# TCFD Report

KB Financial Group is taking the lead in creating a sustainable net-zero society, responding to climate change promptly. We will continue to consider our role and responsibility as a global leading financial group and faithfully implement our strategy on climate change  to turn the risks into opportunities.

# Contents



Developing a climate change strategy has become essential for all businesses as the challenges posed by climate change are being exacerbated.

KB Financial Group has selected 'ESG leadership' as one of the pillars of our management strategy and is actively promoting the climate strategies for the environment. We actively implement creative and innovative climate response solutions by achieving SBTi (Science-based Target Initiative)'s approval for our 'KB Net Zero S.T.A.R.' strategy, which is a first for an Asian Pacific financial company. Furthermore, through major climate change response strategies such as 'KB Green Wave 2030' and 'Risk Management,' we seek creative and innovative climate change response solutions in order to lead the eco-friendly financial ecosystem.

We, as a top financial group, will contribute to creating a better world where everyone can feel safe and happy by fulfilling our social responsibility for climate response.

# Introduction

### Climate change is a reality confronting our society.

Climate change, previously deemed a mere forecast from the press and research institutions, is becoming a reality across the globe with rising impacts. The influence of extreme weather events such as heat waves, heavy rainfalls, and droughts has reached global proportions, going beyond individuals' ways of life as well as families, local communities, and businesses. Climate change is calling for an ever more rigorous response as it does not stop at changing our lives at the moment but also threatens the survival of future generations.

### Accordingly, countries around the world have set shared goals to combat climate change.

The 2021 UN Climate Change Conference (COP26, Conference of the Parties) adopted the "Glasgow Climate Pact" a detailed implementation guideline of the Paris Agreement, following the adoption of the Paris Agreement in December 2015. Under the Paris Agreement, countries committed to containing the rise of global average temperature to below 2℃ above the pre-industrial levels and suppressing the temperature increase to 1.5℃. The Glasgow Climate Pact contains more detailed and strengthened goals and action plans based on the Paris Agreement such as increasing support for climate change response in developing countries, raising greenhouse gas emissions abatement targets, reducing coal and fossil fuel dependency, and expanding climate finance. In accordance with the key agreements on climate change including the Pact, major countries around the world are striving to cut carbon emissions by 45% from the 2010 levels by 2030 and achieve "net-zero", zero net emissions, by 2050.

### However, climate change is becoming a bigger threat.

"State of the Global Climate in 2021 Report" released by the World Meteorological Organization (WMO) in May 2022 stated that the four key climate change indicators that reveal the severity of climate change-greenhouse gas concentrations, sea-level rise, ocean heat, and ocean acidification-have reached an all-time high as of 2021. [1)]

In response, the Intergovernmental Panel on Climate Change (IPCC) emphasized the need for "transformational adaptation" mentioning that countermeasures for climate change taken until now are far from enough. In other words, the world should shift gears and combat climate change by seeking to change the fundamental attributes of the social ecosystems instead of simply correcting the existing systems. [2)]

### The impact of climate change will increase.

The Network for Greening the Financial System (NGFS) suggested six different scenarios to analyze the economic impact of climate change, and the analysis result revealed that climate change could result in a maximum 25% reduction in global GDP by 2100 in the worst-case scenario. [3)]

The IPCC also warned that the climate crisis could even result in climate change-related illnesses including maternal, neonatal, and mental health as well as the fundamental destruction of ecosystems, going beyond physical changes such as the collapse of local infrastructure and environmental destruction. [4)]

### Hence, measures to trigger fundamental changes are required.

Every stakeholder in our society including businesses, governments, public institutions, and local communities must join forces to fight climate change. Major countries including Korea are setting their carbon neutrality targets and ramping up their efforts at the national level. Businesses are also establishing and implementing strategies to achieve net-zero such as moving away from carbon-intensive to eco-friendly and low-carbon businesses.

### As such, minimizing climate-related risks and achieving net-zero based on every stakeholder's collaborative effort will lead to the enhancement of happiness for the present generation as well as our future generations.

