of Climate Engagement Actions

Cathay has gained international recognition for its efforts over the years. The Investor Agenda announced the Investor Climate Action Plans (ICAP) in 2021, and Cathay FHC was the only asset owner in Asia to be included in the world's top ten best practice examples for corporate engagement and policy advocacy. Furthermore, our years of engagement efforts have gradually fermented: The three companies engaged under Climate Action 100+ have committed to net zero emissions or carbon neutrality by 2050. We participated in AIGCC's Asian Utilities Engagement Program, and companies engaged by Cathay Life have committed to eliminating coal-fired power generation assets before the end of 2040. As of the end of 2021, we have successfully convinced 35 companies to disclose their environmental information. The number of participants and presence of companies participating in the annual Climate Change Summit has gradually increased each year. Furthermore, we have spared no effort in climate empowerment to help countries cultivate climate professionals and mitigate physical risks.

### • International initiatives and engagement

Cathay actively participates in major Asian and international climate-related actions, initiatives, or alliances each year, in the hope of sharing Cathay's experience with the international community while bringing in international resources for Taiwan's climate change advancements, actively publicizing Taiwan's contribution to climate change. Cathay participated in the following initiatives and alliances in 2021:

#### Climate Action 100+

Climate Action 100+ (CA100+) was launched in 2017 and is the world's largest investor climate initiative ever, urging companies to take carbon reduction actions according to the Paris Agreement. At present, 700 institutional investors worldwide participate in CA100+, whose assets under management (AUM) total US\$68 trillion.



Cathay FHC actively participates in CA100+, and Cathay Life and Cathay SITE became signatories in 2017. Cathay is the only financial group in Taiwan to participate in CA100+, and engages the three Taiwanese investee companies participating in the initiative (Formosa Petrochemical Corporation, Foxconn, and China Steel) one to one. Besides engaging companies, Cathay also actively participates in the many events and progress meetings of CA100+, and provides revision recommendations for the reports and guidelines it publishes. We also assist by reviewing the Chinese translations of related reports, allowing Taiwanese investee companies to understand information and progress of CA100+ more easily. The three companies engaged by Cathay have all committed to net zero emissions or carbon neutrality in 2021.

#### Asia Investor Group on Climate Change (AIGCC)

In 2016, Cathay became a founding member of the Asia Investor Group on Climate Change (AIGCC), and has actively participated in its events over the years: We participated in three task forces in 2020, namely Net Zero Investment, Engagement and Policy, and Physical Risks and Resilience, providing recommendations and looking into feasible tools and solutions. Cathay Life and Cathay SITE participated in AIGCC's Asian Utilities Engagement Program in 2021, and engaged Asian power plants that account for 23% of global carbon emissions, encouraging companies to adopt carbon reduction mechanisms. Our Chief Investment Officer, Sophia Cheng, has been appointed AIGCC Chair since 2018 to help AIGCC increase awareness towards climate risks/opportunities among investors in Asia, and encourage them to take actions.





## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

### 3 Risk Management

### 4 Metrics and Targets

### 5 Conclusion

## CDP Non-Disclosure Campaign

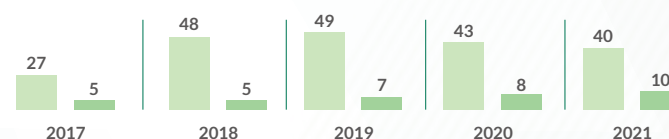
CDP's Non-Disclosure Campaign encouraged investors to demand companies' disclosure of environmental information. Cathay has participated in the initiative for five consecutive years since 2017 and was the only financial institution in Taiwan to have participated in the campaign. Cathay uses one-on-one communication to explain to companies the material impact of climate change and forest and water resource issues on their operations and encourages them to disclose related data and management measures for investors to evaluate related risks.



In 2021, Cathay engaged a total of 40 companies with a success rate of 25%, which is a record high, well above the global average. Furthermore, Cathay has successfully engaged 35 companies since 2017 and 52% of the companies improved their CDP scores in the following year, which demonstrates the long-term positive impact of successful engagement.

### ■ Engagement status

■ Number of companies engaged (one-on-one) ■ Successful cases



## Ceres Valuing Water Finance Task Force

Climate change has indirectly changed the water cycle and precipitation patterns in recent years. It has also made water resources one of the major challenges for the world today. Taiwan has also faced water shortage crises in recent years, impacting the operations of certain industries that are highly dependent on water resources. As such, Cathay FHC and Cathay Life joined the Ceres Valuing Water Finance Task Force in 2020 as the only two participating financial institutions in Taiwan. We obtain information on forecasts of global water resources and learn about the risks and opportunities of water resources in different sectors, hoping that such participation helps Cathay ward off related risks in advance, and increase investment resilience when faced with challenges in water resources.



## CDP Science-Based Targets Campaign

Cathay FHC participated in the CDP Science-Based Targets (SBT) Campaign in 2021, in which over 200 institutional investors worldwide jointly urged over 1,600 companies with significant influence on climate around the globe to commit to achieving the SBTs and goals of the Paris Agreement. Cathay is the only financial institution in Taiwan to participate in the campaign. As of the end of 2021, the campaign has successfully made 79 companies worldwide with approximately 140 million MTCO<sub>2</sub>e commit to the SBTs.



## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

### 3 Risk Management

### 4 Metrics and Targets

### 5 Conclusion

## • Cathay Sustainable Finance and Climate Change Summit

Cathay FHC has organized the Climate Change Forum in Taiwan for five consecutive years to encourage investee enterprises to pay attention to climate change issues and take action. We have begun inviting experts from industry, government, and academia in Taiwan and overseas since 2017, such as former U.S. Vice President Al Gore and the international organization CDP, and also collaborate with the Taiwan Stock Exchange and AIGCC to continue bringing international trends to Taiwan, creating a platform for experience sharing and perspective exchanges.

Upholding this philosophy, Cathay invited leaders of industry, government, and academia, along with heavyweight investors and international experts from America, Europe, and Oceania to the summit in 2021. Over the course of the one-day summit, participants shared system and market trends, and exchanged ESG implementation and zero carbon transition concepts and practical experience of companies, helping Taiwanese companies accelerate their low carbon transition and find development opportunities in a future with net zero emissions. Enterprises that joined accounted for 76% of Taiwan's market cap and 51% of Taiwan's total carbon emissions in 2021. Over 1,000 people were online at the same time and over 240 directors, supervisors, and corporate governance officers participated in the forum.

## • Climate empowerment

Cathay FHC has monitored climate change issues for years and launched empowerment programs for the youth and companies, respectively. Cathay FHC has begun working with the Ministry of Education, National Taiwan University, and Taiwan Youth Climate Coalition for youth empowerment under climate change. We organize youth forums, engage in industry-academia collaboration, and provide practical resources to create a pool of climate professionals in Taiwan through a multifaceted approach. Cathay Century organizes a large-scale loss control seminar every year to help raise the risk awareness of corporate customers and improve their risk awareness and understanding of potential risks. It also strengthens their business continuity management ability and the concept of purchasing insurance, so that they will utilize suitable insurance plans to fill in gaps in their corporate risk and reasonably transfer operational risks.



The chairperson of Cathay FHC, Dr. Hong-Tu Tsai, and the chairperson of FSC, Dr. Tien-Mu Huang, took photos in Cathay Sustainable Finance and Climate Change Summit

Aspect	Category	Action Plans	Description
Youth Empowerment	Actions and initiatives	Climate Change Youth Forum	In 2021, Cathay FHC co-organized the 2021 Taiwan Climate Action Exposition with the International Climate Development Institute and Biodiversity Research Center, National Taiwan University (NTU). We simultaneously held the 2021 Cathay Climate Change Youth Forum and designed "Introduction to Issues", "Action Guidelines", and "Inspiration" sections to empower the youth with climate action skills. The event attracted nearly a hundred college students.
	Practical resources	Youth Excellence Scholarship	Cathay supports youths in taking real actions in response to issues. We used the Cathay Youth Excellence Scholarship to provide the first "creative implementation fund". The project received a total of 27 environmental sustainability action proposals in 2021, and we selected a total of 7 climate-related action plans.
	Industry-academia collaboration	International Degree Program in Climate Change and Sustainable Development	Cathay signed a MOU for a collaborative internship program with the International Degree Program in Climate Change and Sustainable Development (IPCS) of NTU. The program leverages the cooperation between academic institutions and companies to jointly train talent with the abilities for resolving difficulties in different sectors, as to create a solid academic foundation for the development of climate change prevention in Taiwan.
Corporate Empowerment	Knowledge sharing	Loss Control Seminar	Cathay Century strives to provide corporate customers with the latest concepts and knowledge on loss control and risk management. In response to climate change in recent years, Cathay Century is actively planning issues related to extreme weather events and compound disasters, such as the global impact of extreme weather events, overview of the Great East Japan Earthquake, and responses by companies.



## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

### 3 Risk Management

### 4 Metrics and Targets

### 5 Conclusion

## Comprehensive Financial Solutions Provider for Climate Change

### • Increase low-carbon investments

In response to the global trend of transitioning to a low-carbon economy and the Taiwanese government's 5+2 Industrial Innovation Plan, Cathay actively invests in the green energy industry to make contribution to Earth. Cathay Life has committed to increasing low carbon investments by 20% in 2025 compared to 2018, and by 40% in 2030 compared to 2018. For Cathay's low carbon investment performance, please refer to "[Historical Metric Data](#)", [Chapter Metrics and Targets](#).

### • Green bond issuance

- CUB participated in the underwriting of Natixis' international green bonds with a total amount of US\$180 million listed both on the Taipei and Luxembourg exchanges in October 2021. The proceeds will be used to fund or refinance the Sustainability Bond Project of the French banking group BPCE, or be used to fund the renewable energy sector in Taiwan, including the largest offshore wind farm project in Asia, Yunlin Offshore Wind Farm.

- Cathay Securities is also actively involved in fund raising for environmental protection and green enterprises, and helped the initial public offering (IPO) and listed on the Emerging Stock Board of the leading solar photovoltaic company Power Master (6839) in 2021; raised NT\$288 million for the convertible corporate bonds of Anji Technology, Co., Ltd. (core business: high-efficiency solar modules, etc.), and participated in the underwriting of green bonds issued by Chailease Holding Company Limited, Taipower, and TSMC.

### • Promotion of green insurance



#### Renewable energy industry insurance

Cathay Century started to provide appropriate insurance for the green industry sector during its construction and operation phases in 2010 and became the first insurance company to offer insurance coverage for offshore wind farms in Taiwan in 2016. It established an energy infrastructure team in 2020, in the hope of developing potential renewable energy businesses through risk identification. Cathay Century also provides insurance for hydroelectric power plants, solar power plants, and wind farms and equipment, with a total underwritten amount of NT\$31.61 billion in 2021.



#### Green automobile insurance

Following the rise of environmental awareness, increasing numbers of car drivers and scooter riders are choosing to buy eco-friendly electric vehicles. Cathay Century launched the first green vehicle insurance in Taiwan in 2013, and has insured a cumulative total of 28,112 eco-friendly vehicles as of the end of 2021. The insurance is offered in coordination with government initiatives to support the green energy industry, and also aids Taiwan's transportation tool transition by encouraging drivers to support eco-friendly vehicles.



#### Bicycle insurance

Cathay Century started offering bicycle insurance in 2016, and the number of successful underwriting cases reached 8,261 as of the end of 2021. Furthermore, Cathay Century launched the first Public Bicycle Accident Insurance and Public Bicycle Third-party Liability Insurance in Taiwan in June 2018. As of the end of 2021, Public Bicycle Accident Insurance provided coverage for over 77.57 million people. The insurance eliminates the risk of public bicycle riders not having any insurance coverage, and satisfies the wide range of needs of green consumers.

