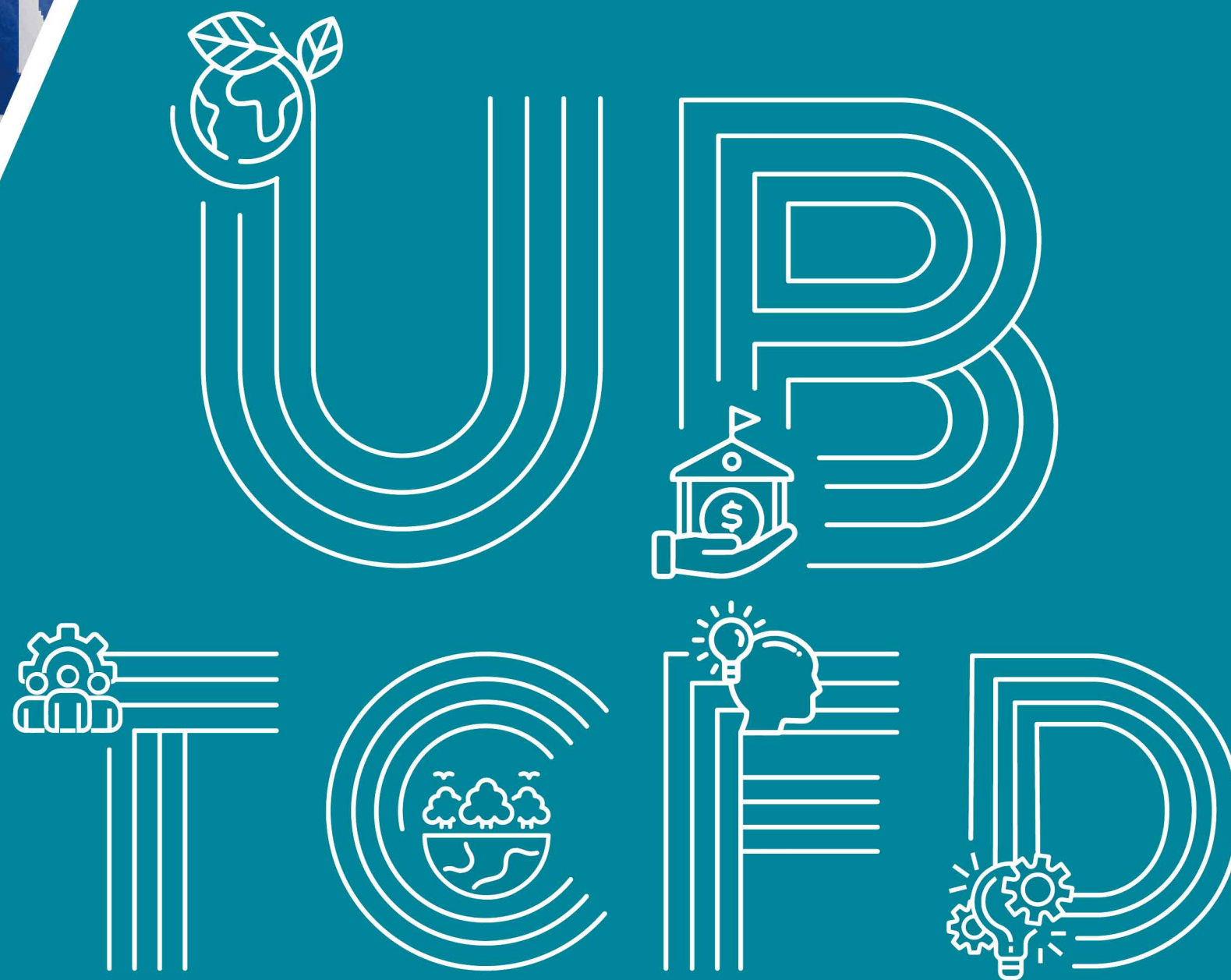


2023

Task Force on Climate-Related Financial Disclosure



| Environment | | Social | | Governance |

“

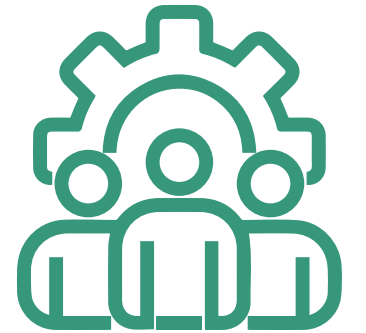
In response to climate change becoming one of the major global risk issues, the Task Force on Climate-related Financial Disclosure (TCFD) established by the Financial Stability Board (FSB) issued the Report on Climate-related Financial Disclosure Suggestions in 2017, and the Financial Supervisory Commission issued “Guidelines for Financial Disclosure of Climatic Risks of Domestic Banks” at the end of 2021.

In accordance with the framework of the Guidelines, UBOT continues to deepen our disclosure of the implementation of four aspects including governance, strategy, risk management, indicators and targets under climate change.

”

01

Governance



a. Board of Directors and management in the Climate Governance Framework

- 1 In order to ensure the implementation of corporate social responsibility, sustainable development policy and climate change risk management, UBOT established the “Sustainable Development Committee” (ESG Committee) under the Board of Directors and the “Asset and Liability and Risk Management” under the Chairman of the Board. The two committees are responsible for relevant issues respectively.
- 2 The ESG Committee is responsible for coordinating UBOT’s sustainable development policies, management guidelines and specific promotion plans, and reports their implementation status annually to the Board of Directors. The ESG Committee has an Environmental Sustainability Team, whose functions include environmental sustainability policy, corporate decarbonization management, green procurement, environmental sustainability propaganda and supply chain management. The convener of the team could invite relevant units to participate in its work based on its functions.
- 3 The Asset and Liability and Risk Management Committee is responsible for reviewing and inspecting management reports or information proposed by various business management units and the Risk Management Department. In addition to the Chairman, its members also include the General manager, Deputy General Manager, supervisors of Head Office’s business management and risk management units.
- 4 The Risk Management Department is responsible for planning and coordinating the financial disclosures related to climate change, and reporting relevant information on climate change risk issues to the Board of Directors annually.

b. Rights and responsibilities of the risk management organization

1 Board of Directors This is the supreme decision-making unit of UBOT’s risk management policy, being responsible for reviewing and verifying UBOT’s overall risk policies, limits, organization structure and attribution of rights and responsibilities.	2 Asset and Liability and Risk Management Committee It is responsible for reviewing and inspecting management reports or information proposed by various business management units and the Risk Management Department, so as to maintain the risk management effectiveness of the whole Bank.	3 Risk Management Department It is an independent dedicated risk management unit, which is responsible for inspecting the risk management mechanism formulated by various business management units and their control conditions, preparing risk control reports to be submitted to the Board of Directors and the Asset and Liability and Risk Management Committee, and planning and establishing various measurement tools of risk control.	4 Various business management units Formulate management regulations, processes and control mechanisms according to business their mainly responsible for, appropriately manage and supervise various business units to carry out necessary management.	5 Various business units They are responsible for making daily business management in accordance with the management regulations and measures formulated by UBOT’s various management units, and confirming the correctness and integrity of all operational data.
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c. Management policy

1 UBOT formulated the “Criteria for Management of Climatic Change and Environmental Sustainability Risks” under the “Risk Management Policy,” specifying that UBOT shall abide by relevant laws and regulations related to climate, energy and environmental protection, implement and disclose greenhouse gas inventory, water consumption and waste management and statistics, formulate related policies and improve education and promotion to strengthen employees’ awareness of energy saving, disclose governance condition of climate risks and opportunities regularly, identify and evaluate relevant risks and the goals used for evaluating relevant topics.	3 UBOT’s “Energy and Environmental Management Policy” stipulates that it shall “abide by laws and regulations related to energy and environmental protection,” “support energy conservation and carbon reduction, and continue to implement green procurement,” “pay attention to education and promotion to strengthen employees’ awareness of energy saving,” “improve management performance and build a sustainable business environment ,” “implement greenhouse gas reduction and disclose related data,” “use products with the water-saving mark to reduce waste of water resources.” and “comply with waste sorting and resource recycling and reuse.”
2 UBOT’s Sustainable Development Best Practice Principles requires it to comply with environment-related laws and regulations, as well as relevant international norms, and protect the natural environment as appropriate. Moreover, in the implementation of operational activities and internal management, UBOT shall be committed to the goal of environmental sustainability. UBOT shall assess the potential risks and opportunities of climate change and take relevant countermeasures. UBOT shall adopt common standards or guidelines at home and abroad, implement enterprise greenhouse gas inventory and make disclosure and statistics of greenhouse gas emissions, water consumption and total waste weight, formulate various policies on energy conservation and carbon reduction, greenhouse gas reduction, water consumption reduction or other waste management, incorporate the acquisition of carbon emission rights into the its carbon reduction strategy planning, and promote relevant work based on this, so as to reduce the impact of its business activities on climate change.	4 UBOT’s “Supplier Management Policy” requires that UBOT shall work together with our suppliers to implement corporate social responsibility and promote environmental sustainability. When signing the contract, they shall sign and abide by the “Commitment Letter on Compliance with CSR, Ethical Management and Legal Provisions,” and jointly abide by the environmental sustainability policy or relevant environmental protection measures promoted by UBOT.