KB Financial Group is making multifaceted efforts to address the human-induced climate crisis. We are responding to climate issues based on the following three strategies: "KB Net Zero S.T.A.R.", a strategy that aims to achieve net-zero operational and financed emissions; "KB Green Wave 2030", a strategy that seeks to expand ESG financing; and "Risk Management", a strategy for a methodical response to climate risks. Going forward, KBFG will not lose sight of the influence of the financial industry on our society and devise proactive countermeasures, taking the initiative to overcome challenges posed by climate change.

1) The World Meteorological Organization (WMO) State of the Global Climate in 2021 Report (May 2022)

2) The 6th IPCC Assessment Report by Working Group II (March 2022)

3) NGFS Climate Scenarios for Central Banks and Supervisors (June 2020)

4) The 6th IPCC Assessment Report by Working Group II (March 2022)

# KB's TCFD

**Climate change is rising as a business risk factor, directly and indirectly impacting business activities.** Accordingly, investors and stakeholders are asking for information about businesses' climate response.

**The Task Force on Climate-related Financial Disclosures (TCFD) provides voluntary and consistent disclosure recommendations for the disclosure of financial information about climate change.** The Task Force was established following the request from the G20 finance ministers and central bank governors to the Financial Stability Board (FSB) to examine the impact of climate issues on the financial industry. TCFD recommendations, developed and published in 2017, include guidelines for climate-related information disclosures with governance, strategy, risk management, metrics and targets as the core elements.

**We are acting on the TCFD recommendations, faithfully disclosing our climate-related activities.** Since becoming a supporter of TCFD in 2018, we have been disclosing details on our climate change response in accordance with the TCFD recommendations. In addition, KBFG published a separate TCFD report for the first time in Korea in 2021 which disclosed activities carried out based on the TCFD recommendations in detail, strengthening communication about climate change response amongst the stakeholders.

**KBFG aims to introduce more detailed climate change response strategies and delineate the impact of climate change on our Group through the 2022 TCFD report.**

[Roadmap for the Advancement of the Strategy to respond to Climate Change]

| | Setting the Basis for Climate Risk Management | Advancement of Climate Strategies | Securing Climate Change Leadership |
|---|---|---|---|
| | 2019 – 2021 | 2022 – 2024 | 2025 – 2030 |
| Governance | – Establish the board-level ESG Committee<br>– Establish ESG forums and responsible teams within subsidiaries<br>– Incorporate ESG in the management's KPI | – Develop board-level metrics and dashboard to address climate change<br>– Nurture climate experts and internalize capability to respond to climate change | – Demonstrate strong leadership in the corporate sector in tackling climate change |
| Strategy | – Develop SBTi based net-zero strategies (including net-zero strategies for operational emissions (Scope 1&2) and financed emissions (Scope 3))<br>– Develop strategy to expand ESG financing<br>– Declare anti-coal financing<br>– Analyze impact on portfolio using scenarios | – Establish carbon emissions management system<br>– Each subsidiary to develop and execute net-zero implementation strategies<br>– Develop a scenario analysis methodology | – Stabilize an integrated management and disclosure of financial and non-financial data<br>– Implement strategies to strengthen climate resilience based on scenarios |
| Risk Management | – Develop Environmental and Social Risk Management (ESRM) Policy Framework at the Group level<br>– Review environmental and social risks based on the Equator Principles | – Strenghthen engagement with high-emission industries<br>– Reinforce credit reating system reflecting climate risks | – Reinforce comprehensive ESG risk management system<br>– Fully utilize the corporate ESG risk assessment system |
| Metrics & Targets | – Measure and disclose greenhouse gas emissions<br>· Operational emissions (Scope 1&2)<br>· Financed emissions (Scope 3) | – Expand target for financed emissions (Scope 3) and set relevant targets in accordance with the development of the global measurement methodology | – Achieve the ESG finance target (by 2030)<br>– Conduct interim check on the fulfillment of net-zero targets and update targets |

# Governance

**KB Financial Group endeavors to overcome the climate crisis by leveraging Group-wide capability.** Robust governance is a basis for effective response and proper decision-making related to climate issues. Swift response to internal and external environmental shifts caused by climate change is a must, which should be driven by in-depth and expertise-based discussions and the decision-making of each party within the governance structure.