### • Corporate natural disaster loss control services

- Cathay Century utilizes its core competency of loss control to provide corporate customers with typhoon and flood risk management solutions, and further adopts effective risk adaptation strategies to reduce disaster losses and impacts. Furthermore, with consideration to torrential rain and flood concerns during extreme weather events, Cathay Century also helps corporate customers evaluate if drainage facilities in areas surrounding their factories have sufficient capacity or if there are vulnerable areas prone to flooding. This is used posteriorly as the basis for flood warning at the factories and drainage facility improvement, lowering the risk of flooding and preventing property loss.

- From 2012 to 2021, Cathay Century served corporate customers in issuing 46 reports of typhoon and flood risk assessment. For corporate customers that intend on purchasing typhoon and flood insurance, data on 205 typhoon and flood risk assessments were provided by the internal underwriting unit, totaling 251 cases. Furthermore, Cathay Century provided 18 flood simulation analysis and vulnerability assessment services between 2013 and 2021.

## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

### 3 Risk Management

### 4 Metrics and Targets

### 5 Conclusion

## • Green fund issuance

### Cathay Global Smart Electric Vehicle ETF

Many countries have committed to achieving carbon neutrality by 2050. One of the policies aimed at achieving this goal is to accelerate the development of electric vehicles (EVs). Cathay SITE offered the Cathay Global Autonomous and Electric Vehicles ETF (00893), which is the first EV ETF in Taiwan, and its AUM reached NT\$19.8 billion as at the end of 2021.

### Cathay Sustainability Private Equity Fund

Cathay SITE became the first investment trust company in Taiwan approved to set up a subsidiary to issue private equity funds. 100% of the Cathay Sustainability Private Equity Fund is invested in key industries of sustainable development in Taiwan, including focus industries such as circular economy (e.g., sewage treatment and waste processing and reuse), renewable energy (e.g., solar energy, geothermal energy, hydropower, and energy storage), as well as the 5+2 innovative industries promoted by the government (e.g., Internet of Things, smart machinery, long-term care, and new agriculture). The total promised investment totaled NT\$8 billion and the total investment of the fund as of 2021 totaled NT\$4.8 billion. We currently have investments in 4 solar power plants, 1 wind farm, 2 circular economy companies, and 1 IoT company.

### Impact of Investments by the Cathay Sustainability Private Equity Fund



Wind  
power

The Fund signed an agreement with Ørsted in 2020 and jointly obtained 50% of the equity of the 605 MW Greater Changhua 1 Offshore Wind Farm with the Caisse de dépôt et placement du Québec (CDPQ) to take part in the construction of the wind farm and provide clean energy to more than 650,000 households in Taiwan. The project is set to provide **1.95 billion** kWh of electricity each year.



Solar  
power

Expected annual power generation: **573 million** kWh each year.



Processing waste resin and  
waste paint residues

The maximum monthly processing volume is **300** tons and the maximum annual processing volume is **3,600** tons.



Oil  
regeneration

Production of approximately **120,000** tons of steam each year.



Waste rubber  
processing

The maximum annual processing volume is **15,000** tons.



## Sustainable Environment Practices

Cathay set three sub-goals for sustainable environment aspect to achieve zero carbon operations by 2050: green operations, green energy, and green real estate. We increased the resilience of business locations to low carbon transition and physical climate disasters through workplace transformation and the assistance of technology, and further promoted renewable energy use and green building development.

### Green Operations

#### • Workplace transformation plan

Cathay follows the ISO 50001 energy management guidelines and replaces energy-consuming equipment based on their service life and electricity consumption every year, in order to lower the environmental impact of our operations and provide employees with a better office environment. For energy use over the years, please refer to "[Historical Metric Data](#)", [Chapter Metrics and Targets](#). The hybrid work model has become the new norm in recent years. Cathay implements workplace transformation with digital transformation at the core, creating a shared office space in conjunction with remote work measures to improve the efficiency of work space, while reducing carbon emissions from employees commuting to work.



Cathay FHC plug and  
play mobile office

#### • Paperless policies and services

- Cathay FHC is urging subsidiaries to reduce the carbon footprint of their products and services through digitalized operating procedures, as well as to inventory direct and indirect GHG emissions of products or services via life cycle assessment (LCA) according to the industry classification standards of the Environmental Protection Administration. We manage upstream products and engage in green procurement, develop a mid-stream low carbon product and service process, and actively obtain product carbon footprint and carbon reduction certifications and labels from the government, showing Cathay's determination to reduce carbon emissions.

- Cathay Life and Cathay Century are the first life insurance company and property insurance company in Taiwan to obtain the ISO14067 carbon footprint of insurance products certification and Carbon Reduction Label in 2020 and 2021, respectively. Cathay Century established the compliance standard for property insurance carbon footprint inventory: product category rules (PCR) for the carbon footprint of property insurance services, which is a paradigm that can be adopted by industry peers in the future.

- In 2021, CUB became the first bank in Taiwan to obtain the Carbon Footprint Label and Carbon Reduction Label for unsecured loan services, and established related PCR for their carbon footprint, accelerating electronic services through digital finance.



Cathay Century obtained the Carbon  
Reduction Label in 2021

### Green Energy

#### • Purchasing T-RECs

Cathay FHC completed the first batch of T-REC transactions in Taiwan in 2017, and has continued to install power generation equipment to generate green electricity for self-use and trading the electricity surplus for certificates or acquiring certificates through T-REC to offset greenhouse gas emissions.

#### • Installing rooftop PV systems on self-owned buildings

In addition to the continued replacement of major energy-consuming equipment, Cathay FHC and subsidiaries continue to install solar panels on rooftops. Cathay started making assessments and installing solar panels on self-owned buildings in 2016. Cumulative installed capacity was over 6,970 kW as of the end of 2021.





## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

### 3 Risk Management

### 4 Metrics and Targets

### 5 Conclusion

## Weight loss by Cathay employees transformed into renewable energy, the first renewable energy purchase cooperation project in Taiwan

Cathay FHC entered into the first renewable energy purchase cooperation in Taiwan with Dingshan LOHAS Development Association and other institutions in 2019. The rooftop PV system in the Dingshan Campus of Tainan's Hougang Elementary School, which was built using the NT\$2 million donated as a result of employee weight loss, was completed in December 2021. The green electricity will be purchased by Cathay for its own use so as to maximize environmental benefits. The money from energy purchasing will also be donated to the elderly people living in the Dingshan Community to provide community meals and activities and promote the prosperity of the community. This is a pioneering green energy public welfare model and is the first power purchase agreement (PPA) of a partnership between the financial and renewable energy sectors, creating a positive cycle of "weight loss, renewable energy, and charity".



Completed rooftop PV system in the Dingshan Campus of Hougang Elementary School in Tainan

### • Developing a visualized energy management system meter

CUB established the branch energy management system in 2020, and analyzes the electricity use of each branch through the cloud system. The system also changes energy use behavior and controls the cost of energy use, laying the foundation for energy management to strengthen Cathay's climate resilience.

## Green Real Estate

### • Green building development

Cathay Life established the Responsible Property Investment and Management Policy to ensure mutual prosperity with the environment. All new buildings use eco-friendly, energy efficient designs for green buildings. As of 2021, Cathay Life had a total of 17 green buildings (2 more than in 2020) and 21 green building certifications (5 more than in 2020).

#### ■ Details of Cathay Life's green building certifications

Certification	Grade	Certification Gained (no.)	Certification Pending (no.)
LEED-NC <sup>1</sup> (Leadership in Energy and Environmental Design)	Gold	2	-
	Silver	3	-
LEED-EBOM (existing buildings)	Platinum	1	-
EPC <sup>2</sup> (Energy Performance Certificates)	B	1	-
	C	1	-
Taiwan's Green Building labels <sup>3</sup>	Diamond	1	-
	Gold	0	2
	Silver	6	-
	Bronze	2	-
	Certified	4	-

<sup>1</sup> The LEED rating system includes 4 levels: Platinum, Gold, Silver, and Certified.

<sup>2</sup> The EPC rating is based on a scale from A (Very efficient) to G (Inefficient).

<sup>3</sup> Taiwan's Green Building labels include Diamond, Gold, Silver, Bronze, and Certified.



The new building in Qingping, Taoyuan obtained the Green Building label in 2021



The new building in Shixing, Hsinchu obtained the Green Building label in 2021

## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

### 3 Risk Management

### 4 Metrics and Targets

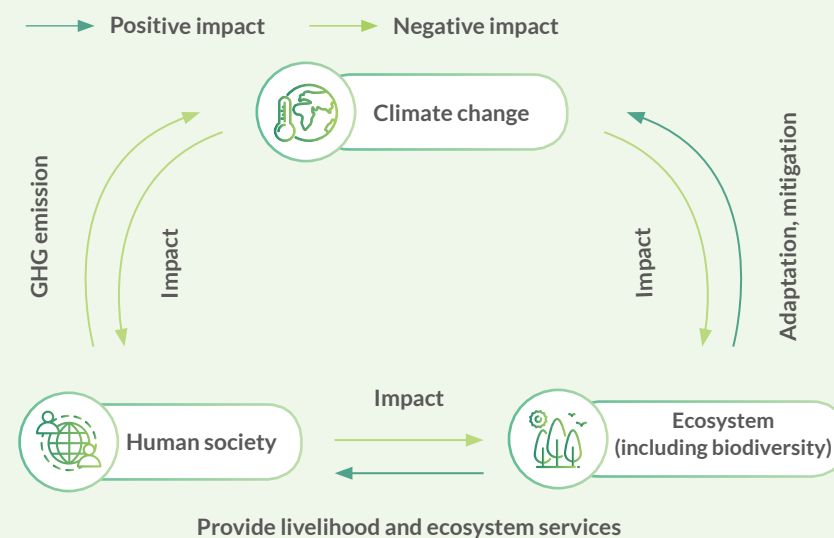
### 5 Conclusion

## Other Environmental Sustainability Issues – Biodiversity

According to the second part of the Sixth Assessment Report "Climate Change 2022: Impacts, Adaptation and Vulnerability" published by the Intergovernmental Panel on Climate Change (IPCC), climate change not only affects ecology, but also endangers food, water resources, health, and urban development of human societies. Countries have gradually come up with Nature-based Solutions (NbS) to respond to impacts and disasters under climate change.

Cathay has always attached great importance to environmental sustainability issues, and has invested resources and manpower to protect the habitat of marine life and space for the survival of different species. Cathay Life began supporting the Adopt-a-Beach project of the Environmental Protection Administration in 2017, and adopted coasts at Longfeng, Miaoli; Budai, Chiayi; and Donggang, Pingdong. Cathay Life called on families to participate in and work with environmental education organizations in 2021, providing a complete set of courses that covered from understanding the environmental crisis and types of marine waste, and personally participating in beach cleanup, to reflecting on potential actions in the future. Cathay has organized tree planting events non-stop, totaling 74 tree planting events in Taiwan over 11 years as of 2021, with 90,000 trees planted. We take action to make communities greener, restore nature, and encourage people to make their lives more eco-friendly, making environmental education a part of tree planting. CUB has organized beach cleanups for 4 consecutive years since 2018, totaling over 8 beach cleanups across Taiwan so far.

In terms of financial services, based on their individual management assessments, major subsidiaries have respectively listed "mining," "tropical rain forest lumbering," and "gillnet manufacturing and fishing" as industries/operations of special concern due to their impact on biodiversity, and have incorporated these in their investment and lending decision-making process to strengthen management. The subsidiaries included "toxic substance emissions and waste management" as an engagement topic, and exert their financial influence by calling on companies to take pollution prevention and habitat conservation seriously. The Cathay Sustainability Private Equity Fund issued by Cathay SITE invests 100% of funds into key industries for Taiwan's sustainable development, including circular economy industries (e.g., wastewater treatment, waste treatment and reuse).



■ Climate change, biodiversity, and human society affect each other



A beach cleanup activity held at Longfeng Fishing Harbor for children and their parents. An environmental education teacher talked to participants about common beach litter and things to look out for while cleaning.