d. Enhance climate-related expertise and capabilities

- 1

In order to actively acquire new knowledge about climate trends, enhance staff awareness of climate change issues, and improve corporate culture, UBOT’s members of the Board of Directors, senior managers, relevant personnel of Head Office’s business units and risk management units continued to actively participate in various projects, seminars, presentations and training courses.
- 2

UBOT has appointed a dedicated environmental management staff in the General Affairs Department, who is responsible for promoting measures related to environmental sustainability, making disclosure of greenhouse gas inventory information in accordance with the “Sustainable Development Roadmap of TWSE- and TPEX-listed Companies” made by the Financial Supervisory Commission, and conducting education and training for greenhouse gas emission inventory personnel in all units of the entire bank.
- 3

In 2023, a total of 28 training sessions were conducted by UBOT, which saw the participation of 679 people undergoing training for 180 hours in total.

Participant	Number of session	Cumulative number of employees	Total training hours	Primary content
Board members	3	11	9	• Opportunities and challenges in the financial sector, trends in sustainable finance disclosure, sharing of responsible investment practices, development trends concerning climate stress testing in the banking sector under the pathway to net-zero emission by 2050. • Climate-related financial disclosure (TCFD) report, biodiversity, and nature-related financial disclosure (TNFD) • Sustainable Development Action Plans for TWSE- and TPEX-listed Companies, as well as corporate governance and ESG promotion measures in the near future.
Senior executives and staff from various units at the head office		21		
Relevant personnel at various business units across UBOT or business units under the head office and risk management units	20	60	163.8	• Introduction to climate risks, response strategies, experiences and challenges in promoting management practices, and international development trends; biodiversity and TNFD, and IFRS S1 and S2 Sustainability Accounting Standards. • Innovative applications of digital technology in sustainable finance. • Green and sustainable finance risk management. • Net-zero risks/opportunities and how to deal with them. • International development trends in greenhouse gas issues, as well as carbon footprint management and calculation.
Personnel at the head office (including senior management personnel) and various business units	5	587	7.5	• ISO 50001 and ISO 14001 energy management system management review meetings, as well as related education and training programs. • Education and training on the ISO 14064 Standards for Greenhouse Gas Inventories.

02 Strategy



- a. As the impact of extreme weather intensifies globally, relevant transnational initiatives and national governments have proposed various climate adaptation and mitigation measures. Sustainable development has become the primary goal of the current global economic transition. In line with the Sustainable Development Goals of United Nations, UBOT aims to use our influence to provide climatic finance products and services and enhance the climate adaptation capability of our customers. In addition, it would take practical actions to support Taiwan green energy, implement carbon reduction, and continuously commit to the sustainable development of enterprises. UBOT's strategy is as follows:

1 Moving towards net-zero emission

UBOT is actively managing our daily operational activities to conserve energy and reduce carbon emissions, with a view to achieving the goal of net-zero emission.

2 Supporting Low Carbon Economic Activities

UBOT develops and implements potential business opportunities and related financial benefits arising from climate change, while effectively managing associated risks. Our services include assisting clients in their transition to a low carbon economy, supporting the development of low carbon technologies, and promoting climate financial products and services.

b. Climate risks and opportunities

1 Types of climate risk



1 Physical risk

Physical risk refers to the direct or indirect impact of extreme weather events on banks that may result in the destruction of fixed assets, disruption of operations, impairment of production, and potential changes in asset value.



2 Transition risk

In order to achieve the global warming control objectives outlined in the Paris Agreement, countries worldwide are considering the implementation of net zero carbon emission targets. This could involve the introduction of measures such as taxation and stricter regulations aimed at curbing carbon emissions. However, these actions may have potential implications for businesses, including reduced revenue and increased costs.



3 Climate opportunities

In order to mitigate or adapt to the impacts of climate change and considering the market development potential, UBOT, as a financial service provider, may develop diversified business opportunities, such as encouraging the research and development of electric vehicles or promoting low-carbon means of transport, implementing green procurement, as well as providing green investment, financing, products and services.

2 Short-, medium-, and long-term climate risks and opportunities

In order to comprehend the impact of climate change risks and opportunities on UBOT and UBOT’s response measures, these items are explained in the following table:

Type of risk	No.	Description	Impact period	Corresponding risks	Impact on business or finances	Response measures/ Climate actions
Physical risk	1	Impact of extreme weather on UBOT's business locations	Short- and long-term	Operational risk	Extreme weather events, such as typhoons, floods, or long-term sea level rise, can cause regional power outages, water shortages, and communication disruptions. This can lead to the risk of business operation interruptions and the associated costs of recovery.	1 To ensure the backup of core information equipment, power, and network, as well as the establishment of emergency response operating procedures for disasters, business units conduct regular safety and security education training and drills. These measures are continuously reviewed and improved. Furthermore, insurance coverage is in place to mitigate the risk of property damage resulting from extreme weather disasters. 2 By conducting a self-assessment of operational risk control, UBOT evaluates the effectiveness of control measures and develop alternative action plans based on the assessment results if necessary.
	2	Impact of extreme weather on UBOT's real estate collaterals	Short- and long-term	Credit risk	Extreme weather events, such as typhoons, floods, or long-term sea level rise, have led to a decline in the value of UBOT's real estate collateral, thereby increasing UBOT's credit risk.	UBOT’s appraisal standards stipulate that credit grantees that are susceptible to wind disasters, floods and droughts or adverse geological conditions shall be included in the matters requiring attention, and special attention shall be paid to their risk control; whereas real estate collaterals such as those located in high flood risk areas, high risk areas for slope hazards, and high potential areas for soil liquefaction shall be detailed in the appraisal report.
	3	Impact of extreme weather on customers' operations or revenue	Short-, medium-, and long-term	Credit risk and market risk	Extreme weather events, such as typhoons, floods, or long-term sea level rise, can have a detrimental effect on the operations and income of our investment and financing customers, thereby impacting their ability to make repayment.	1 Keep a close eye on the operational and financial condition of customers and consistently enhance due diligence investigations and control measures for customers. 2 Assist customers impacted by natural disasters in their restoration and reconstruction efforts by providing the necessary funding for post-disaster restoration while minimizing the impact on UBOT’s earnings.
Transition risk	1	Cost implications of carbon reduction and compliance arising from policies and regulations.	Short- and medium-term	Operational risk	In response to the Climate Change Response Act, UBOT will incur additional costs for carbon reduction measures, such as carbon tax and carbon pricing, as well as penalties for non-compliance.	1 Establish relevant energy-saving goals and prioritize the procurement of energy-saving equipment that is labeled with energy-saving labels, water-saving labels, green building material labels, and eco labels. 2 As part of the Ministry of Economic Affairs' "Service Industry Energy Management System Demonstration and Promotion Program," UBOT has implemented ISO energy management systems in all five of our buildings. Additionally, all units within UBOT have successfully completed greenhouse gas inventory and certification. 3 Evaluate the effectiveness of control measures by conducting a self-assessment of operational risk control, and develop alternative action plans based on the assessment results if required.
	2	Customers' exposure to risks related to carbon reduction and sustainable transformation.	Short-, medium-, and long-term	Credit risk and market risk	The repayment capacity of investment and financing clients has been affected by additional costs resulting from policy and regulatory transformation, as well as a decline in revenue due to untimely transformation.	Pay close attention to the operations and financial condition of customers, continuously strengthen due diligence investigations and control measures for customers, as well as remain vigilant about relevant regulatory disclosures and provide working capital in a timely manner to assist customers in low-carbon transition. Note: Short-term refers to within 3 years, medium-term refers to 3 to 10 years (inclusive), and long-term refers to more than 10 years