**We built a governance structure for climate response.** Our governance structure for climate response is composed of the Board, the group management, and subsidiaries. The ESG Committee, Audit Committee, and Risk Management Committee manage climate issues according to each committee's roles, with the highest-level decision-making body, the Board at the center.

For the group management, the Group CEO is leading CSO and CRO to manage climate risks with their area of expertise. In recognition of the importance of ESG management, KBFG has elevated a team responsible for ESG from the Group's Brand·ESG Division to the ESG Division under the supervision of the Group CSO (Chief Strategy Officer) during its organizational reform in 2021. Furthermore, ESG forums and responsible teams are responding to climate issues, reflecting each subsidiary's business.

We engage in seamless communication between each party within the governance structure to understand the impact of climate-related risks and opportunities on our business model and reflect the impact in management activities including business strategies and financial planning. In addition, climate response strategies are being comprehensively reflected in the Group risk management, and the roles and responsibilities of the Board and management are clearly defined for effective climate response.

[Climate Response Governance Structure]

# Climate Change Response Governance

## Board Level

KBFG is responding to climate change with the Board, the highest-level decision-making body, at its center. The Board oversees the Group's climate response strategies and goals and manages the activities of each committee under the Board. The ESG Committee, the Audit Committee and the Risk Management Committee maintain organic cooperative relationship according to each committee's role.

### ESG Committee

The ESG Committee was established in 2020 as the first of its kind in the financial industry to oversee ESG-related issues. The Committee, composed of the entire standing and non-standing directors, reflects diverse perspectives of stakeholders given the significance of ESG management and demonstrates ESG values within the Group by strengthening its capability to execute.
The KB Financial Group ESG Committee establishes the Group's ESG strategies ad policies including climate change-related issues and serves as the highest-level decision-making body for the Group and its subsidiaries' key ESG initiatives. Moreover, it monitors the progress of major implementation tasks related to the Group's ESG strategies as well as the scale of ESG products, investments, and loans, and the performance of activities for greenhouse gas abatement, as the highest-level decision-making body that guarantees the implementation of ESG management.

[Key Resolutions by and Reporting to the ESG Committee]

| Category | | Resolutions and Reports |
|---|---|---|
| 1st meeting in 2020 | Resolved | Set strategic ESG direction of the Group |
| 2nd meeting in 2020 | Resolved | Declare anti-coal financing |
| 3rd meeting in 2020 | Reported | Report on the Group's ESG progress |
| 1st meeting in 2021 | Resolved | Develop the Group's carbon neutrality strategy |
| 2nd meeting in 2021 | Resolved | Develop the Group's Environmental and Social Risk Management (ESRM) policy framework |
| 3rd meeting in 2021 | Reported | Establish key plans for the Group's ESG Initiatives in 2022 |

### Audit Committee

The Audit Committee's basic responsibility is to perform audits of the Group's businesses and assets. The Committee contributes to ensuring the reliability of the Group's management activities by reviewing financial data that is released to secure the transparency of the Group's financial data.
The committee plans to review the impact of climate risks on the Group's financial status and audit whether the process of reflecting climate issues in management activities is being reasonably implemented.
KB Financial Group provides training on climate issues for members of the Audit Committee, recognizing that the role of the Committee will increase when it comes to climate change response. As such, we are looking to secure the appropriateness and reliability of our climate change response activities with the Audit Committee at the center.

### Risk Management Committee

The Risk Management Committee reviews diverse risks the Group faces and establishes relevant management policies and procedures. The Committee also develops risk management strategies that align with the Group's strategic direction determined by the Board and decides the risk appetite which is the amount of risk the Group could afford.
Particularly, the Committee is developing a response system, considering climate issues as one of the major risks facing our Group. On top of this, risk factors that may hinder KB Financial Group from achieving our net-zero target are being preemptively identified and a relevant response system is being established.