## 2.3 Climate Scenario Analysis

Cathay invests resources and manpower to study international methodologies and develop quantitative scenario analysis to understand the financial impact of climate change. For areas that still require further development on a global level, such as insurance products, we are actively searching for external cooperation opportunities or independently developing scenario analysis methods, in order to address the characteristics of Cathay's assets and liabilities and further examine Cathay's climate strategies and resilience.

### ■ Scenario Description

Cathay referenced climate scenarios released by international organizations, including the Intergovernmental Panel on Climate Change (IPCC), International Energy Agency (IEA), and Network of Central Banks and Supervisors for Greening the Financial System (NGFS), and included Nationally Determined Contributions (NDCs) in evaluations.

#### ■ Climate scenarios and corresponding temperature rise at the end of the century

Corresponding Temperature Rise at the End of the Century	IPCC-AR5	NGFS	IEA
~1.5° C	-	Net Zero 2050	NZE
		Divergent Net Zero	
~2° C	RCP2.6	Below 2° C	SDS
		Delayed Transition	
~3° C	RCP4.5	NDCs	STEPS
	RCP6.0		
~4° C	-	Current policies	-
>4° C	RCP8.5		

#### ■ Cathay's scenario analysis items and scenarios

Item No.	Risk Type	Risk Pattern	Description	Time of Analysis <sup>1</sup>	Scope	Climate Scenario
Investments and loans						
A	Physical risk	Acute	Impact of natural disasters on the repayment ability of customers that provided mortgage collaterals	Near future	Taiwan	RCP 8.5
B	Transition risk	Policy and legal Changes in market preferences	Impact of growingly strict policies and regulations on corporate loan position—In the case of the basic metals and manufacturing industry	2030	Global	SDS、STEPS
C	Transition risk Physical risk	Policy and legal Acute, Chronic	Impact of the global economic and political situation and natural disasters on the value of stock and bond positions	2021~2080	Global	NGFS RCP8.5
Insurance						
D	Physical risk	Acute	Impact of climate change on typhoon and flood insurance claims	Near future, middle of the century, and end of the century	Taiwan	RCP 2.6、4.5、6.0、8.5
E	Physical risk	Chronic	Impact of temperature and rainfall changes on vehicle insurance claims	2035、2050、2100	Taiwan	RCP 8.5
F	Physical risk	Chronic	Impact of temperature changes on life insurance death benefit claims	2035、2050、2100	Taiwan	RCP 2.6、4.5、6.0、8.5
Operations						
G	Physical risk	Acute	Impact of typhoons and floods on the repair of self-owned real estate under climate change	Near future, middle of the century, and end of the century	Taiwan	RCP2.6、4.5、6.0、8.5

<sup>1</sup> "Near future" is before 2035, "mid-century" is from 2046 to 2065, and "end of century" is from 2081 to 2100.

## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

### 3 Risk Management

### 4 Metrics and Targets

### 5 Conclusion

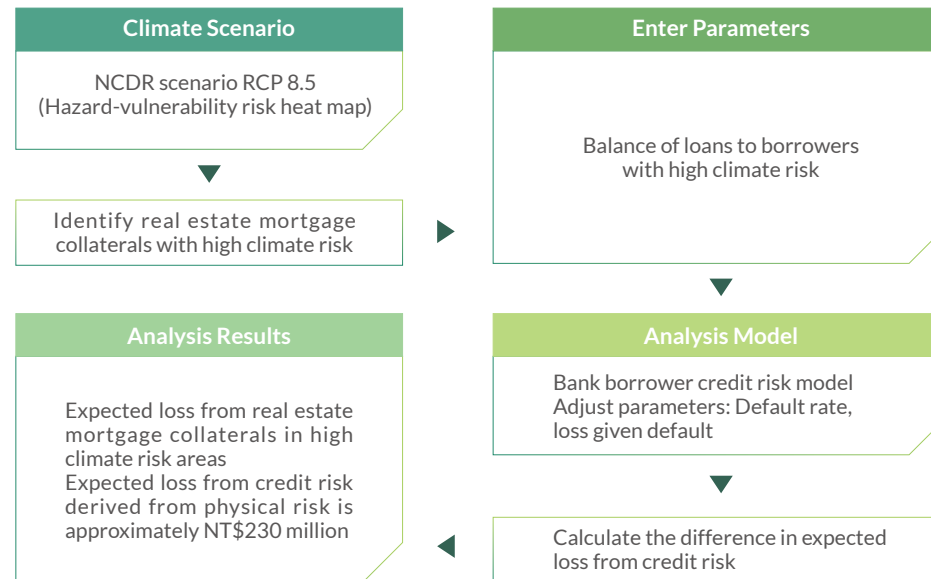
## ■ Impact of Investments and Loans

### A. Physical Risk Scenario Analysis for Mortgage Collaterals

#### ① Background

The asset value of collaterals in high risk areas decreases when these are impacted by a natural disaster, and may increase the probability of default by borrowers. Hence, CUB uses the inundation and slope risk heat maps of the National Science and Technology Center for Disaster Reduction (NCDR) to classify the risk of each township and district in Taiwan, analyze the default loss from high climate risk cases, and make timely adjustments to its real estate mortgage strategy.

#### ② Analysis process and results



#### ③ Risk response measures

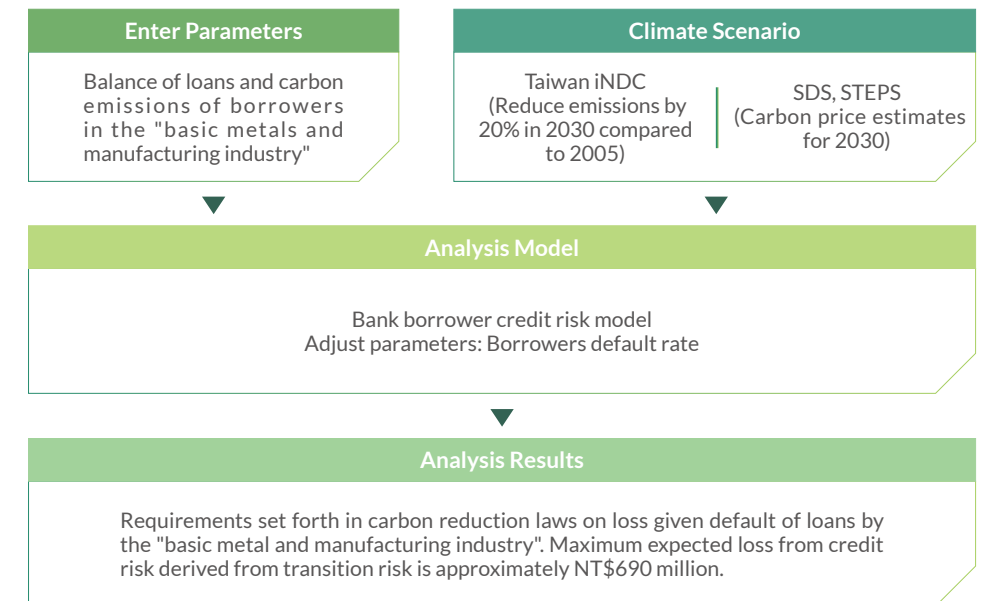
CUB regularly monitors the risks of real estate mortgage collaterals in high climate risk areas, continues to improve the management framework for climate risks, examines real estate mortgage collateral appraisal-related rules based on scenario analysis results, and proposes response plans.

### B. Transition Risk of Corporate Lending —in the Case of Basic Metals and Manufacturing Industry

#### ① Background

Governments around the world have set national carbon reduction goals in response to the Paris Agreement, and have introduced policies to urge industries to accelerate their low carbon transition. If companies are late in their transition, the additional compliance costs will impact their profits, which will further affect their credit rating. With consideration to high carbon emission industries, data availability, and credit exposure, CUB carried out scenario analysis for the transition risk of borrowers in the "basic metals and manufacturing industry" and used two carbon price scenarios, SDS and STEPS, for evaluation, calculating expected losses from credit risk derived from transition risk.

#### ② Analysis process and results



#### ③ Risk response measures

CUB has formulated credit management guidelines for high carbon emission industries. Before granting a loan, clients' ESG risks are scrutinized and changes in risks are followed up on after granting the loan. For details of the risk management process, please see "Investment and Lending Risk Management", Chapter Risk Management.



## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

### 3 Risk Management

### 4 Metrics and Targets

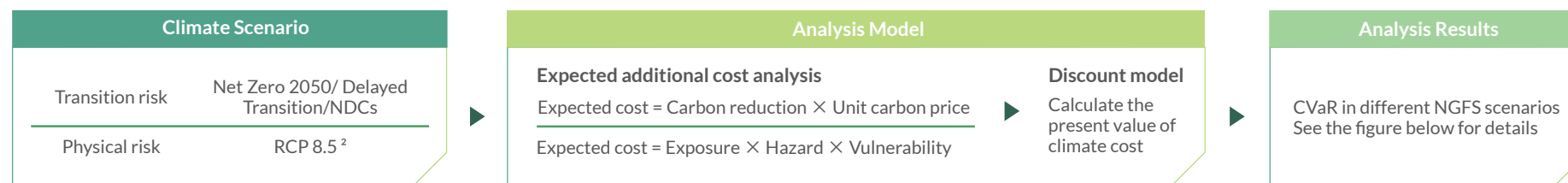
### 5 Conclusion

## C. Analysis of Transition and Physical Risks of Stocks and Bonds

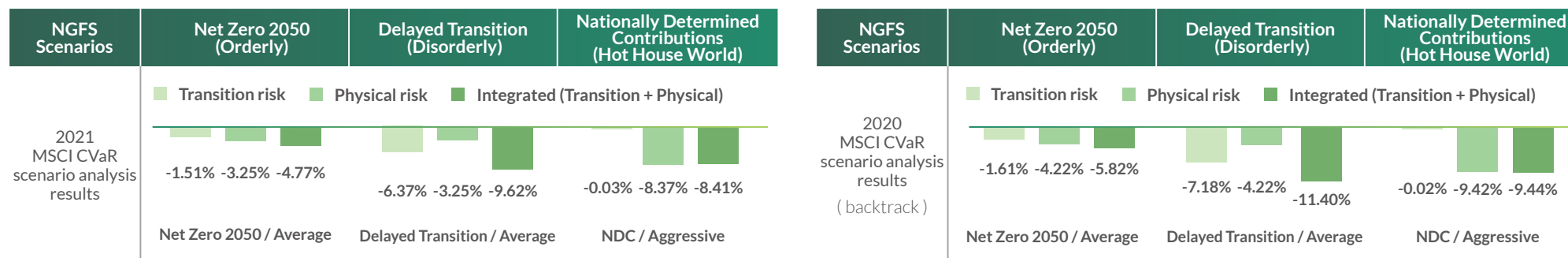
### ① Background

Low carbon transition and extreme weather events around the world will greatly impact companies and cause the prices of their negotiable securities to decline, resulting in loss of net asset value for all investors. Cathay used the NGFS scenarios in the model developed by MSCI, which includes orderly transition to achieve net zero emissions by 2050, delayed transition, and Nationally Determined Contributions (NDCs) scenarios, in order to evaluate the impact of climate change on the value of Cathay's investments in stocks and bonds. We used CVaR<sup>1</sup> for assessment and will reference it when making investment decisions in the future.

### ② Analysis process and results



#### ■ CVaR in the 2020 and 2021 NGFS scenarios



#### 【Result description】

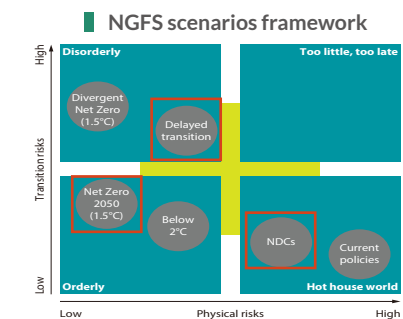
Using the latest model and data for retrospective calculations, the overall risks (including transition and physical) of stocks and bonds investment portfolios in the 2021 NGFS scenarios is lower than in 2020.