	No.	Description	Impact period	Impact on business or finances	Response measures/ Climate actions
Climate opportunities	1	Enhance energy efficiency in UBOT's business locations	Short-, medium-, and long-term	By replacing outdated energy-consuming products, implementing energy-saving and power-saving products, and promoting energy-saving measures, UBOT is able to reduce our operating costs.	1 Switch to LED light bulbs, replace old air conditioners, participate in the Ministry of Economic Affairs Energy Bureau's "Service Industry Energy Management System Demonstration and Promotion Program," control indoor air conditioning temperature during summer, and promote energy-saving measures to conserve electricity. 2 Ensure that green building materials account for more than 45% of the building materials used in the renovation of UBOT's dormitory buildings.
	2	Promote a variety of online services and paperless initiatives.	Short- and medium-term	Promote digital transactions and various online services, enhance operational efficiency, achieve the benefits of going paperless, and reduce operating costs for UBOT.	Provide digital deposit accounts, online loan application service, as well as promote electronic billing and insurance policies, and optimize internal operating procedures to achieve energy conservation and carbon reduction.
	3	Issue low-carbon financial products or services.	Short- and medium-term	By developing and promoting low-carbon products and services, we can improve consumers' perception of our brand, leading to increased profitability.	1 Issue green credit cards made from environmentally friendly materials and virtual cards, and encourage customers to engage in green consumption through UBOT's official website. 2 Introduce ESG or low-carbon specific investment trust products to meet the demand of investors.
	4	Promote green and sustainability loans and investment products.	Short-, medium-, and long-term	Provide green and sustainability loans and invest in green/ sustainability bonds, with the intention of encouraging businesses to adopt sustainability-related practices and enhancing UBOT's revenue.	1 Provide green credit (including renewable energy loans, green building loans, electric (or hybrid) vehicle loans, loans for green and related industries, etc.), and invest in green bonds, sustainability bonds, and solar power plants. 2 Plan to formulate the "Key Points to the Sustainability-linked Loan Business," aimed at encourage companies to achieve the sustainability performance indicators they are committed to by offering more favorable interest rate conditions, so as to assist companies and industries in low-carbon and sustainability transitions.
	5	Respond to energy conservation advocacy campaigns and programs	Short-, medium-, and long-term	Corporate image is an intangible asset of the company. If we can jointly respond to energy conservation initiatives with our customers and neighboring businesses to save energy expenditure, it will have a positive impact on corporate finance	Enhance corporate image by responding to the global "Earth Hour", "World Earth Day", "World Environment Day" and other energy-saving initiatives, as well as participating in the "Green Procurement for Private Enterprises and Organizations" program organized and promoted by the Executive Yuan.

Climate Risk

and

Opportunity Matrix



Physical
Risk



Transition
Risk



Opportunity

Level of impact

High

Moderate

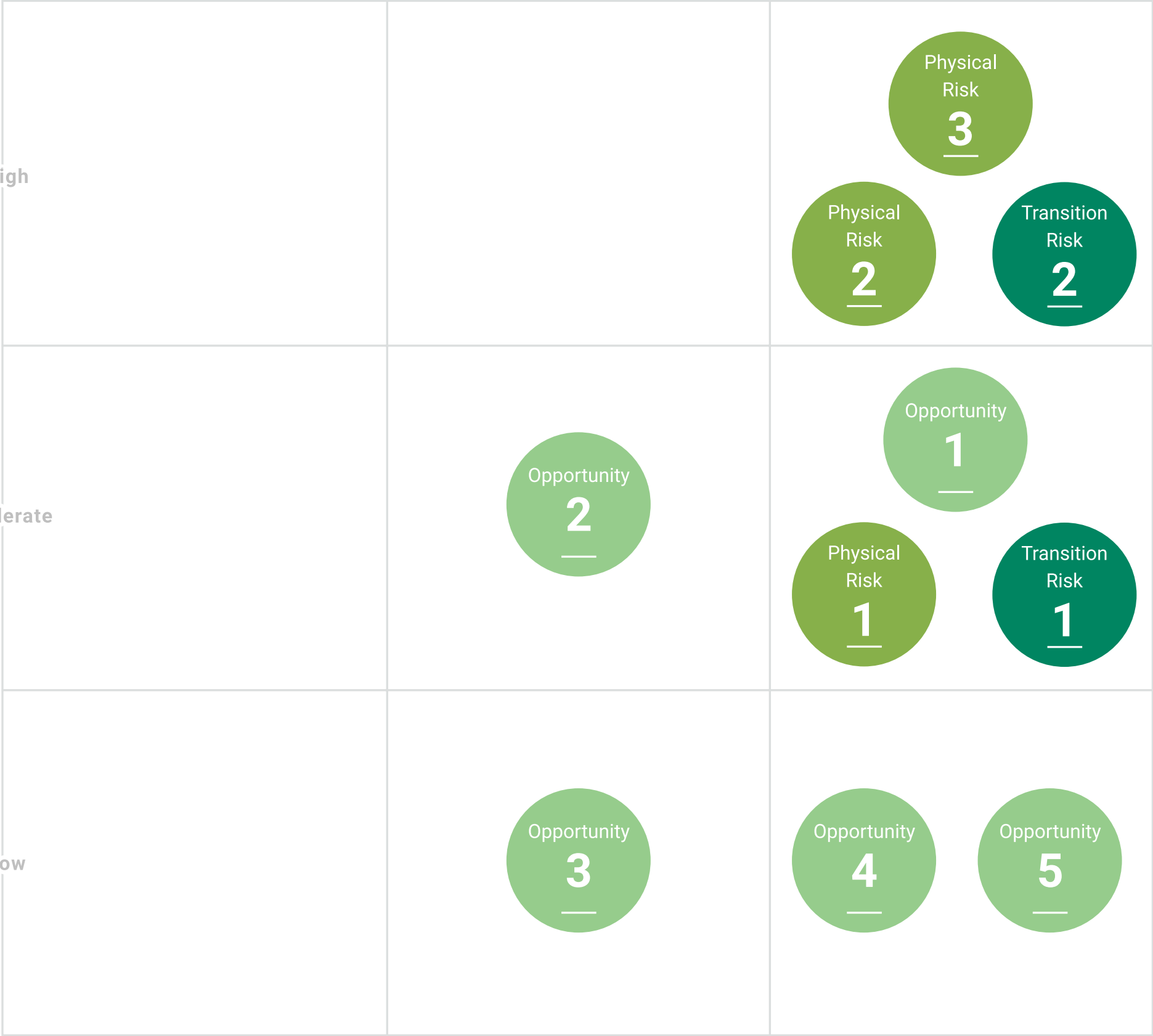
Low

Low

Moderate

High

Moderate probability



03

Climate Risk Management

a. UBOT conducts climatic risk management through the three-defense-line framework of internal control, which includes the internal audit system, self-audit system, legal compliance system, and risk management mechanism. Among them, self-audit constitutes the first defense line, compliance with law and risk management constitute the second defense line, and internal audit constitutes the third defense line In order to enable effective and proper operation of the internal control system, the first and the second defense lines perform risk monitoring, and the third defense line performs independent monitoring so the three defense lines perform their own functions.



b. The “Risk Management Policy” formulated by UBOT is the highest management principle of risk management at UBOT, which includes the “Criteria for Management of Climatic Change and Environmental Sustainability Risks” and our risk management process includes risk identification, risk measurement, risk monitoring, risk reporting and other procedures.