### Capability Building for the Board Members

KB Financial Group is providing training on climate issues for the Board members to raise their awareness and build capability on the issues. Topics including climate change-related global trends, supervisory and regulatory trends, directions of response within the financial industry, and changes in the disclosure system are being covered in special lectures from outside experts, thereby, providing a comprehensive insight into climate issues. In 2021, we also hosted a training session on ESG issues such as the Korean ESG model and ESG management strategy, and the roles of financial institutions.
KB Management Research Center provides quarterly research reports on ESG trends at home and abroad, including climate change, to outside directors to support their timely and reasonable decision-making.

## Group Management Level

The management of the Group including the CEO leads the practical execution of climate change response strategies. In particular, the CSO and CRO consider climate change response as a key determining factor of the Group's sustainable growth and oversee management activities related to business strategies according to their field of expertise.

### Group CEO

The Group CEO is responsible for the continuous review of the Group's climate change strategy activities. In addition, the CEO participates in the ESG Committee as a member to achieve harmony between the Committee's supervision and the management's implementation.

### Group CSO

The Group CSO's role is to develop and promote climate change strategies. In addition, The Group CSO shares agenda related to ESG including climate change with executives and employees to encourage their participation in ESG activities.

### Group CRO

The Group CRO lays a solid foundation for management by overseeing the financial and non-financial risks of the Group. In particular, ESG risks including climate risks, are being reflected in the risk management system to preemptively manage direct, indirect, and potential risks stemming from their environmental and social impact.

### Strengthened Responsibility of the Management

KBFG includes climate change metrics in its management KPIs to put climate change response strategies into action. We have been increasing the management's responsibility by reflecting metrics linked to the Group's climate change response strategies in KPIs, such as carbon emissions reduction and ESG financial products expansion.

## Subsidiaries

KBFG has ESG forums and responsible teams in each subsidiary for the practical implementation of ESG management. Our subsidiaries are faithfully implementing the Group's climate change response strategies by reflecting climate issues in their management activities.

### ESG Forums

We established ESG forums for each subsidiary to promote ESG management. The forums oversee ESG issues including climate change and conduct self-reporting on key updates to the Board.

### ESG-responsible Teams

KB Financial Group and its 13 subsidiaries have formed ESG teams and are enhancing working-level ESG capabilities. The teams actively promote ESG activities, including climate change, by reflecting each subsidiary's unique characteristics, in a view to supporting the Group's achievement of its climate change response and ESG management strategies.

# Strategy

Climate change brings about various changes across industries and also serves as a strategic opportunity to create new markets and businesses. As demands for financial services and financing to transition from traditional carbon-intensive to eco-friendly businesses such as renewable energy are on the rise, new business opportunities such as investments, lending, green bond issuance, and climate risk insurance will emerge. Financial institutions should redefine the role of finance in line with the new climate regime and preemptively respond to climate risks to find new innovation drivers and promote sustainable growth.

### Before establishing strategies, KBFG contemplated on which climate issues are important from the financial institutions' viewpoint.

First, an increase in carbon costs across the industry is projected to be inevitable due to the worldwide strengthening of carbon regulations, and this could have an impact on KBFG's asset portfolio.