### ③ Risk response measures

We included climate risk impact assessment in the ESG risk review of the stock and bond investment decision-making process, focus on climate change as the topic of engagement, fully revised outsourcing contracts, require climate change factors to be considered during investment, and ask contractors to describe their climate change actions each year. For details of the risk management process, please see "Investment and Lending Risk Management", Chapter Risk Management. For engagement measures, please see "Climate Strategy Blueprint and Actions", Chapter Strategy.

<sup>1</sup> Climate Value-at-Risk (CVaR) refers to the discounted cost of climate risk accumulatively borne by investment portfolios up to the year 2080, which can be found on the MSCI website (<https://www.msci.com/our-solutions/esg-investing/climate-solutions/scenario-analysis>).

<sup>2</sup> In terms of the trade-offs between the impact of transition and physical risks, given that MSCI takes into account the effect of other emission scenarios in reducing physical climate risks in the short term, there is no significant difference compared to the Business-as-Usual or RCP 8.5 scenarios. Therefore, the emission scenario RCP 8.5 was adopted to analyze physical risks, with only two climate scenarios: average climate and extreme climate (95th percentile). Hence, "RCP 8.5 Extreme" was chosen as the NDC scenario when assessing physical risks, and "RCP 8.5 Average" was chosen for remaining risks.



Source: NGFS Climate Scenarios for central banks and supervisors, June 2021

Message from the Chairman

About This Report

Cathay's Climate Strategy  
Blueprint

Course of Cathay's Climate  
Actions

1 Governance

2 Strategy

3 Risk Management

4 Metrics and Targets

5 Conclusion

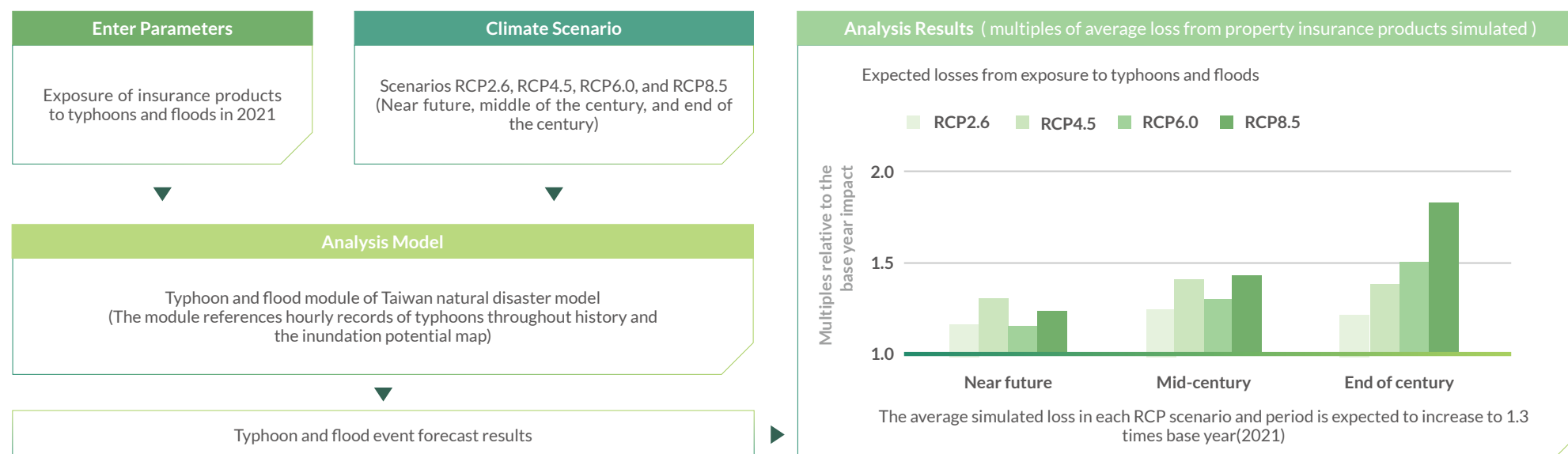
## Impact on Insurance

### D. Physical Risk Scenario Analysis for Typhoon and Flood Insurance Claims

#### 1 Background

Cathay Century is one of the top two largest property insurance companies in Taiwan. Insured assets will sustain more severe damages due to climate change, resulting in an increase in the company's claims. Hence, Cathay used scenarios RCP2.6, RCP4.5, RCP6.0, and the most severe RCP8.5 proposed in the IPCC Fifth Assessment Report (AR5), along with the typhoon and flood module, to analyze the potential damages of our exposure to typhoons and floods in the near future (-2035), middle of the century (2046-2065), and end of the century (2081-2100), respectively. This allows us to make timely adjustments to our solvency and risks.

#### 2 Analysis process and results



#### 3 Risk response measures

Cathay Century periodically examines changes in expected losses caused by typhoon and flood disasters in each climate change scenario, and uses this as a basis for long-term plans to take on risk and arrange re-insurance. We also include climate change factors into stress tests, and examine the impact of typhoon and flood disasters under each scenario on our solvency, ensuring that risks are still within the tolerable range. For details of the risk management process, please see "Risk Management for Property Insurance Products", Chapter Risk Management.



## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

### 3 Risk Management

### 4 Metrics and Targets

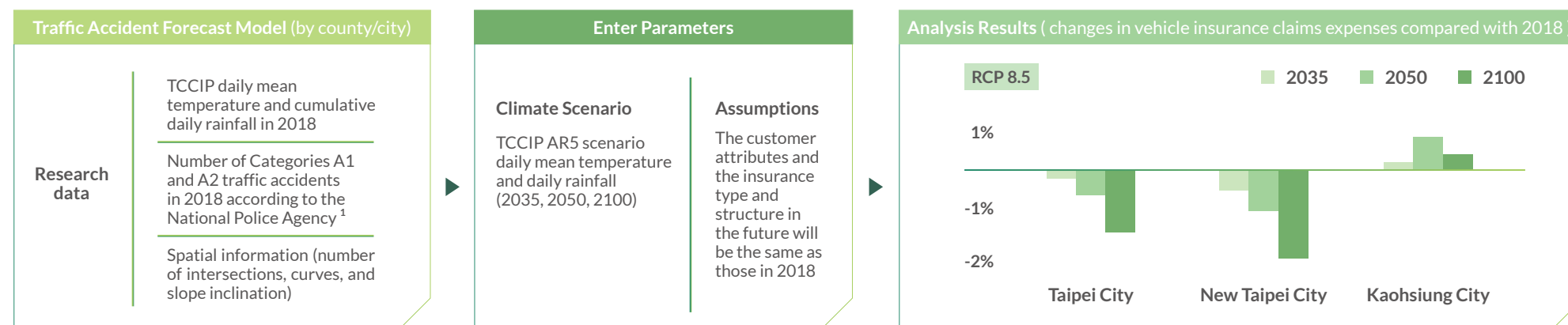
### 5 Conclusion

## E. Physical Risk Scenario Analysis for Traffic Accident Claims

### 1 Background

Vehicle insurance is the largest source of property insurance premium income and claims expenses in Taiwan, and accounted for approximately 58% of Cathay Century's overall premium income and approximately 61% of Cathay Century's claims in 2021. According to overseas studies, factors that may affect traffic accidents include driver, road characteristics (e.g., road width and curves), rainfall, and temperature. Cathay Century worked with scholars to understand if vehicle insurance claims expenses were affected by climate change, and conducted a preliminary assessment of the impact of climate change on vehicle insurance claims expenses using scenario RCP8.5, which has the most severe warming, in Taipei City, New Taipei City, and Kaohsiung City.

### 2 Analysis process and results



### 【Result description】

Assessment results show that climate change only had an approximately -2.4%-0.7% effect on Categories A1 and A2 traffic accidents. Due to the availability of data, only the direct impact of daily mean temperature and daily rainfall changes on traffic accidents is considered at the moment. We are still unable to consider the impact of extreme weather events (e.g., typhoons and floods) on vehicle insurance. Furthermore, the National Police Agency, Ministry of the Interior still has not released data on Category A3 traffic accidents (only caused property damage).

### 3 Risk response measures

Cathay Century will continue to observe trends in vehicle insurance claims and improve the model when necessary, which will allow us to more accurately determine trends in vehicle insurance claims due to climate change. Cathay Century can then reference the trends when making long-term plans for setting vehicle insurance premium rates and arranging re-insurance.

<sup>1</sup> The traffic accident data used is Categories A1 and A2 traffic accident data for all of Taiwan in 2018 provided by the National Police Agency, Ministry of the Interior. Category A1 traffic accidents refer to traffic accidents in which persons were killed on the spot or died within 24 hours; Category A2 traffic accidents refer to traffic accidents in which persons were injured or died after 24 hours.

## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

### 3 Risk Management

### 4 Metrics and Targets

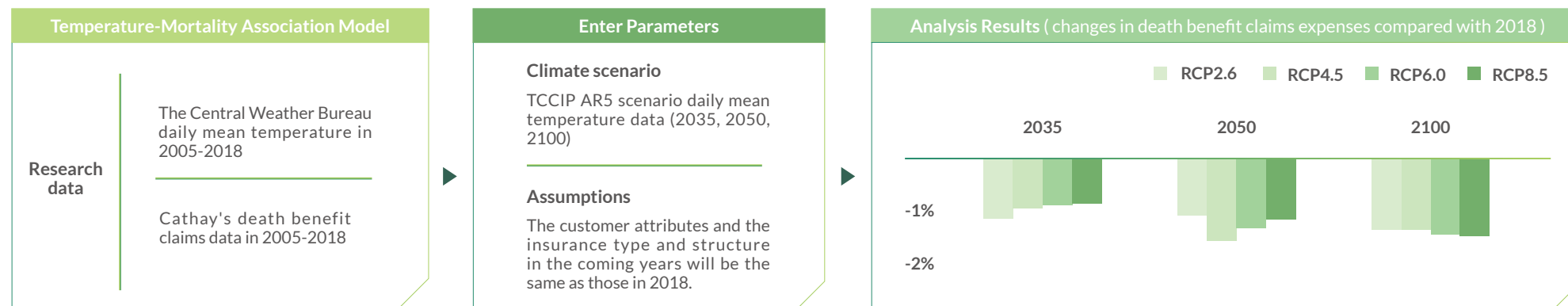
### 5 Conclusion

## F. Physical Risk Analysis for Life Insurance Death Benefit Claims

### 1 Background

Climate change has caused a sustained rise in global temperatures and resulted in heat waves around the world in recent years. Global warming combined with the urban heat island effect have increased the frequency of extremely high temperatures, as well as the duration of such high temperatures in Taiwan, which may even become the new normal in the future. Cathay Life utilized historical data (2005-2018) related to weather and life insurance claims and AR5 climate scenario analysis data available on the Taiwan Climate Change Projection Information and Adaptation Knowledge Platform (TCCIP), and set up an internal model to assess the impact of global warming on death rate from all causes. This will help us understand future changes in expenses due to life insurance death benefit claims.

### 2 Analysis process and results



### 【Result description】

According to the TCCIP simulations of temperatures in Taiwan in different climate scenarios, the number of high temperature days in counties and cities in Taiwan show an upward trend, while the number of high risk low temperature days decreases. Taiwanese people have better adaptability to high temperatures compared to low temperatures. Assuming that our customer structure remains the same, preliminary assessment results show that temperature rise will cause overall death rate to slightly decline 0.7-1.5%, and the impact on insurance claims is not considered to be a material financial impact.

### 3 Risk response measures

According to domestic and international studies, climate change will increase the severity of extreme weather events (such as rainstorms and typhoons), and even accelerate the spread of infectious diseases. However, due to limitations in relevant domestic studies and data availability, the recent studies are restricted to investigating the direct impacts of rising temperatures, but they will continue to improve and accurately keep track of the climate risks related to life insurance products.