Identification	Measurement	Monitoring	Reporting
Climate-related risks and opportunities are identified by referencing domestic and international climate-related risk reports and documents.	Measurements are carried out on the probability of occurrence of climate-related risks identified by each responsibility unit and their level of impact, and the impact of these risks on UBOT's business or finances.	After assessing the impact of climate-related risks, each responsible unit formulates or develops relevant management measures and carry out monitoring on an ongoing basis.	Each responsible unit regularly reports the relevant monitoring results to the supervisor in charge, while the Risk Management Department regularly reports information related to climate change risk issues to the Asset and Liability and Risk Management Committee and the Board of Directors.

c. For the direction of our credit granting policy, UBOT shall support alternative energy and water resources, environmental protection and pollution control, and other green industries, as well as assist credit grantees in transition to decarbonization, while our credit-awarding audit shall place special emphasis on circumstances such as significant negative impact of enterprise operation on environmental protection, or violation of environmental protection laws and regulations. Furthermore, with the intention of guiding our customers to pay serious attention to sustainability-related issues and to fulfill CSR so as to achieve the goal of sustainable development jointly realized by both enterprises and UBOT, UBOT plans to formulate the “Key Points to the Sustainability-linked Loan Business,” which links the overall performance of our corporate customers in the area of sustainable development to the terms and conditions of credit facilities, with the aim of encouraging companies to achieve the sustainability performance indicators they are committed to by offering more favorable interest rate conditions, so as to assist companies and industries in low-carbon and sustainability transitions.

d. For the investment business, UBOT takes into consideration ESG or projects with high climate risk factors in a progressive manner, which is detailed as follows:

- 1
- Investment in New Taiwan dollar-denominated bills and bonds, as well as foreign currency-denominated debt instruments:

UBOT has put in place an ESG assessment and review process for investments in New Taiwan dollar-denominated corporate bonds (including financial bonds) and underwriting of non-guaranteed commercial papers, which is explained as follows. Before making such an investment, ESG is incorporated in the review and appraisal process, where investment caps are applied based on the appraisal grading scale. After making such an investment, the ESG situation is reviewed regularly. If the issuing company is in a high-emitting industry, the company is required to disclose its carbon reduction plan. Investment caps on the aforesaid instruments and foreign currency-denominated bonds have also been put in place against high-emitting industries.

- 2
- The following additions have been made in the first quarter of 2024:

1 Investment in TWSE- and TPEx-listed equity instruments

For investments in equity instruments not held for trading, ESG scores shall be used as a reference indicator before making such an investment; if the aforesaid scores are not available, the results of the Taiwan Corporate Governance Evaluation can be use in place of these scores. If both sets of indicators are unavailable or below the threshold, the investment cap shall be adjusted, while the reason for such an adjustment has to be detailed in a written report; moreover, the ESG situation of the investment shall be reviewed on a regular basis. In addition, UBOT has also set out the industries to be avoided when making such investments, which is listed as follows: fur trading, pornography, illegal weapons manufacturing, logging in tropical rainforest, manufacture of asbestos cement tiles or other asbestos products, gillnet fishing, and manufacture of drugs or radioactive substances (excluding those for medical purposes).

2 Investment in foreign currency-denominated bonds

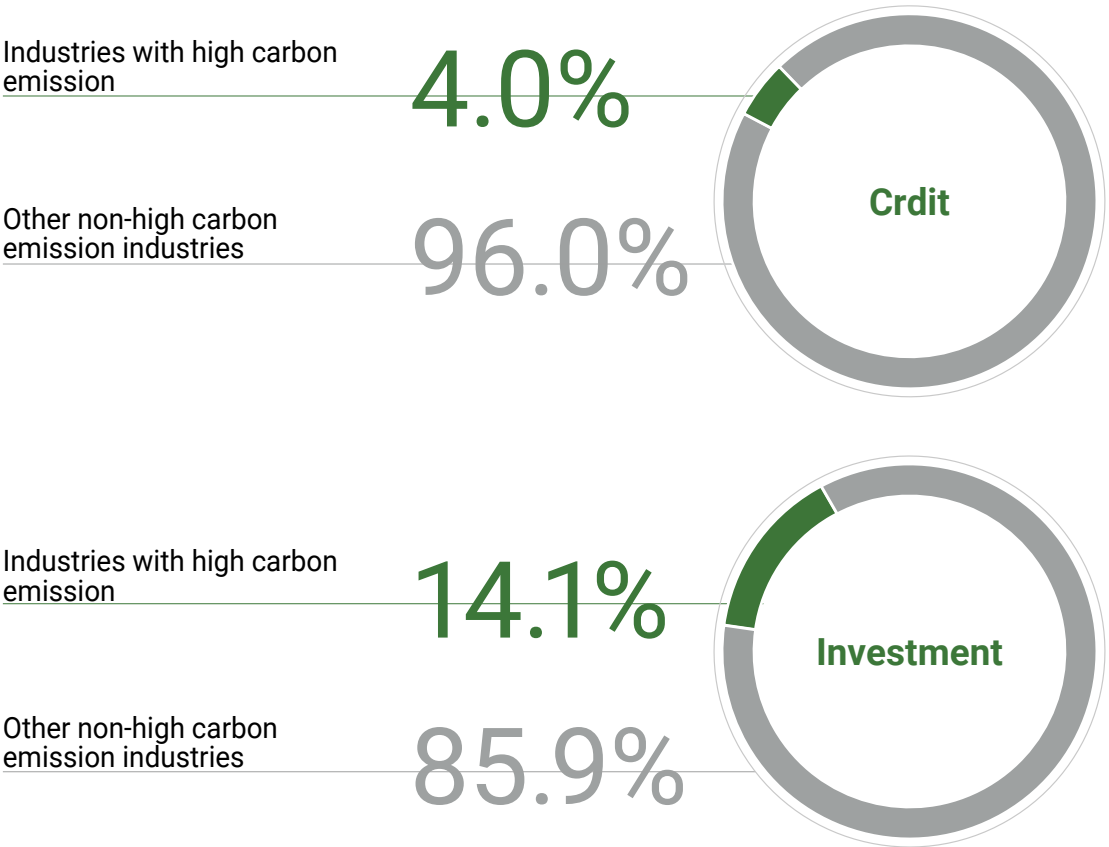
ESG shall be included in the investment appraisal process, where ESG score items shall be reviewed before making such an investment, while the investment cap shall be adjusted according to the grading results in the appraisal process and also reviewed on a regular basis. If the subject matter in the investment is a sovereign bond, it is a must to disclose in the checklist whether the country that issues the bond has a carbon reduction program in place. If the subject matter in the investment is a corporate bond or a financial bond, it is a must to disclose whether the company that issues the bond has set a net-zero emission target.

e. A dedicated unit in charge of energy and environmental management shall establish appropriate energy and environmental management system in accordance with attribute of the banking industry, including green management policy, corporate decarbonization management, green procurement, energy certificate subscription, supply chain management, resource recycling, and reusing, and creating green life and other execution measures, and review the operation effect regularly.