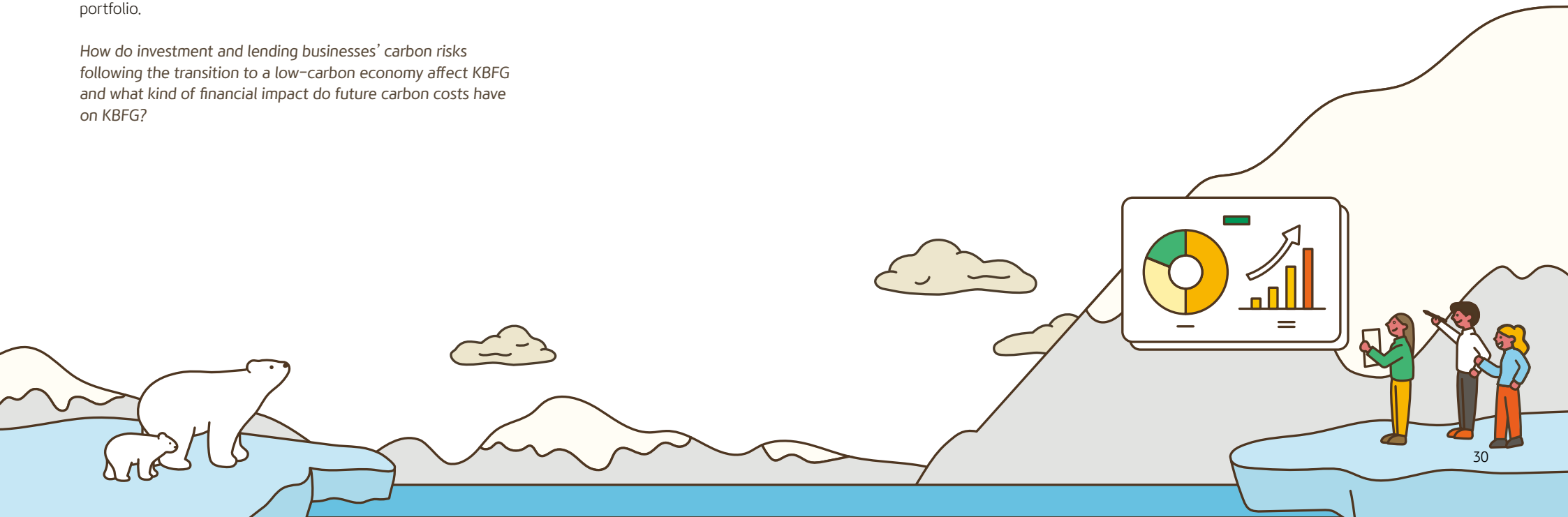
*How do investment and lending businesses' carbon risks following the transition to a low-carbon economy affect KBFG and what kind of financial impact do future carbon costs have on KBFG?*

Second, the past decade has witnessed an increase in the frequency of weather anomalies, leading to a surge in human and property damage, with buildings and infrastructure being flooded due to heavy rainfalls, typhoons, and others.

*What is the potential impact and scale of climate change on KBFG's asset portfolio in the mid-to-long term?*

### Two fundamental questions about climate issues can be boiled down to two risks, transition risk and physical risk, mentioned in the TCFD recommendations.

Accordingly, KB Financial Group reviewed transition risks, physical risks, and opportunities stemming from climate change facing our Group. Moreover, a scenario analysis was conducted to substantially analyze the impact of transition and physical risks on the Group's management activities.



# Risk Analysis on Climate Change

KB Financial Group analyzed climate-related risks before developing climate change response strategies. First, we identified the risks by dividing them into two, transition and physical risks, in accordance with the TCFD recommendations. Transition risks are risks that arise from the shift toward a low-carbon economy such as policy and legal, technology, market, and reputational risks. Physical risks refer to those caused by the physical impact of climate change and can be divided into acute and chronic risks depending on the duration in which a risk factor has an influence. We identified the potential financial impacts of transition and physical risks as well as their influence on the financial industry to establish a rigorous response system against each risk.