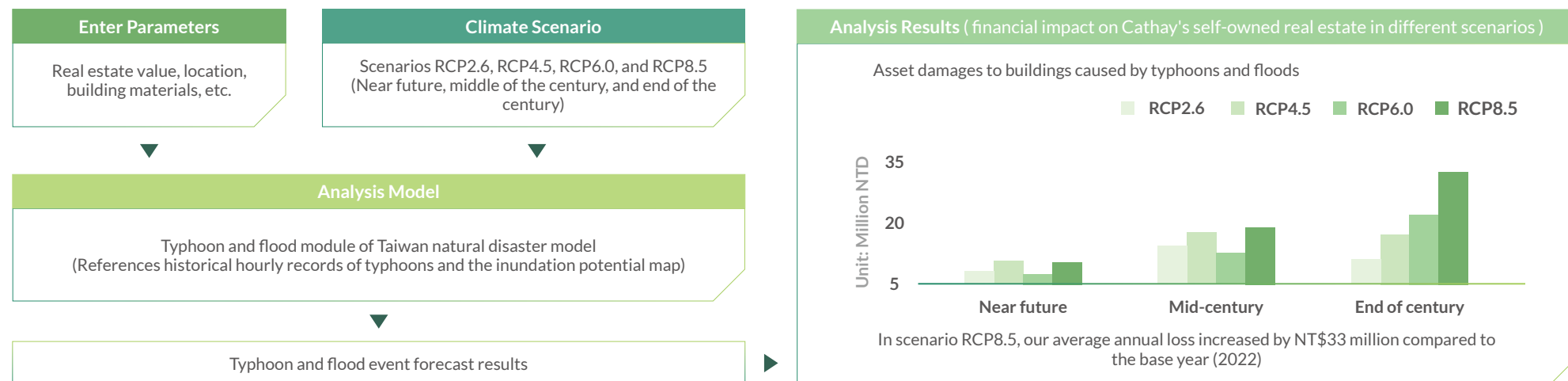
## Impact on Operations

### G. Scenario Analysis for Physical Risk of Self-Owned Real Estate

#### 1 Background

Taiwan is often hit by typhoons, and the intensity and rainfall brought by this natural disaster have increased along with global warming, resulting in an increase in repair costs for self-owned real estate under our management. Cathay used scenarios RCP2.6, RCP4.5, RCP6.0, and the most severe RCP8.5 proposed in the IPCC AR5 to understand climate impact. We also used the typhoon and flood module of the natural disaster model jointly developed with academic institutions to analyze the potential damages to self-owned real estate caused by typhoons and floods in different periods, using results as the basis for formulating our business continuity plan and asset allocation strategy.

#### 2 Analysis process and results



#### 3 Risk response measures

Cathay is not only transforming self-owned real estate into green real estate, but also increasing the climate resilience of self-owned real estate through the following physical risk prevention measures:

- Before selecting a business location/investment target, we consider the potential impact of climate-related risk factors (e.g., floods, debris flows, and earthquakes) on the safety of assets, and periodically carry out inspections and repairs to improve safety.
- We maintain and calibrate the business continuity management (BCM) strategy, including natural disaster scenarios, backup and recovery plan (BCP), and regular drills, to strengthen our resilience to climate change. For details of the management process, please see ["Operational Risk Management"](#), [Chapter Risk Management](#).

## Climate Strategy and Resilience

Overall scenario analysis results show that climate-related risks have a relatively significant financial impact on investments and loans. Cathay considers "low carbon economy" to be an important mission in its climate strategy. Besides strengthening risk management for investments and loans, we are also actively promoting low-carbon investments and loans. The CVaR of Cathay's negotiable securities has improved in recent years, showing that Cathay's low carbon investment and lending strategies have increased the resilience of related assets.

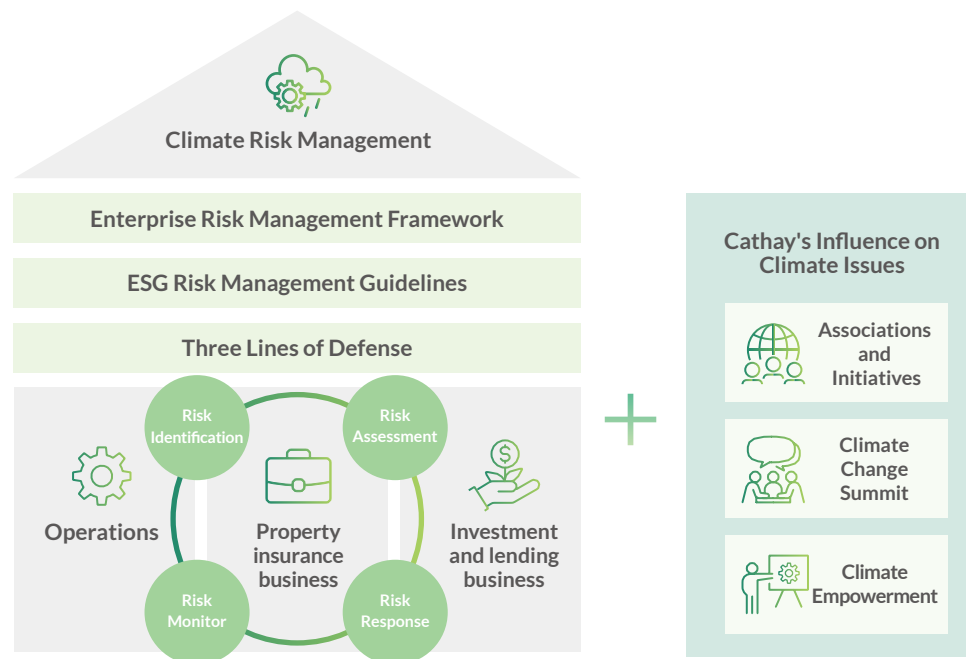
Typhoon and flood insurance claims will be impacted by climate change in the long-term. Besides formulating related risk management measures, Cathay Century is also actively developing financial products and services to increase the resilience of its liabilities. Furthermore, even though operations are not as impacted by climate change, Cathay will still implement "environmental sustainability" strategies to increase the resilience of its operations, so as to meet society's expectations.

# 3 Risk Management

Cathay has integrated climate-related risk management with the enterprise risk management (ERM) framework, and managed climate risks through the three lines of defense from its internal controls. Each line of defense incorporates climate-related risk factors into existing business processes according to its duties, and formulates climate-related risk management and response measures.

## 3.1 Risk Management Framework

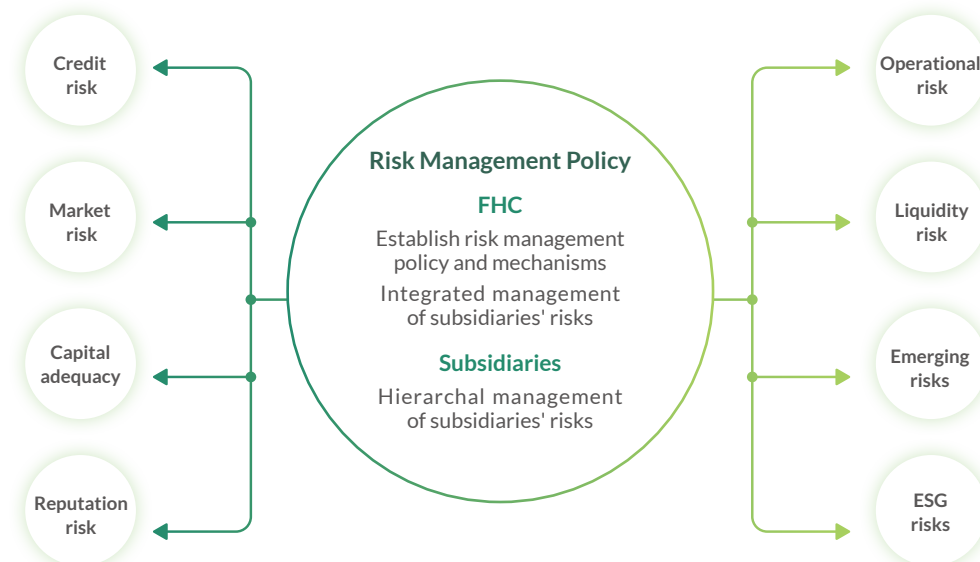
Climate-related risks impact the economy conditions and individual's revenue and income, which eventually converge to the financial sector. As an important stakeholder in climate issues, Cathay not only implements risk management internally, but also harnesses the power of finance for active engagement, helping companies transition and strengthen their ability to adapt to climate change, which further lowers climate related risks faced by Cathay. Cathay hopes to make a positive impact by helping companies lower the impact of low carbon transition and climate disasters, and strengthen climate resilience jointly alongside companies.



### Enterprise Risk Management

Cathay established the Risk Management Policy based on the ERM framework, and manages market risk, credit risk, operational risk, liquidity risk, emerging risks, ESG (including climate) risks, reputation risk, and capital adequacy, establishing individual management guidelines for each type of risk.

Cathay FHC established the Emerging Risk Management Guidelines in 2019, and included climate-related risks into the scope of Cathay's risk management. We further separated ESG risks (including climate-related risks) from emerging risks in 2020, and established the ESG Risk Management Guidelines to step up the management of ESG risks and climate-related risks.





## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

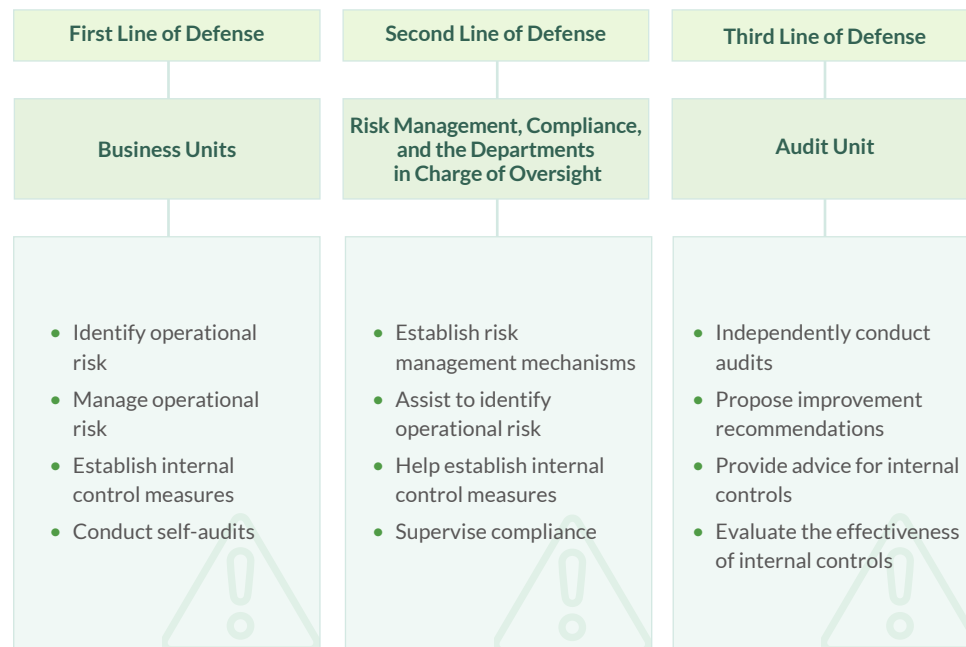
### 3 Risk Management

### 4 Metrics and Targets

### 5 Conclusion

## Three Lines of Defense

With regard to the implementation of risk management and internal control, Cathay assesses climate-related risks of businesses from the first line of defense. The second line of defense is independent from the first line of defense and monitors the management of climate-related risks by the first line of defense, while supervising compliance. Finally, the third line of defense is subordinate to the Board of Directors, evaluates the effectiveness of climate-related risk management by the first two lines of defense, and proposes improvement recommendations.