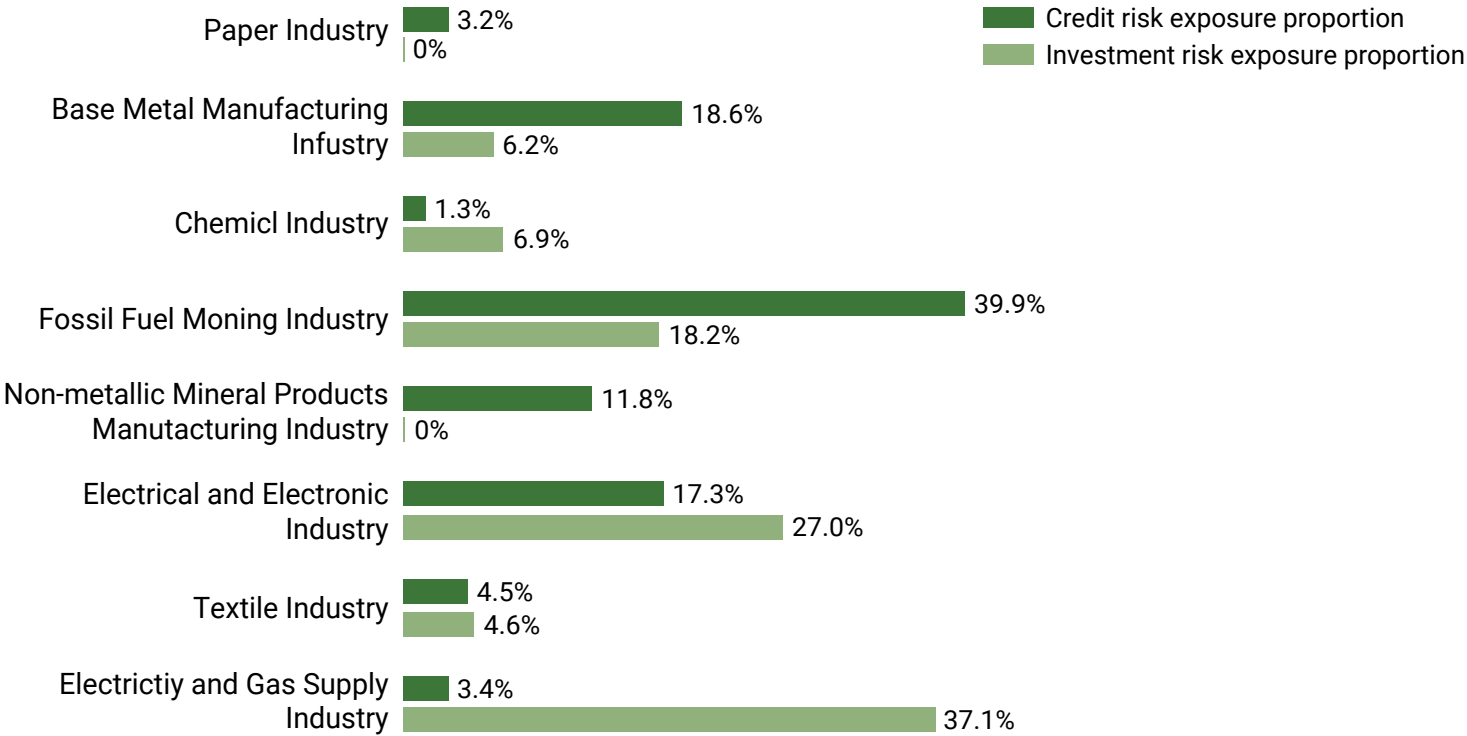
f. Risk measurement

1 Risk exposure of high-emitting industries:

Under the trend of global low-carbon transition, high-emitting industries will face increasingly stringent laws and regulations or policy controls. In the future, the imposition of carbon tax/fee both at home and abroad will increase the operating cost of enterprises. Failure to engage in transition in a timely manner may affect the operation and profit of enterprises. By referencing the identification of industries with high energy consumption and high carbon emissions by the Environmental Protection Administration and the Ministry of Economic Affairs, UBOT has compiled the “List of High-emitting Industries” as follows: “paper,” “base metal manufacturing,” “fossil fuel mining,” “chemical” “non-metallic mineral products manufacturing,” “electrical and electronics,” “textile,” and “electricity and gas supply.” The percentage of credit and investment risk exposure of high-emitting industries as of the end of 2023 are illustrated in the following diagrams:



Uindustries with high carbon emission



2 Scenario analysis of transition risks - the carbon price influence scenario



1 Background statement

With the trend of promoting economy towards the low-carbon transition and building net zero emission already becoming a global consensus, high-emitting industries will be the first group of industries to be affected by relevant laws, regulations and policies and become their main object of control. In the future, the imposition of carbon tax/fee both at home and abroad will increase the operating cost and reduce the revenue of relevant enterprises. In the face of increasing customer risk, it is necessary to not only reassess the change of customer default risk, but also analyze the possibility of increased expected losses arising from future credit risks, and assess the transition risk of customers investing in credit and bank book bonds.



2 Subject of evaluation

Based on the carbon emission data published on the Mandatory Greenhouse Gas Reporting System provided by the Climate Change Administration under the Ministry of Environment, a total of 18 UBOT customers with risk exposure as of the end of December 2023 were identified, while the balance of these customers accounted for 1.2% of UBOT's total credit and bond balance.



3 Evaluation method

Based on relevant domestic and foreign information, three carbon fee scenarios (as shown in the table below) were assumed to calculate the additional operating costs that customers may face (unit carbon price * carbon emissions) and the resulting impact on revenue. The financial data adjusted by carbon fee pressure was used to analyze the change of default rate and expected credit loss under the scenario that customers pay extra costs of carbon fee.



4 Evaluation results

1. According to the evaluation results for Scenario 1, in which Taiwan is estimated to begin collecting carbon fees in 2025, one customer will experience an increase in default rate, which could result in an expected credit loss of approximately NT\$0.12 million. there is no change in customer default rates and no change in expected credit losses for the time being. However, under Scenario 2 and Scenario 3 in which carbon fees are expected to rise until 2030, three and five customers will experience an increase in default rate, which could result in an expected credit loss of approximately NT\$10.28 million and NT\$13.94 million, respectively. It is assessed that these expected loss amounts will have little impact on UBOT.
2. As can be observed in analysis by industry category, under Scenario 3 in which carbon fee reaches its peak, the industry with the highest increase in expected loss is "electricity and gas supply" (70%), followed by "base metal manufacturing" (19%).

Carbon fee

pressure scenario

▼ Carbon fee pressure scenario

Item	Scenario 1 NT\$307 (approximately US\$10)	Scenario 2 NT\$2,305 (approximately US\$75)	Scenario 3 NT\$3,934 (approximately US\$128)
Scenario statement	Following the promulgation of the Climate Change Response Act in Taiwan in February 2023, it is estimated that Taiwan will begin collecting carbon fees in 2025 based on the inventory results for 2024 while keeping up the pressure with the current starting price of NT\$10 per ton as recommended in an outsourced study commissioned by the Environmental Protection Administration.	In order to achieve the goal of limiting global warming to within 2 degrees Celsius, as set by the Paris Agreement, the World Bank projects a carbon price range of US\$50 to US\$100 per ton by 2030. The estimated price per metric ton is US\$75 based on the average value.	Out of the six NGFS scenarios, UBOT selected the Net Zero 2050 scenario in the orderly category, where the average estimated carbon price of US\$128 per metric ton for Asian countries in 2030 was adopted.
Number of customers with changes in default rate	1	3	5
[Calculation results]: Amount of additional expected credit loss (NT\$ millions)	0.12	10.28	13.94

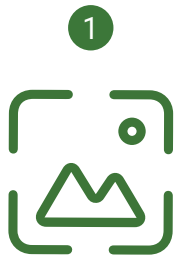
Note: Additional expected credit loss = Expected credit loss after carbon fee pressure - Expected credit loss before carbon fee pressure.

▼ Scenario 3

Item		Proportion of additional expected loss
High-emitting industries	Electricity and gas supply	70%
	Base metal manufacturing	19%
	Fossil fuel mining	0%
	Chemicals	0%
	Non-metallic mineral product manufacturing	2%
	Electrical and electronics	0%
	Textile	1%
	Paper	0%
	Subtotal	92%
Non-high-emitting industries	Wholesale	0%
	Real estate development	0%
	Financial services	0%
	Retail	0%
	Food and feed manufacturing	8%
	Others	0%
	Subtotal	8%
Total		100%

Scenario 3

3 Scenario analysis of physical risks - the flood scenario



In terms of climate disaster, Taiwan is more prone to floods. Therefore, the quantitative assessment of flood risk was carried out for UBOT's business locations and the locations of the real estate collaterals with credit granted by UBOT.

2 Evaluation method



According to the Climate Change Disaster Risk Adaptation Platform of the National Center for Disaster Reduction (NCDR), the hazard level of extreme rainfall occurrence in all townships and districts in Taiwan has been assessed for the mid-century period (2036-2065) under the RCP8.5 scenario. In addition, UBOT's business locations and real estate collateral loans have taken into account the vulnerability classification map of the third-generation flood potential by the Water Resources Agency, considering exposure based on the number of sites and balance levels. To assess the potential impact of flood disasters on UBOT in different regions, we have used five risk levels, ranging from Level 1 to Level 5.



3 Evaluation results

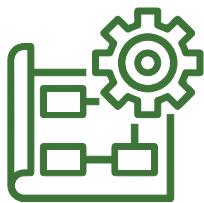
According to the flood map of 316 towns and cities made by NCDR, under the scenario of RCP8.5, there are 51 towns and cities in the region with relatively high flood risk-vulnerability degree (with the risk-vulnerability level of 5) in the middle of the century. After comprehensive consideration of exposure degree, the risk exposure of UBOT's business locations and the locations of real estate collaterals with credit granted by UBOT during floods is as follows:

1. UBOT's business locations:

As of the end of December 2023, seven out of UBOT's 90 business locations in Taiwan were in the region with high exposure risk (Level 5: more than three located in the same region), all of which were in northern Taiwan.

2. Real estate collateral loans with credit:

- (A) As of the end of December 2023, among the real estate collateral loans with credit, the proportion of notional balance of real estate collateral loans with credit that has high risk exposure (Level 5) to total credit balance was 5.31%. All of them are located in the northern region. However, this proportion is relatively low and the overall physical risk of these loans is relatively limited. Specifically, the real estate balance of corporate customers accounted for 1.24% of the total real estate loans, while the real estate balance of individual customers accounted for about 4.07% of the total real estate loan.
- (B) According to analysis by industry, category, UBOT-defined high-emitting industries accounted for 0.06%, whereas non-high-emitting industries accounted for about 1.18%. Specifically, industries with a credit concentration of more than 8% (according to the classification description provided by the Directorate-General of Budget, Accounting and Statistics) include real estate development, financial services, and wholesale, which accounted for 0.48%, 0.14% and 0.11%, respectively.