| Category | | | Potential impact on finance | Impact on the financial industry |
|---|---|---|---|---|
| Transition Risk | Policy and Legal Risk | · Strengthening of carbon regulation such as emissions trading scheme and EU carbon border tax, and increase in emission prices<br>· Introduction of new environmental disclosure standards, strengthening of disclosure duties, and increase in climate-related litigation claims | · Increase in operating expense following the rise of greenhouse gas emissions permit prices<br>· Increase in legal and financial burden due to unsecured emissions permits and exceeding the cap<br>· Decline in industrial competitiveness and the value of tangible assets due to regulations against high-carbon businesses<br>· Potential confusion caused by the mismatch between the existing and new disclosure standards | · Financial burden stemming from the purchasing of emissions permits and compliance with environmental regulations<br>· Deterioration of reliability and profitability of supply chain and asset portfolio when partner companies or businesses within the Group's asset portfolio fail to secure emissions permits, exceed the cap or face environmental litigation claims<br>· Limitations in customer and investor communication due to confusion related to disclosure |
| | Technology Risk | · Transition to green and low carbon technologies<br>· Improvement of energy efficiency and increase of technology investments to cut emissions<br>· Possibility of investment failure in new technologies | · Increase in costs related to the research, development, and adoption of new technologies<br>· Increase in financial risks due to failures in new technology investment<br>· Amortization and early disposal of existing assets | · Changes in lender and investment companies' profitability following the adoption of new technologies<br>· Deterioration of reliability and profitability of supply chain and asset portfolio when partner companies, lenders, and investment companies avoid the adoption of green and low-carbon technologies |
| | Market Risk | · Decrease in the demand for high-carbon products<br>· Shifts in demand and supply for commodities, products, and services<br>· Increase in uncertainty due to changes in market conditions | · Changes in demand and sales due to the increase in customer preference for green products and businesses<br>· Fluctuations in production costs following the changes in commodity prices and waste treatment costs<br>· Changes in value due to asset revaluation | · Increase in the necessity to develop green products and services, and build an eco-friendly asset portfolio<br>· Decline in demand and operating profits if a product or service is found to have an adverse environmental impact<br>· Deterioration of customer and investor trust and withdrawal of investment, if green management is not implemented, |
| | Reputational Risk | · Changes in customer and investor preference<br>· Increase in negative feedback from stakeholders | · Changes in corporate operational strategies and relevant costs due to rising customer interest in eco-friendly activities<br>· Deterioration of reputation due to a failure to disclose eco-friendly information and carry out climate change response activities | · Deterioration of reputation upon the rise of issues such as greenwashing and ESG washing<br>· Deterioration of reputation when negative environmental issues arise amongst partner companies and businesses within the Group's asset portfolio |
| Physical Risk | Acute Risk | · Increased frequency and severity of extreme weather events such as cyclones, floods, and forest fire | · Production suspension and fall in operating profits due to damage to business sites and supply chain<br>· Increase in costs to restore business sites | · Increase in nearby customers' inconvenience if a physical risk causes damage to financial institutions' branches<br>· Restrictions on the use of online customer services in the event of computer network error<br>· Increase in financial burden following the early disposal of existing assets and devaluation of asset portfolios |
| | Chronic Risk | · Long-term shifts in climate patterns that may cause sea-level rise, average temperature increase, or chronic heatwaves | | |

# Opportunity Analysis on Climate Change

Climate change presents opportunities as well as crisis for businesses. The fact that the impact of climate change is spreading throughout society means that it is a strategic opportunity to create new markets and businesses.
Already, many companies are moving from traditional carbon-intensive businesses to businesses centered on renewable energy and eco-friendly businesses, which are also affecting the financial industry. KB Financial Group analyzes the opportunity factors caused by climate change and reflects them in its management activities in order to respond quickly to the transition of the industrial paradigm caused by climate change.
First of all, we analyzed the potential financial impact and impact of each opportunity factor on the financial industry by classifying the opportunity of climate change into resource efficiency, energy resources, goods and services, and market resilience according to the TCFD recommendation.