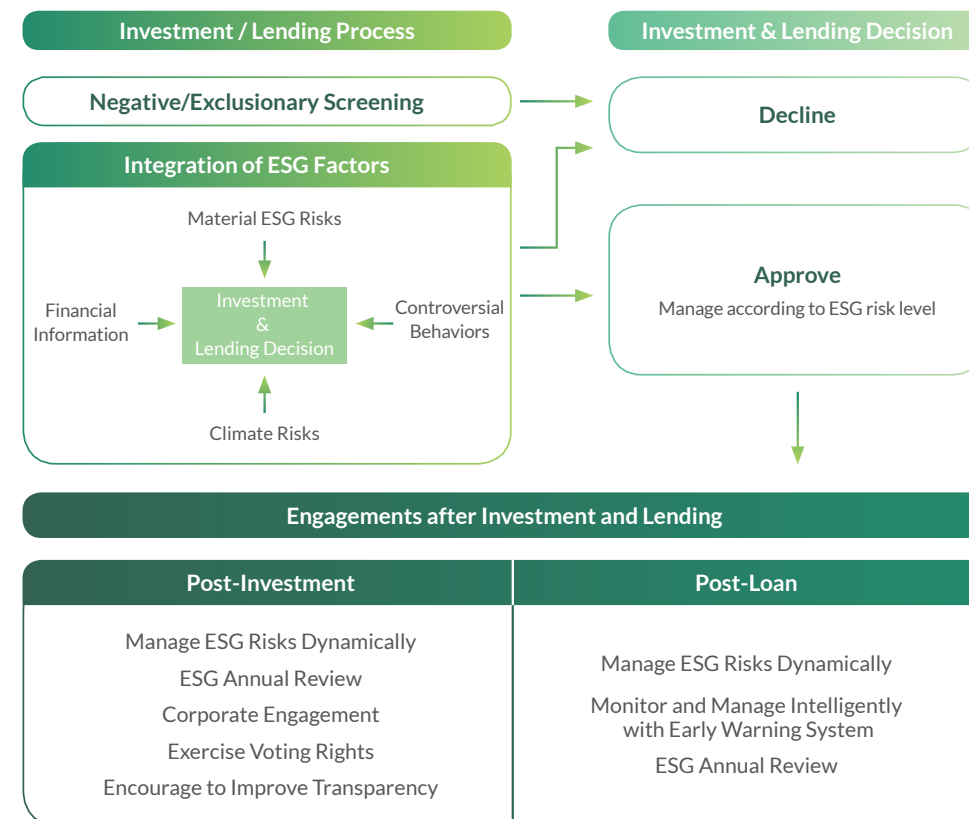
## 3.2 Climate Risk Management

Cathay implements climate strategies and takes relevant actions to mitigate and adapt to climate-related risks. We are gradually strengthening climate-related risk management in current risk management processes of main businesses group-wide, including investment and lending business, property insurance products, and company operations.

### Investing and Lending Risk Management

Cathay believes that climate change will exacerbate existing financial risks. Cathay FHC and its major subsidiaries have incorporated ESG and climate risks into their existing investment and lending processes, and have carefully assessed the ESG and climate risks of investees and borrowers for layered management before concluding each transaction. After the transaction, we continue to monitor their ESG and climate performance, and also actively engage in conversations with related companies, assisting the zero carbon transition of companies to ensure the appropriateness of Cathay's investment and loan portfolios.

#### Cathay's responsible investment/lending process



## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

### 3 Risk Management

### 4 Metrics and Targets

### 5 Conclusion

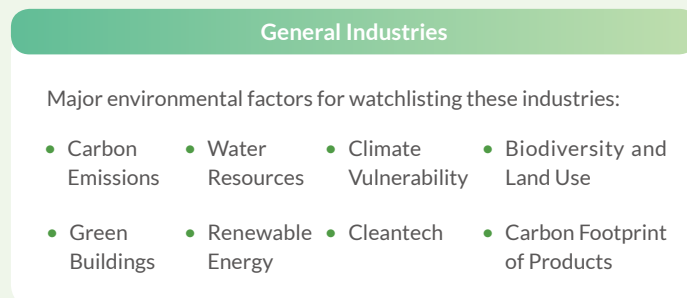
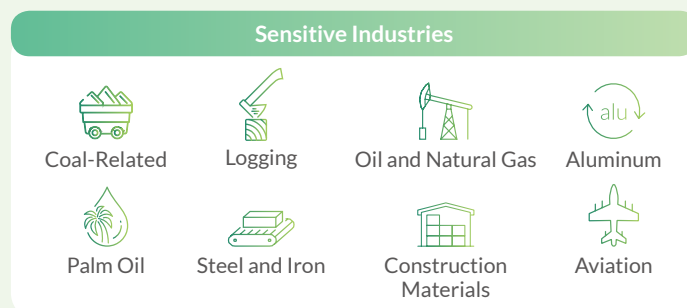
## Investment and Lending Exclusion Policy of the Group

Cathay screens high-risk industries and countries and has established the group-wide Exclusion List. The Responsible Investment Working Group reviews the List each year and subsidiaries can expand the list based on actual requirements. For example, CUB lists the "mining," "coal-fired power generation," "coal related," "upstream mining of oil and natural gas," "tropical rain forest lumbering", and "gillnet manufacturing and fishing" industries as ineligible subjects.

## Integration of ESG and Climate-Related Factors into the Decision-Making Process

Cathay incorporates ESG and climate-related factors into current investment and lending decision-making processes, in order to properly manage climate-related risks. Subsidiaries have also compiled a list of industries/operating activities of concern (see [Cathay FHC's 2021 Sustainability Report](#), Chapter 2.2 Responsible Investment) to strengthen management. For example, Cathay Life assesses the impact of climate risk in its investment ESG risk review process. It has compiled a watchlist of investment targets with potential ESG (including climate) risks (e.g., industries with lower ratings and sensitive industries), and required new and existing investment targets to be cross-checked with the watchlist and also assessed and reviewed. In addition to listing ineligible subjects, CUB also considers climate risk factors, such as carbon emissions, water consumption, electricity consumption, and waste, has established risk management mechanisms for high climate risk industries, and assessed environment and climate-related risks. Cathay SITE launched the low-carbon investment project in 2020 and uses its proprietary carbon emission analysis tool to analyze individual companies and investment portfolios, in order to find and replace stocks that have high carbon emission risks with industries/individual stocks that have low carbon emissions. This gradually lowers the carbon emissions of investment portfolios to achieve low-carbon investment goals.

### Cathay Life assesses the impact of climate risk in its investment ESG risk review process

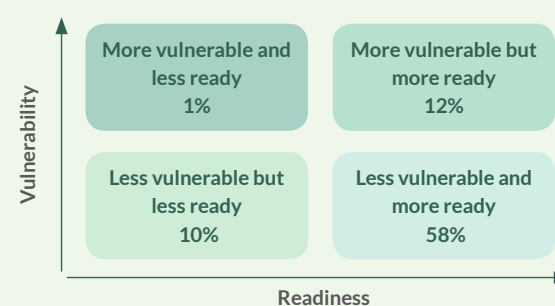


### Sovereign Bond Risk Management

The climate impact of sovereign bonds involves macroeconomic factors, so Cathay reviewed literature of research institutions and included country risk limit as a factor of climate risk in 2021, integrating it with existing management processes for management. We mainly use the ND-GAIN Country Index<sup>1</sup> published by the University of Notre Dame in the United States for sovereign bond climate risk management. Cathay identified the climate risk of potential investee countries through the corresponding quadrants in which these countries are located.

Examining Cathay's positions at the end of 2021, although the sovereign bonds exposed to climate-related risks were predominantly located in countries of emerging markets and are therefore facing tougher climate challenges, the red (upper left) quadrant, representing sovereign bond holdings with higher climate-related risks, accounts for only around 1% of all sovereign bonds in the four-quadrant ND-GAIN matrix. In conclusion, their climate-related risks are controllable.

#### ND-GAIN matrix chart and the distribution



Note: N/A ND-GAIN information on the remaining holdings

<sup>1</sup> The ND-GAIN Country Index published by the University of Notre Dame in the United States identifies the extent to which sovereign bond investment positions are vulnerable to climate-related risks (mainly physical risks). The ND-GAIN index quantitatively assesses the impact of global climate change on countries around the world as well as whether governments are capable of coping with increasingly extreme climates. This assessment mainly includes two dimensions: vulnerability and readiness, and classifies countries into four quadrants, which were created based on the medians of the vulnerability and readiness scores of all countries in all years. Countries in the upper left quadrant are more vulnerable to climate change yet less ready to cope with climate crisis, thus having higher climate-related risks. Countries in the lower right quadrant are less vulnerable to climate change and more prepared, so they have lower climate-related risks.



## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

### 3 Risk Management

### 4 Metrics and Targets

### 5 Conclusion

## Post-Investment/Loan Stewardship Measures

Cathay Life, Cathay SITE, Cathay Century, CUB, and Cathay Securities, subsidiaries of Cathay FHC, have all signed the Taiwan Stewardship Principles for Institutional Investors. Cathay Life and CUB were the only insurance company and bank to be selected as part of Taiwan Stock Exchange Corporation's 2021 List of Companies with Superior Disclosures of the Stewardship Principles for Institutional Investors; and Cathay SITE won Provider of the Year (ETF) 2021 in Taiwan in BENCHMARK's Fund of the Year Awards.

After making investments, Cathay Life examines existent investment targets on the watchlist (e.g., a company is put on the watchlist of sensitive industries if its ESG or climate performance requires improving) each year, and monitors changes in their ESG performance at any time. When an investment target declines in ESG performance and is placed on the watchlist, investment teams must immediately provide an assessment report and take appropriate risk management measures (including continue to observe and follow up on developments, reduce holdings, or halt purchases).

With regard to loans, CUB continues to monitor ESG and climate risks of customers during the loan period, and periodically evaluates the original terms of loans that were approved as well as compliance. When the credit facility reaches a significant scale and the use of proceeds by the customer meets the definition of specific sensitive industries, CUB proposes environment and social post-loan management solutions based on the review and loan approval process.

Cathay Life also communicates with top management of investee companies via telephone conferences, forums, participation in investor conferences, or attending shareholders' meetings. For example, Cathay Life has committed to supporting agenda items that comply with carbon reduction goals of the Paris Agreement, and voted in favor of 100% of such agenda items during shareholders' meetings in 2021. Furthermore, we have jointed international engagement initiatives to exert our influence as a financial institution (for details of influence in climate issues, please see "[Climate Strategy Blueprint and Actions](#)", [Chapter Strategy](#)). Cathay Life and Cathay Century also take responsible investment into consideration when signing contracts with contractors to ensure the companies fulfill their duties as asset managers.

## Carbon Inventory of Investment/Lending Portfolios

For details of the carbon inventory of investment/lending portfolios, please refer to "[Low-Carbon Economy Metrics](#)", [Chapter Metrics and Targets](#).

## Risk Management for Property Insurance Products

Extreme weather events caused by climate change have greatly impacted assets and the insurance business. The increasing frequency of physical risks, such as extreme weather events, may cause insurance targets insured by property insurance companies to sustain direct damages caused by typhoons and floods, which will cause related insurance claims to increase. As for transition risks, transition actions (such as carbon reduction and renewable energy use) of insureds in response to climate change will cause changes in the insurance business or insurance coverage. Insurance products will face growing market competition and demand for transformation of insurance products. Hence, Cathay Century periodically examines the potential impact of climate change risk on specific industries or insured assets, makes timely adjustments, and works with experts from industry, government, and academia to develop technologies in response to climate change.



## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

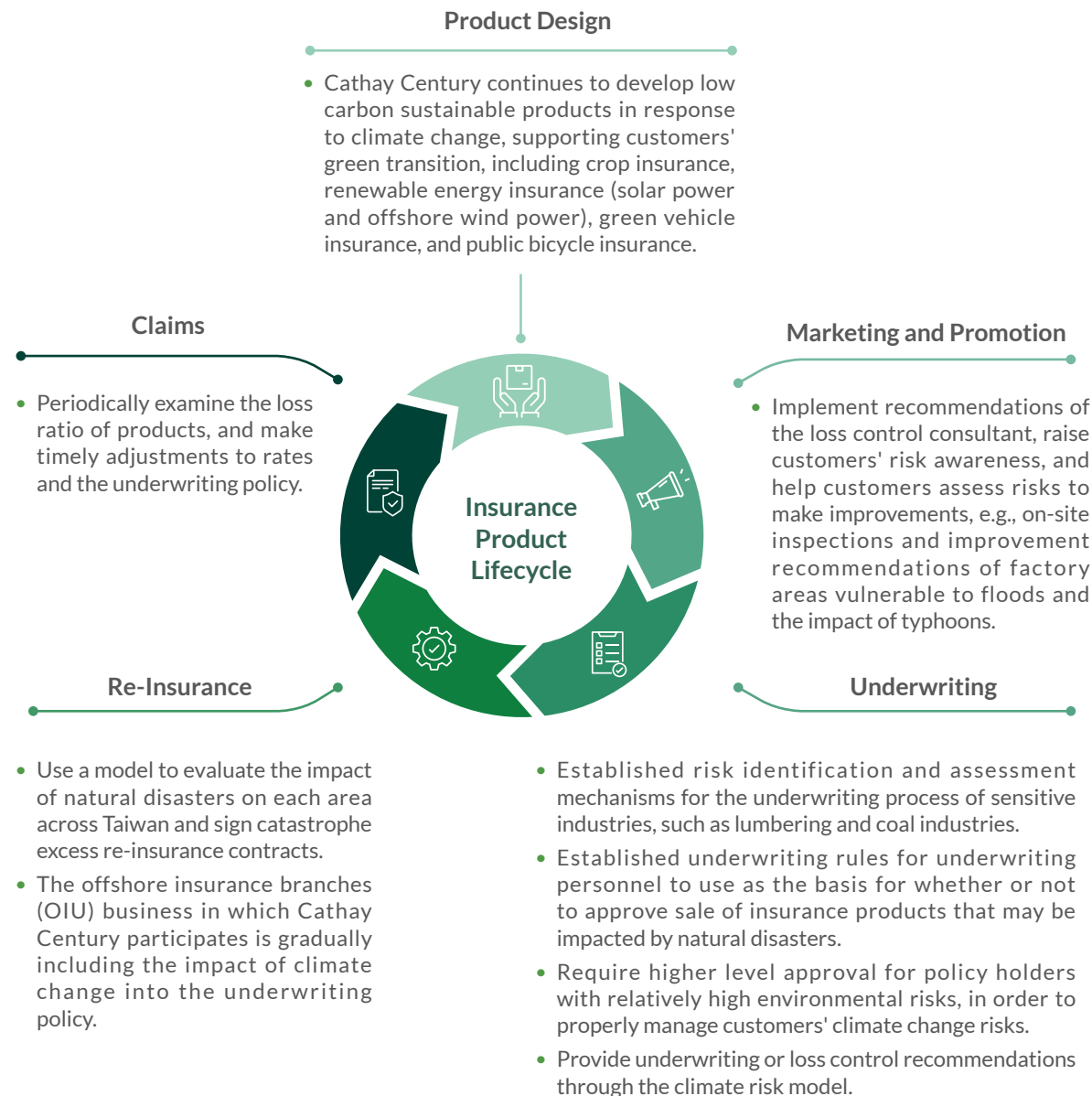
### 3 Risk Management

### 4 Metrics and Targets

### 5 Conclusion

## Embedding the Risk Management Process into the Insurance Product Lifecycle


Cathay Century actively considers ESG and climate risks in product design, and leverages the core abilities of each department to examine the value chain of core insurance products, formulating response and management measures for potential climate-related risks in each process of the value chain:





## Carbon Intensity of the Property Insurance Product Portfolios

Cathay Century uses the "Carbon footprinting methodology for underwriting portfolios" published by the CRO Forum to understand the carbon intensity of its underwriting portfolios, and conducted a study and trial for calculating the carbon intensity of vehicle insurance, which is its main business, and related insurance of the energy industry. Conclusions are as follows:

2021 Automobile Insurance

Type of Insurance	Physical Damage Insurance	Theft Insurance	Total
 Automobile Insurance	0.3116	0.0368	0.3484

2021 Energy Industry

Type of Insurance	Fire Insurance	Engineering Insurance	Marine Insurance	Liability Insurance
 General Electricity Generation Industry	0.1364	0.0309	0.1709	0.0168
 Renewable Energy-Related Industry	-	0.0001	0.1040	

Unit: GHG emissions per kg/Income from insurance policies



## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

### 3 Risk Management

### 4 Metrics and Targets

### 5 Conclusion

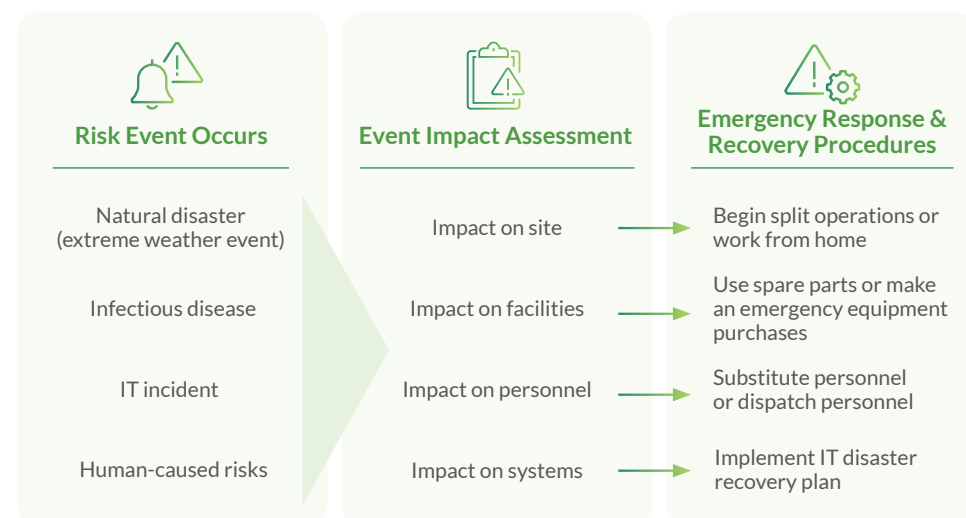
## Operational Risk Management

Cathay has strengthened its risk responsiveness and operational resilience to ensure its sustainable development and lower the impact of extreme weather events and the pandemic on company operations. We actively adopted the international management standard ISO 22301 Business Continuity Management; Cathay FHC and Cathay Life obtained BSI certification in 2021; and other subsidiaries (e.g., CUB, Cathay Century, Cathay Securities, and Cathay SITE) will successively complete implementation and certification in 2022.

## Business Continuity Management

Cathay has developed a business continuity management (BCM) strategy from a group-level perspective, and strengthened its emergency responsiveness for major contingencies, such as climate-related natural disasters, in order to ensure that core and crucial business operations are not suspended, protect customer rights, and continue to work towards the goal of business continuity. Cathay FHC established the Business Continuity Management Guidelines and Business Continuity Management Strategy to provide a group-level management system, establish complete reporting mechanisms, and effectively communicate information. If we encounter an emergency, such as a natural disaster, we will carry out emergency response procedures and business recovery operations based on the severity of the event and reporting level. Furthermore, we regularly organize multi-hazard practice drills for different scenarios each year, so as to ensure that crucial business operations are not suspended and that backup mechanisms are effective when a natural disaster or force majeure event occurs.

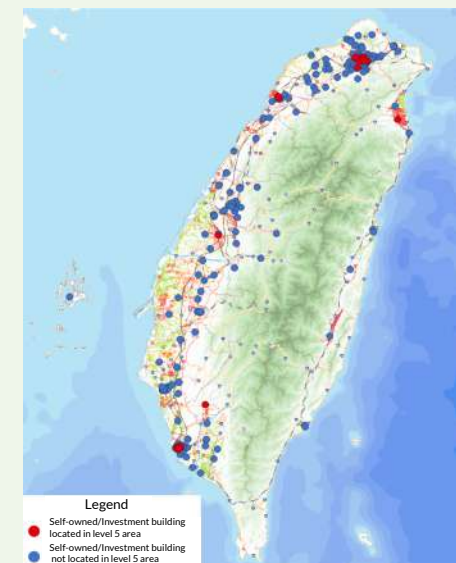
### Business Continuity Management Mechanism



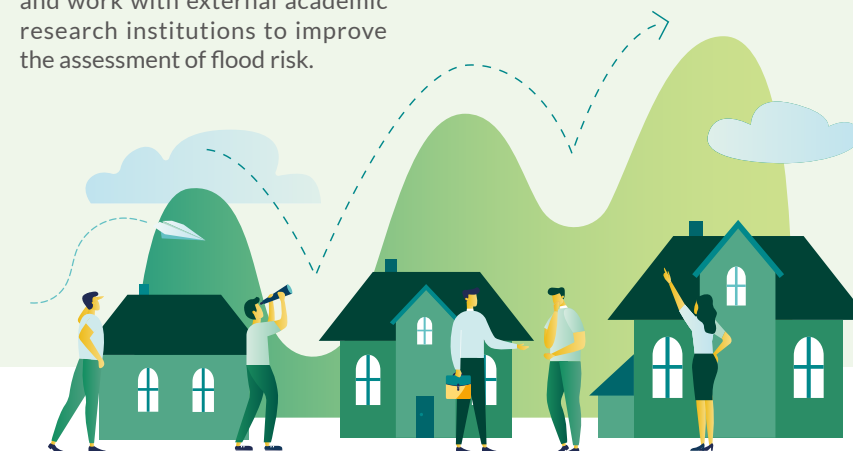
## Exposure of Self-Owned Real Estate to the Risk of Flooding Due to Climate Change

Cathay has prepared a risk heat map of projections for the end of the century based on flood risks identified in AR5 scenarios of NCDR, in which flood hazard is divided into five levels. Areas with level 5 hazard vulnerability are all areas that rank in the top 20% in terms of hazard vulnerability. Areas with the highest level flood risk are compared with the locations of self-owned real estate. After examining the physical risk of flooding at Cathay-owned real estate as of the end of 2021, buildings located in areas with level 5 flood risk accounted for approximately 9.6% of all real estate.

We periodically examine the safety and potential impact on our self-owned real estate, and also upgrade flood prevention equipment and backup mechanisms. Furthermore, we have established a comprehensive reporting process that complies with BCM, and carry out emergency response procedures and business recovery operations based on the level of the emergency event. Considering that the assessment of flood risk caused by climate change is still being developed, the accuracy of current risk projections will still need to be verified over time. Cathay will continue to follow developments and work with external academic research institutions to improve the assessment of flood risk.



Flood risk assessment for Cathay-owned real estate at the end of the century





# 4 Metrics and Targets

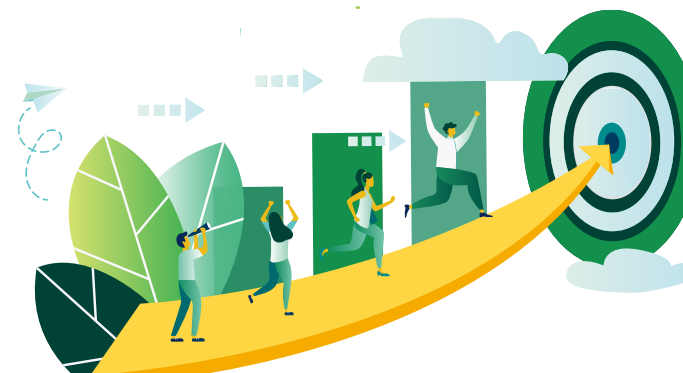
Cathay's target is to achieve net zero emissions by 2050. We have committed to 100% renewable electricity in line with RE100 and to setting SBTs, and disclose historical GHG emission data.

## 4.1 Climate Metrics and Targets

In 2017, Cathay set the target of 5% cumulative carbon reduction by 2021, with 2016 as the base year, in response to climate change, and it was achieved in 2019. Cathay committed to 100% renewable electricity in line with RE100, in response to the government's energy transition and carbon reduction pathway, and formally committed to set SBTs in January 2022, planning carbon reduction goals related to our operations and financial assets, so as to more effectively manage climate risks and opportunities.