4 Existing measures

1. UBOT has incorporated natural disasters, such as floods and earthquakes, into the scope and reporting procedures for major unforeseen events at our business locations. Additionally, UBOT has implemented emergency response measures to effectively mitigate the potential negative impacts of floods.
2. UBOT's current standards for real estate collateral appraisal stipulate that those susceptible to floods shall be included in the matters needing attention in the appraisal report; whereas real estate collaterals such as those located in high flood-risk areas, high risk areas for slope hazards, and high potential areas for soil liquefaction shall be detailed in the appraisal report.

Areas with high flood risk (Level 5)	Mid-century (2036 to 2065)	
	Number of business locations	Percentage of real estate collateral loan balance
Northern region	7	5.31%
Central region	0	0%
Southern region	0	0%
Eastern region	0	0%

Real estate collateral loans			
Subject of evaluation			Proportion of balance
Corporate custor	High-emitting industri	Electricity and gas supply	0.00%
		Base metal manufacturing	0.00%
		Fossil fuel mining	0.00%
		Chemicals	0.02%
		Non-metallic mineral product manufacturing	0.00%
		Electrical and electronics	0.02%
		Textile	0.01%
		Paper	0.01%
		Subtotal	0.06%
	Non-high-emitting industries	1.18%	
	Subtotal	1.24%	
Individual accounts			4.07%
Total			5.31%

4 Scenario analysis of physical and transition risks - Operational Plan for Climate Change
Scenario Analysis by Banks in Taiwan



UBOT assesses the financial impact of climate change under three climate scenarios: "Orderly Transition," "Disorderly Transition," and "No Policy" based on the "Operational Plan for Climate Change Scenario Analysis by Banks in Taiwan" published by the Financial Supervisory Commission. These scenarios encompass both physical risks and transition risks.

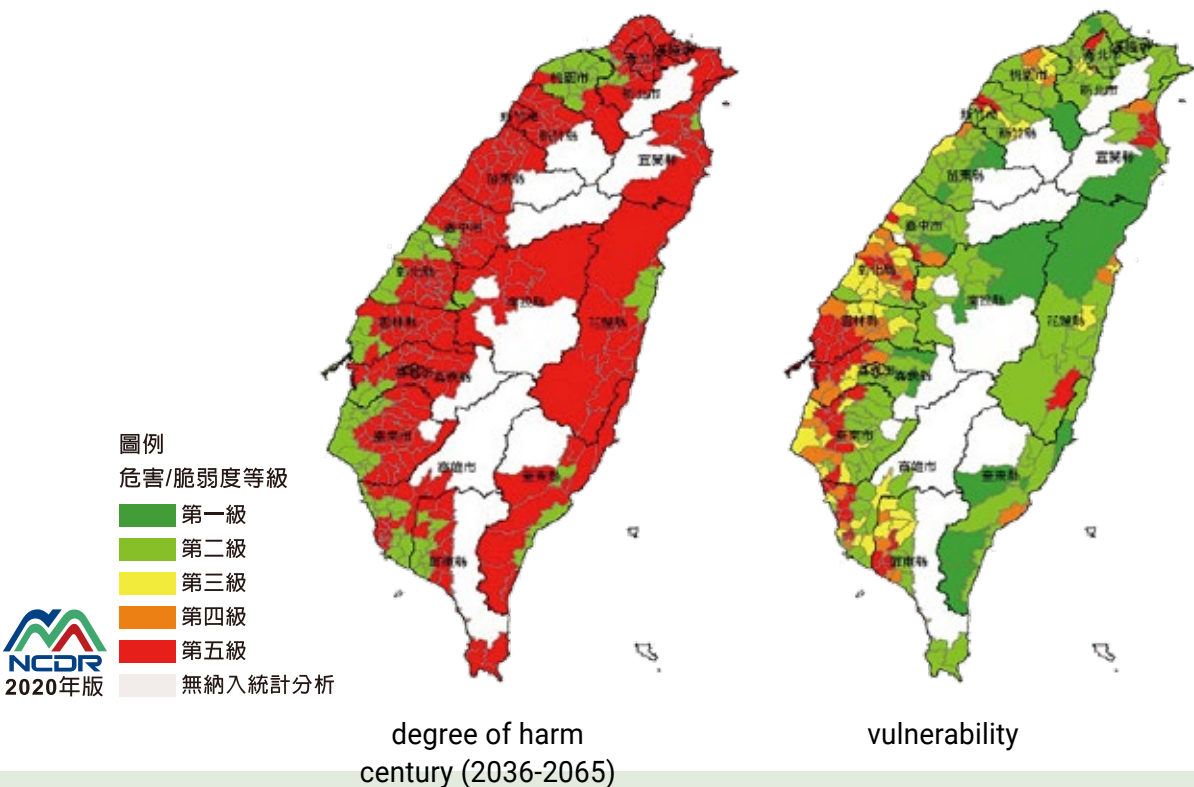


1. Evaluation date: End of December 2023
2. Scope of evaluation: The scope of evaluation covers UBOT's credit risk position (including branches of international financial business) in and outside Taiwan, i.e., UBOT's credit position (including credit card), bond, and equity investment positions on and off UBOT's books.

Set scenario period		2030 and 2050		
Climate scenario		Scenario 1 Orderly Transition	Scenario 2 Disorderly Transition	Scenario 3 No Policy
Scenario statement		Implement immediate and gradual transition to achieve carbon reduction targets	Continue to achieve carbon reduction targets despite delaying the implementation of transition	No transition policy
Corresponding scenario	NGFS	Net Zero 2050	Delay Transition	Baseline
	IPCC	RCP2.6	RCP2.6	RCP8.5
Set climate scenario factors		1 Macroeconomic factors: The "Net Zero 2050," "Delayed Transition," and "Baseline" scenarios are adopted as the basis for macroeconomic factors in each analysis scenario. The indicators for these factors include GDP growth, unemployment rate, and long-term interest rate, while changes in default rates in each position were simulated. 2 Environmental factors: The "RCP2.6" and "RCP8.5" scenarios in the Fifth IPCC report are adopted as the basis for environmental factors in each analysis scenario. These factors take into account the values of environmental and temperature changes to predict future trends in physical risk hazards such as heavy rain, floods, and droughts, as well as their impact on individuals with different attributes. 3 Transition factors: These factors are primarily employed to simulate changes in a company's carbon emissions and carbon prices, and their impact on individuals.		
Methodological framework		1 Domestic credit position: Evaluate the impact of macroeconomic factors on risk-linked indicators (including business finance ratio, full guarantee ratio, combined loan-to-value ratio (CLTV), and debt burden ratio (DBR)) after taking into account the extent of macroeconomic factors under each scenario, which in turn produces the probability of default, loss given default, and default risk exposure under each scenario, and eventually evaluate the expected loss for each analysis scenario. 2 Overseas credit position: Determine the default rate under each analysis scenario in primary consideration of UBOT's international credit ratings, and then estimate the loss given default by referencing the domestic credit position. 3 Bank book investment position: Adopts the same approach as that for credit position.		

Note: 1.NGFS stands for Network for Greening the Financial System.
2.IPCC stands for Intergovernmental Panel on Climate Change.
3.RCPs stands for Representative Concentration Pathways.

Disaster risk map of Taiwan



3 Evaluation results



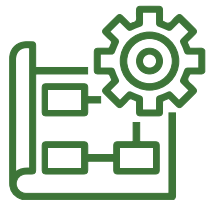
1. Under three hypothetical scenarios, the proportions of expected loss in 2030 and 2050 to UBOT's net worth and pre-tax profit and loss are shown in the table below:
- (A) According to analysis, the proportions of expected loss to net profit and pre-tax profit and loss will peak in 2030 and 2050 under the "Disorderly Transition" scenario. By 2030, expected loss will amount to NT\$3.2 billion, and account for 4.72% and 62.51% of net worth and pre-tax profit and loss, respectively. By 2050, expected loss will amount to about NT\$3.6 billion, and account for 5.25% and 69.53% of net worth and pre-tax profit and loss, respectively.