| Category | | Potential financial impact | Impact on the financial industry |
|---|---|---|---|
| **Resource efficiency** | · Increase in energy and water resources efficiency<br>· Improvement in recycling and waste management systems<br>· Increase in the use of green transportation<br>· Expansion of green construction | · Operating cost reduction following the increase in energy efficiency<br>· Cost reduction and profit increase following productivity increase<br>· Expansion of low-carbon industries including recycling, waste management, and green transportation | · Increase in demands for financing from corporate clients that seek to increase resource efficiency<br>· Preemptive securement of clients in need of financing through industrial monitoring and asset portfolio diversification |
| **Energy sources** | · Increase in the use of green (low-carbon and renewable energy) energy sources<br>· Expansion of green and low-carbon technologies<br>· Participation in the carbon market | · Decrease in emissions permit or carbon tax-related financial risks following the reduction of greenhouse gas emissions<br>· Increase in profitability following the reduction of long-term operating costs<br>· Demand generation following the enhancement of corporate image | · Increase in demands for financing from corporate clients that seek to adopt renewable energy sources<br>· Expansion of investment for large-scale projects |
| **Products and services** | · Increase in customer preference for green products<br>· Development of green products and increase in technology application<br>· Expansion of green businesses | · Increase in the demand for green products and services, and sales expansion<br>· Establishment of a foundation for sustainable growth based on green business expansion | · Expansion of the scale of green products, loans, and investments<br>· Strengthen competitiveness by developing green financial solutions |
| **Markets** | · Entry into new markets related to climate change response<br>· Diversification of business portfolio | · Expansion of revenue streams following entry into new markets<br>· Establishment of a foundation for sustainable growth based on business portfolio diversification | · New market entry by discovering green products and services<br>· Advancement of profit structure by building a green asset portfolio |
| **Resilience** | · Expansion of renewable energy and enhancement of energy efficiency<br>· Discovery of green alternative resources and resource diversification | · Securing stability in fixed assets and supply chain based on enhanced resilience<br>· Enhancement of corporate image and increase in product demand<br>· Increase in market value following positive evaluations from stakeholders and increase in the inflow of investment | · Increase in the reliability of supply chain and asset portfolio<br>· Business portfolio diversification and establishment of a foundation for sustainable growth |

# Scenario Analysis on Transition Risk

## Analysis Overview

Stronger regulations on carbon emissions around the world will inevitably increase carbon costs across industries, and transition risks are also projected to rise accordingly. KBFG identified the potential financial impact of transition risks as well as their influence on the financial industry following the reinforcement of carbon regulations. In addition, a scenario analysis was conducted to analyze the actual impact of transition risks on the Group's asset portfolio.

## Analysis Method

KB Financial Group identified the impact of stronger carbon regulations on each industrial sector in the asset portfolio and our Group through the scenario analysis. The scenario analysis, conducted with S&P Global Market Intelligence, followed three procedures. First, we compared the exposure and carbon emissions of each industrial sector and analyzed carbon intensity. Next, we analyzed the Unpriced Carbon Cost (UCC) in connection with the 2°C scenario's target based on the OECD and IEA research. The analysis scope was the corporate finance portfolio including corporate lending, corporate bonds, and stocks.

[Transition Risk Scenario Analysis Procedure]

① Analysis of the share of exposure and carbon emissions of each industrial sector → ② Analysis of carbon intensity of each industrial sector and asset portfolio → ③ Analysis of Unpriced Carbon Cost (UCC) of each industrial sector

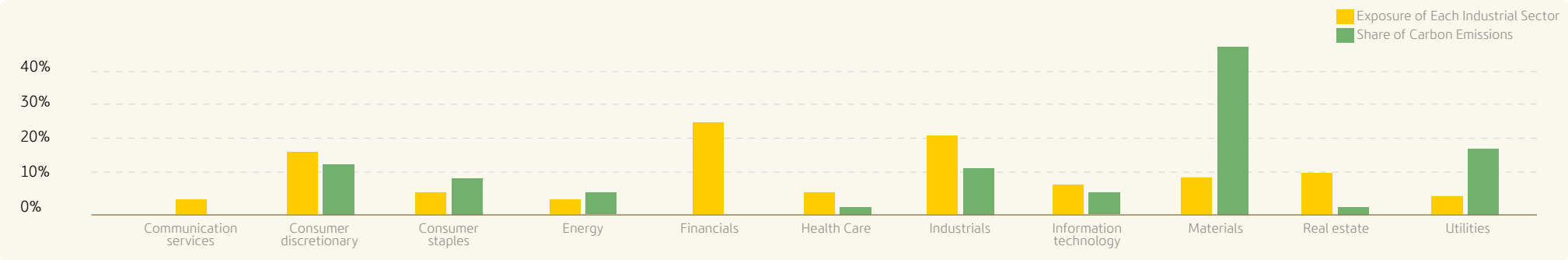
### ① Analysis on the Share of Exposure and Carbon Emissions of Each Industrial[1] Sector