### Cathay's climate-related metrics and targets

Strategy Aspect	Item	Base Year	Targets by 2025	Targets by 2030
 Sustainable Environment	Scopes 1+2 GHG emissions	2020	Reduce carbon emissions by a total of 12.5%	Reduce carbon emissions by a total of 25%
	Renewable energy use	-	Head offices of Cathay FHC, Cathay Life, CUB, and Cathay Century reach 100%	All domestic business locations reach 100%
 Low-Carbon Economy	CUB Renewable energy loans as a percentage of loans to electricity generation companies	-	85%	-
	Cathay Life Growth of low-carbon investments compared with the base year	2018	+20%	+40%





Message from the Chairman

About This Report

Cathay's Climate Strategy  
Blueprint

Course of Cathay's Climate  
Actions

1 Governance

2 Strategy

3 Risk Management

4 Metrics and Targets

5 Conclusion

## 4.2 Historical Metric Data

### Sustainable Environment Metrics

Cathay set "GHG emissions" and "energy use" as metrics for the "Sustainable Environment" strategy. GHG emissions in recent years <sup>1</sup> are as follows:

Year		2018 <sup>2</sup>	2019	2020	2021
Scope 1 emissions ( tCO <sub>2</sub> e )		3,272.04	3,438.27	3,816.05	3,712.39
Scope 2 emissions ( tCO <sub>2</sub> e ) <sup>3</sup>		52,487.76	51,331.48	56,427.61 <sup>4</sup>	52,817.70
Scopes 1+2 emissions ( tCO <sub>2</sub> e )		55,759.80	54,769.75	60,243.66	56,530.09
Scope 3	Transport emissions ( tCO <sub>2</sub> e ) <sup>5</sup>	-	38.77	27.03	28.48
	Business trips ( tCO <sub>2</sub> e ) <sup>6</sup>	1,178.1	1,029.7	175.2	76.34
	Operational waste + Product procurement emissions ( tCO <sub>2</sub> e )	995.14	3,114.83	2,017.9	1,825.51 <sup>7</sup>
	Product use stage + End of product life emissions ( tCO <sub>2</sub> e )	998.59	1,555.74	1,643	1,364.19 <sup>8</sup>

Conventional energy and renewable energy use over the years are as follows:

Year	2018	2019	2020	2021
Energy use ( GJ )	361,637	355,463	407,020	387,965.10
Electricity consumption ( kWh )	98,476,090	96,462,714	110,862,737	105,713,107
Renewable energy use ( kWh )	77,000	156,000	272,000	686,000

<sup>1</sup> The GHG inventory is compiled based on operational control. The scope of the inventory is 100%, and Scope 2 is calculated via a market based approach.

<sup>2</sup> We used ISO 14064-1:2006 for our GHG inventory in 2017, and began using the new version, ISO 14064-1:2018, in 2018. We commissioned BSI to conduct inspections.

<sup>3</sup> Scope 2 consists of emissions associated with electricity. The Bureau of Energy has adjusted the historical electricity emission factor, so the current calculation uses the updated factor, which is 0.554 (2018), 0.533 (2019), 0.509 (2020) and 0.502 (2021) kg CO<sub>2</sub>e/kWh. The GHG inventory is based on data in GWP AR5.

<sup>4</sup> We implemented science-based and data-based management of carbon emission hotspots in 2020, expanded the scope of GHG management in our value chain, and adjusted the scope based on the location of data centers. Hence, our electricity and water consumption and GHG emissions increased compared with previous years.

<sup>5</sup> The number of employees at locations in the scope of inventory was 45,961 (2018), 46,990 (2019), 47,267 (2020), and 46,427 (2021).

<sup>6</sup> Business travel emissions are emissions from Taiwan High Speed Rail (THSR) rides and flights taken by employees. Emissions from flights are calculated according to data from the International Civil Aviation Organization (ICAO) and THSR (34g CO<sub>2</sub>e/person-km). In addition, as business travels are implemented in accordance with Cathay's business needs and are not a major category of emissions, these are not included in the management indicators.

<sup>7</sup> Operational waste and product procurement emissions were 212.99 and 1,612.53 MTCO<sub>2</sub>e, respectively.

<sup>8</sup> Product use stage and end of product life emissions were 1,221.6 and 142.59 MTCO<sub>2</sub>e, respectively.

## Message from the Chairman

## About This Report

## Cathay's Climate Strategy Blueprint

## Course of Cathay's Climate Actions

### 1 Governance

### 2 Strategy

### 3 Risk Management

### 4 Metrics and Targets

### 5 Conclusion

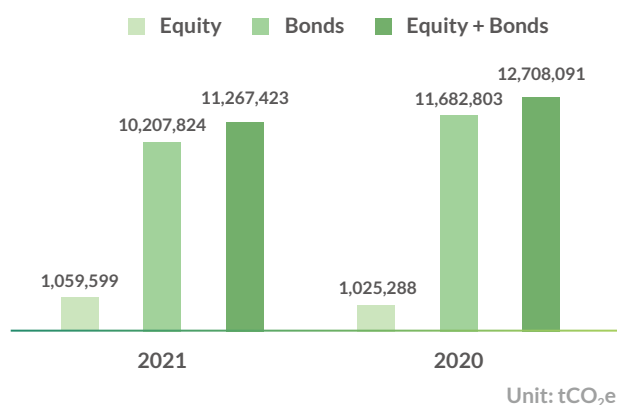
## Low-Carbon Economy Metrics

In the low-carbon economy aspect of our climate sustainability strategy, we are transitioning to low carbon investments and loans and also actively developing climate-related financial products. Metric data over the years is as follows:

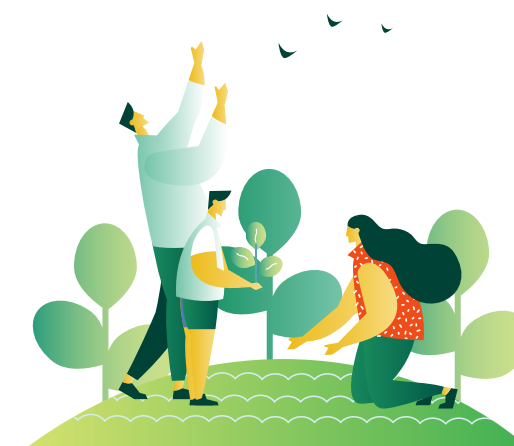
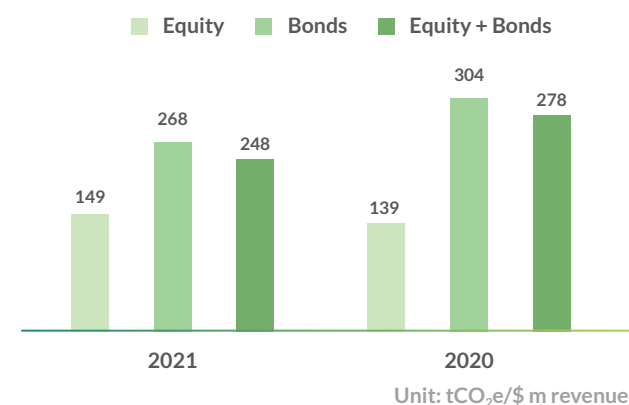
### Carbon Footprint of Investment Portfolios

Cathay Life began to compile the carbon footprint of listed equity assets and corporate bonds in 2018, and uses it as a tool for managing and assessing the climate risk of investment portfolios. Starting in 2020, we began using the methodologies of TCFD and the Partnership for Carbon Accounting Financials (PCAF) to calculate carbon emissions, and track and manage the carbon footprint of investment portfolios. Total carbon emissions from Cathay-owned<sup>1</sup> asset investment portfolios were approximately 11.27 million tCO<sub>2</sub>e, down approximately 11% compared with 2020.

■ Total carbon emissions of various asset investment portfolio in 2020-2021<sup>2</sup>

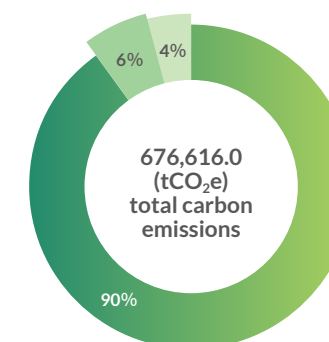


■ WACI of various asset investment portfolio in 2020-2021<sup>3</sup>



### Carbon Footprint of Loan Portfolios

CUB referenced the methodologies of PCAF and SBTi to inventory the carbon footprint of its loan portfolios in 2021. Total carbon emissions from Cathay's lending business were approximately 680,000 tCO<sub>2</sub>e in 2020. CUB has stopped receiving applications for new coal-fired power generation loans since October 2019 in an active response to the international trend of supervising industries with high carbon emissions. In 2021, CUB further set the goal and timetable for zero coal-fired power generation loans: reducing the credit facility for the coal industry chain to zero in 2027 Q1.



■ Carbon footprint of CUB's credit business in 2020

- Mortgaged commercial real estate
- Power generation project financing
- Long-term corporate loans

<sup>1</sup> The scope of self-owned assets includes Cathay Life, Cathay United Bank, Cathay Century, and Cathay Securities.

<sup>2</sup> Total carbon emissions are calculated according to the PCAF methodology. For investment targets without carbon emission data, Cathay estimates carbon emissions using the PCAF methodology. Hence, the coverage of carbon emission data is 100%.

<sup>3</sup> Weighted average carbon intensity (WACI) is calculated based on the method recommended by TCFD.



Message from the Chairman

About This Report

Cathay's Climate Strategy  
Blueprint

Course of Cathay's Climate  
Actions

1 Governance

2 Strategy

3 Risk Management

4 Metrics and Targets

5 Conclusion

## Low-Carbon Investment/Lending

Historical data of low-carbon investment/lending:

Year	2019		2020		2021	
(Billion NTD)	Investment	Lending	Investment	Lending	Investment	Lending
<b>Low carbon</b>	142.5	22.7	174.8	25.2	207.6	31.4
Renewable energy	11.1	10.0	11.9	11.4	23.5	17.2
Buildings	79.2	7.8	74.6	3.2	76.8	4.4
Waste recycling	3.4	1.9	4.2	3.5	5.0	4.8
Transportation	31.4	2.8	54.7	7.0	70.7	4.0
Industry	6.6	1.0	15.1	2.0	12.1	9.0
Green bonds	10.8	0.0	14.3	0.0	19.6	0.0

## Balance of Renewable Energy Loans as a Percentage of Total Loans to the Electricity Generation Industry

The balance of renewable energy loans as a percentage of CUB's total loans to the electricity generation industry is as follows:

Year	2019	2020	2021
Renewable energy percentage	69.23	76.08	77.53



- 1 Governance
- 2 Strategy
- 3 Risk Management
- 4 Climate Metrics and Targets
- 5 Conclusion

# 5 Conclusion

Climate is an important focus area of development in Cathay's corporate sustainability strategy. After understanding the risks and opportunities brought by climate change, we included related risks and opportunities into our business strategy. Cathay's target is to achieve net zero emissions by 2050. We have committed to 100% renewable electricity in line with RE100 and to set SBTs, and crafted the climate strategy blueprint from the perspectives of "Sustainable Environment" and "Low-Carbon Economy". We will uphold the core values of "Integrity, Accountability, and Innovation" and pragmatically work towards climate-related targets.

Cathay will continue to create a low carbon work space through workplace transformation and paperless operations/services, and develop low carbon buildings through 100% renewable energy use at business locations and data-based energy management. We are implementing energy transition and driving industries to do so as well, in order to achieve zero carbon operations for environmental sustainability. We will also fully leverage our core financial competencies, exert our influence, and use funds, financial products, and services to support companies and promote the transition of financial assets, leading industries towards an era of low carbon economy.

Over nearly a decade of climate action, Cathay has long become aware that achieving the goals set in the Paris Agreement not only requires the support of financial institutions, but also the cooperation of different industries. We will continue to participate in domestic and overseas financial forums to share about our philosophy and the formulation of climate-related public policies, and work together with partners in the value chain to become the best for the world and jointly create a sustainable future.



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