Climate scenario		Scenario period	Overall evaluation results	
			Proportion of expected loss to net worth	Proportion of expected loss to pre-tax profit and loss
Scenario 1	Orderly Transition	2030	4.36%	57.74%
		2050	5.07%	67.20%
Scenario 2	Disorderly Transition	2030	4.72%	62.51%
		2050	5.25%	69.53%
Scenario 3	No Policy	2030	4.21%	55.73%
		2050	4.68%	62.05%

2. Analysis of the proportions of expected losses of each asset type to net worth and risk exposure in 2030 and 2050 respectively under the "Disorderly Transition" scenario:
- (A) According to analysis, the proportions of expected loss to net worth by 2030 and 2050 are the highest in the "corporate credit" category, i.e., 1.87% and 2.46%, respectively.
- (B) According to analysis, the proportions of expected loss to net worth by 2030 and 2050 are the highest in the "bank book investment" category, i.e., 1.01% and 1.75%, respectively.

Asset category			Proportion of expected loss to net worth		Proportion of expected loss to risk exposure	
			2030	2050	2030	2050
Credit (including credit cards)	Corporate		1.87%	2.46%	0.86%	1.12%
	Individual	Home loans	0.31%	0.24%	0.08%	0.06%
		Others	1.85%	1.36%	0.73%	0.54%
	Subtotal		4.03%	4.05%	0.48%	0.48%
Bank book investment			0.69%	1.20%	1.01%	1.75%
Total			4.72%	5.25%	0.52%	0.58%

4 Existing measures



1 During the annual review of industry-specific credit risk concentration limits (including investment and credit business), UBOT reviews the list of "high-carbon emission industries" we have defined, includes them in the consideration of the adjustment factor, and lowers the relevant industry-specific limits at our discretion.

2 For the investment business, UBOT takes into consideration ESG or projects with high climate risk factors in a progressive manner. ESG is incorporated in the review and appraisal process before making such an investment, where investment caps are applied based on the assessment grading scale. After making such an investment, the ESG situation is reviewed regularly. If the issuing company is in a high-emitting industry, the company is required to disclose its carbon reduction plan. Investment caps on the aforesaid instruments and foreign currency-denominated bonds have also been put in place against high-emitting industries. Investment caps on the aforesaid instruments and foreign currency-denominated bonds have also been put in place against high-emitting industries.

3 For the corporate banking credit business, UBOT has set the target of "incorporating climate risk factors into the credit granting process." In 2023, UBOT has completed the design of the "Climate Risk Assessment Form" for credit grantees. In 2024, UBOT plans to digitalize the aforesaid form so as to facilitate the analysis of the credit positions of UBOT's credit grantees affected by climate risk. Thereafter, UBOT will set caps on the credit position of sensitive industries that are susceptible to climate risks and establish credit granting principles or engagement methods for credit grantees with high climate risks based on the analysis results, which are scheduled for completion by 2026.

4 UBOT's appraisal standards stipulate that credit grantees that are susceptible to wind disasters, floods and droughts or adverse geological conditions shall be included in the matters requiring attention, and special attention shall be paid to their risk control; whereas real estate collaterals such as those located in high flood risk areas, high risk areas for slope hazards, and high potential areas for soil liquefaction shall be detailed in the appraisal report.

04

Effectiveness, Indicators, and Targets of Climate-related Measures



a. Greenhouse gas emissions

1 Emission inventory of UBOT's own operations:

UBOT conducts a bank-wide inventory of electricity consumption and corresponding greenhouse gas emissions (measured in metric tons of carbon dioxide equivalent) according to the ISO 14064 standards, where the corresponding results for each year are shown in the table below. While the amount of carbon emissions at UBOT were calculated based on emissions from electricity consumption in 2022 and prior years, such a calculation has been expended to include not only electricity, but also other sources of greenhouse gas emissions, such as water, gas gasoline, and diesel, starting in 2023.

Indicator	Unit of measurement	2019	2020	2021	2022	2023
Greenhouse gas emissions	Metric tons of CO2e	5,023	5,016	4,838	4,309	10,064
Intensity	Metric tons of CO2e per NT\$ million	-	-	-	-	0.6566

Note: In 2022 and prior years, the scope of inventory covers bank dormitory in which electricity bills were paid separately. In 2023, the scope of inventory encompasses Scope 1, 2 and 3 (Categories 1 to 14) emissions from UBOT's 90 business units and various units under the head office. UBOT's greenhouse gas inventory for 2023 has been awarded the SGS verification certificate.

Target item	Short-term targets (2024)	Medium- to long-term targets (2025~)
Greenhouse gas inventory and verification	1 Scheduled to complete the greenhouse gas inventory of UBOT. 2 Scheduled to complete the greenhouse gas inventory of UBOT subsidiaries.	Scheduled to complete greenhouse gas verification at UBOT subsidiaries by 2027.
Carbon emission reduction	1 Plan to set annual greenhouse gas reduction targets based on SBTi's Absolute Contraction Approach, with 2023 as the base year. 2 Strategies and specific action plans: (1) Energy conservation: Continue to implement various measures to save electricity, fuel and water, as well as purchase electric vehicles and scooters. (2) Energy creation: Install solar power systems on the rooftop of UBOT dormitory buildings.	1 Achieve the target of 42% reduction in carbon emissions by 2030 using the Absolute Contraction Approach, with 2023 as the base year. 2 Achieve the goal of net- zero emission (carbon neutrality) through energy conservation and carbon reduction, investment in solar plants (energy creation), purchase of green electricity, and trading of carbon credits from 2031 to 2050 in line with Taiwan's carbon reduction targets for 2050.

2 Investment and financing portfolio emission inventory:

UBOT not only conducts a greenhouse gas inventory of our investment and financing customers, but also calculates the financed emissions that we need to assume, as shown in the following table, based on the methodology adopted by the Partnership for Carbon Accounting Financials (PCAF). In 2023, UBOT recorded a total of 777,638 metric tons of CO2e in financed emissions, with a carbon emission intensity of 6.45 and a data quality score of 2.65.

Item	Inventory coverage	
Business category	2022	2023
Investment business	5.46%	34.12%
Financing business	1.28%	8.75%
Total	2.30%	15.10%

Item	Absolute emissions (metric tons of CO2e)		Carbon emission intensity (metric tons of CO2e per NT\$ million)		Data quality	
	2022	2023	2022	2023	2022	2023
TWSE/TPEX-listed stocks	17,478	47,347	7.30	2.74	-	1.59
Corporate bonds	147,391	251,341	22.50	10.70	-	2.61
Sovereign bonds	-	222,890	-	7.41	-	1.65
Commercial loans	62,850	256,060	9.18	5.16	-	3.64
Total	227,719	777,638	14.42	6.45	-	2.65

Note1:Inventory coverage: Emission inventory of investment and financing portfolios/FVTPL, FVOCI, AC, IEQU (excluding subsidiaries), and loans (excluding collections) on the balance sheet.

Note2:Carbon emission intensity: Scope 1 and 2 emissions from the investment and financing portfolio/Emission inventory of investment and financing portfolios.

Target item	Short-term targets (2024)	Medium- to long-term targets (2025~)
Greenhouse gas inventory and verification	Plan and carry out inventory and disclosure of greenhouse gas emissions from investment and financing customers based on the PCAF methodology.	Continue to carry out inventory and disclosure of greenhouse gas emissions from investment and financing customers based on the PCAF methodology, expand the scope of asset covered in such inventories, and plan for third-party assurance (verification).
Carbon emission reduction	tudy and deliberate on carbon reduction methods and strategies for financed emissions from investment and financing portfolios in accordance with the "Guidelines on Carbon Reduction Target Setting and Strategy Planning for the Financial Sector."	Plan and set carbon reduction targets, strategies and action plans in accordance with the "Guidelines on Carbon Reduction Target Setting and Strategy Planning for the Financial Sector" and the progress of financed emission inventory for PCAF's asset classes.

b. Energy use

- 1 UBOT implements the following measures to "reduce electricity consumption":
- (1) Replace old lighting fixtures and air conditioning units with high energy consumption, where a total of 54 lighting fixtures and 16 air conditioning units were replaced in 2023 at a total cost of NT\$8.582 million.
 - (2) Ensure that the air conditioning temperature is not set below 26°C during summer.
 - (3) Display "Power saving in progress" signs at prominent places across all UBOT business locations to remind employees and customers to save energy.
 - (4) Maintain minimum lighting or use sensor lighting in all public spaces during off-peak hours.
 - (5) In 2023, electricity consumption across UBOT was 8.66% lower than that for the same period in 2020. Based on this trend, as well as the progress of the actions listed above, we conducted a trend analysis, and predicted that the reduction goals could be achieved on schedule by 2035. In addition, due to the obsolescence and renewal of equipment with high energy consumption, the energy saving benefit in the early stage would be very significant. However, the energy saving benefits in the later stage will decrease gradually. In the future, the energy saving goals will be adjusted in an appropriate and timely manner according to the obsolescence and renewal situation of equipment with high energy consumption. According to our judgment, we remain climate resilient for the time being following the implementation of our current climate strategies and actions.
- 2 UBOT implements various measures to "reduce water consumption," which includes not only checking sanitary equipment for leaks, but also using products with water-saving labels.

Target item	Targets for the current year (2023)	Short-term targets (2024)	Medium- to long-term targets (2025~)	Implementation of targets for 2023
Reducing electricity consumption	Achieve a 15% reduction in electricity consumption across UBOT by 2035, with 2020 as the base year.			Achieved a 8.66% reduction in electricity consumption compared to the base year.
Reducing water consumption	Achieve a 8% reduction in water consumption across UBOT by 2035, with 2023 as the base year.			Used 2023 as the base year
Reducing fuel consumption in company vehicles	Achieve a 40% reduction in fuel consumption in all company vehicles by 2035, with 2023 as the base year.			Used 2023 as the base year
Installing charging systems for electric vehicles	Equip parking lots in all UBOT buildings with electric vehicle systems from 2023 onward.			Planned to install four electric vehicle charging piles at UBOT's own building in Tucheng which is currently under construction.
Setting up solar farms on the rooftop of UBOT's buildings	Set up at least five solar farms on the rooftop of UBOT's own buildings by 2035.			Planned to set up a solar farm on the rooftop of UBOT's own building in Southern Taoyuan.

c. Climate risk management

UBOT adopted the following measures to manage and control climate-related risks:

- 1 Aside from compiling a list of high-emitting industries in 2023, UBOT will also take into account adjustment factors in the annual review of the industry-specific concentration limits and reduce the limits as appropriate. All relevant units have set monitoring indicators for climate risk control, while the Risk Management Department reports to the Asset and Liability and Risk Management Committee on a quarterly basis the risk exposure of the high-emitting industries to the investment and credit granting businesses, as well as the warning indicators set by each business unit in order to monitor changes in risk exposure.
- 2 For the corporate banking credit business, UBOT planned to develop the “Climate Risk Assessment Scale” aimed at collecting information on climate risks (including physical risks and transition risks) from credit grantees, and formulate the development direction of the credit granting business (e.g., adjusting credit terms, interest rates, and pricing) based on the analysis results in order to help credit grantees reduce carbon emissions and speed up sustainability transition, which is scheduled for completion by 2026.

Indicator (Unit of measurement %)	2022	2023
Proportion of the balance of credit facilities granted to high-emitting industries to the total number of credit facilities granted by UBOT	3.61%	3.96%
Proportion of the balance of investment commitments in high-emitting industries to UBOT's overall investment position	8.48%	14.09%
Proportion of foreign currency bonds invested in high-emitting industries to UBOT's overall foreign currency bonds (which must be less than or equal to 35%)	15.35%	19.06%
Proportion of New Taiwan dollar-denominated bonds invested in high-emitting industries to UBOT's overall New Taiwan dollar-denominated bonds (which must not exceed 35%)	-	16.69%
Proportion of non-guaranteed promissory notes underwritten for high-emitting industries to the total balance of non-guaranteed promissory notes underwritten by UBOT (which must not exceed 50%)	-	27.71%

Target item	Targets for the current year (2023)	Short-term targets (2024)	Medium- to long-term targets (2025~)	Implementation of targets for 2023
For the corporate banking business, include climate risk factors in the credit granting process, which is scheduled for completion by 2026.	Develop the “Climate Risk Assessment Scale.”	Plan to digitalize the “Climate Risk Assessment Form.”	1 Set caps for UBOT's credit positions in sensitive industries that are susceptible to climate risks. 2 Establish credit granting principles or engagement methods for credit grantees with high climate risks.	In 2023, UBOT completed the design of the “Climate Risk Assessment Scale” for credit grantees, primarily aimed at collecting information on the physical and transition risks faced by credit grantees. In the future, UBOT plans to add an input interface to our system to facilitate the analysis of the credit positions of UBOT's credit grantees affected by climate risk.

Indicator		Unit of measurement	2022	2023
Proportion of credit granted to corporate customers in green-related industries to the total balance of credit granted to corporate customers		NT\$ hundred millions	94.55	132.9
		%	4.98%	6.93%
Proportion of green credit granted to individual customers to the total balance of credit granted to individual customers		NT\$ hundred millions	13.3	44.5
		%	0.36%	1.11%
Total amount of investment in New Taiwan dollar- and foreign currency-denominated green, social, and sustainability bonds		NT\$ hundred millions	19.3	17.2
Number of Union Green Cards issued by UBOT		ten thousand cards	5.5	8
Number of ESG-related funds already launched by UBOT		funds	45	55
Promoting digital finance	Number of new New New Bank accounts	accounts	50,950	150,579
	Number of accounts applying for personal online/mobile banking	accounts	148,479	286,629
	Number of new accounts with e-banking features	accounts	3,568	3,090

Target item		Targets for the current year (2023)	Short-term targets (2024)	Medium- to long-term targets (2025~)	Implementation of targets for 2023
Green bond investment growth rate		Achieve 3% average annual growth in the balance of investment in New Taiwan dollar-denominated green bonds, social bonds, and sustainability bonds, with 2023 as the base year.			Used 2023 as the base year
Providing green and sustainability-related loan products		-	Plan to establish the “Key Points to the Sustainability-linked Loan Business” to assist companies and industries in low-carbon and sustainability transitions.	-	-
Launching new climate-related financial products		Launch 10 climate-related products such as funds and bonds between 2023 and 2025.			AS of 2023, UBOT has launched a total of 10 ESG-related green financial products for customer selection.
Promoting digital finance	Number of new New New Bank accounts	120,000	144,000	-	In 2023, UBOT recorded a total of 150,579 new New New Bank accounts, representing a 125% achievement rate.
	Number of accounts applying for personal online/mobile banking	132,000	132,000	-	In 2023, UBOT recorded a total of 286,629 accounts applying for personal online/mobile banking, representing a 217% achievement rate.
	Number of new accounts with e-banking features	3,600	3,240	-	In 2023, UBOT recorded a total of 3,090 new accounts with e-banking features, which was less than the target of 3,600 for the year, representing a 85% achievement rate. The slow growth in achievement rate was mainly due to the COVID-19 outbreak and enhanced scrutiny of applications as a consequence of the occurrence of fraud cases in 2023.

e. Other Items

1 Targets for other categories:

Category	Target item	Targets for the current year (2023)	Short-term targets (2024)	Medium- to long-term targets (2025~)	Implementation of targets for 2023
Governance	Number of hours of climate-related education and training for board members	Attend 3 hours of climate-related education and training every two years from 2023 to 2030.			Arranged for all board members to attend a training course titled “On the Importance of Sustainability Reports and TCFD” for a total of 3 hours in June 2023.
Engagement and communication	Training rate among personnel attending carbon emission inventory courses or number of courses on environmental (or energy) management and greenhouse gas reduction	Have at least two people from each unit who have undergone training on carbon emission inventory, with a target training rate of 100%.	Conduct at least three training courses on the environment, energy, and greenhouse gas reduction each year from 2024 to 2030.		Achieved a 100% training rate among personnel attending carbon emission inventory courses in 2023.
Internal carbon pricing	Develop internal carbon pricing for Scope 1 and 2 emissions from UBOT’s operations	-	Plan the introduction of the internal carbon pricing mechanism in UBOT’s own operations, with priority to be given to high-emitting UBOT branches.	Continue to introduce the internal carbon pricing mechanism.	-

Internal carbon pricing: As far as our own operations are concerned, UBOT plans to price the cost of each ton of carbon emissions based on internal shadow carbon prices and the carbon fee rates announced by the competent authorities, and then includes it in the assessment during the decision-making process so that we can carry out greenhouse gas management internally. For high-emitting business units, priority will be given to equipment upgrading and related energy-saving and carbon reduction measures.

2 Implementation of other measures:

In 2023, UBOT paid a total of NT\$2.445 million in electronic equipment insurance and fire insurance premiums.