First, KB Financial Group compared the share of exposure and carbon emissions of each industrial sector of its asset portfolio.
The industrial sectors with high exposure (Value of Holdings, VOH) in the asset portfolio were finance (26%); industrials such as capital goods, commercial service, and transportation (20%); and consumer discretionary (16%). Materials (40%), utilities (16%), and consumer discretionary (13%) were the industrial sectors that had a high share of carbon emissions in our asset portfolio.
This means that the share of carbon emissions in industrial sectors with high exposure is not high in absolute terms and that both the share of exposure and carbon emissions should be taken into account when managing financed emissions. Hence, KBFG is preparing a response system that considers both indicators to manage transition risks in our asset portfolio.

[Major Business of Each Industrial Sector]

| Category | Description |
|---|---|
| Consumer discretionary | Automobiles (including the parts industry), consumer durables (home appliances, fashion accessories, apparel and luxury goods, etc.), consumer services (hotels, leisure facilities, education, etc.), department stores, etc. |
| Consumer staples | Production and sales of food and beverages, production and sales of personal items, supermarkets, etc. |
| Materials | Steel, aluminum, copper, other metals, chemicals, fertilizer, specialty chemicals, building materials, paper, etc. |
| Utilities | Electricity generation (including hydroelectric, combined heat, and renewable energy power generation), power trading, etc. |

[The Share of Exposure and Carbon Emissions of Each Industrial Sector]




1) Industrial sector categorization followed the Global Industry Classification Standard (GICS) ※ Major business of each industrial sector

### ② Analysis on Carbon Intensity of Each Industrial Sector and Asset Portfolio

In general, the absolute value of carbon emissions is high when a specific industrial sector or an asset portfolio is large. However financial companies need an objective indicator when choosing industrial sectors that need attention since the share of an industrial sector's exposure is not proportionate to the share of carbon emissions, as indicated by analysis ①.
Accordingly, KB Financial Group calculated the carbon intensity of each industrial sector and asset portfolio. Carbon intensity means Carbon to Revenue (C/R) and is used as an objective indicator of comparison since it minimizes the impact of scale when comparing carbon emissions.
The analysis of carbon intensity revealed that the utilities sector has the highest carbon intensity in the entire asset portfolio and three asset portfolios, followed by the materials sector. We are planning to establish an engagement strategy that encourages businesses' participation in green activities instead of excluding industrial sectors with high carbon intensity to reduce carbon emissions.

[Carbon Intensity of Each Industrial Sector and Asset Portfolio]

(Unit: $tCO_2eq/₩m$)

| Portfolio Category | Financials | Health care | Communication services | Real estate | Industrials | Information technology | Consumer discretionary | Consumer staples | Energy | Materials | Utilities |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 0.03 | 0.09 | 0.10 | 0.18 | 0.23 | 0.26 | 0.27 | 0.52 | 0.54 | 1.34 | 2.77 |
| Stocks | 0.03 | 0.13 | 0.07 | 0.12 | 0.21 | 0.27 | 0.28 | 0.60 | 0.60 | 1.70 | 2.66 |
| Lending | 0.05 | 0.09 | 0.09 | 0.18 | 0.23 | 0.26 | 0.27 | 0.54 | 0.54 | 1.34 | 2.42 |
| Bonds | 0.03 | 0.10 | 0.10 | 0.19 | 0.23 | 0.24 | 0.27 | 0.55 | 0.55 | 1.14 | 2.97 |

Low carbon intensity — High carbon intensity

### ③ Analysis on Unpriced Carbon Cost (UCC) of Each Industrial Sector

Whereas the share of exposure and carbon emissions, as well as the carbon intensity of each industrial sector, is an indicator for analyzing the current climate change risks in the asset portfolio, 'Unpriced Carbon Cost (UCC)' is an indicator used to analyze the future climate risks of the asset portfolio.

UCC is calculated by the difference between what a company pays for carbon emissions today and what it may pay in the future and is used as an indicator to assess each company's solvency regarding future carbon costs. High UCC indicates that a company's carbon costs will rise, increasing its exposure to climate risks.

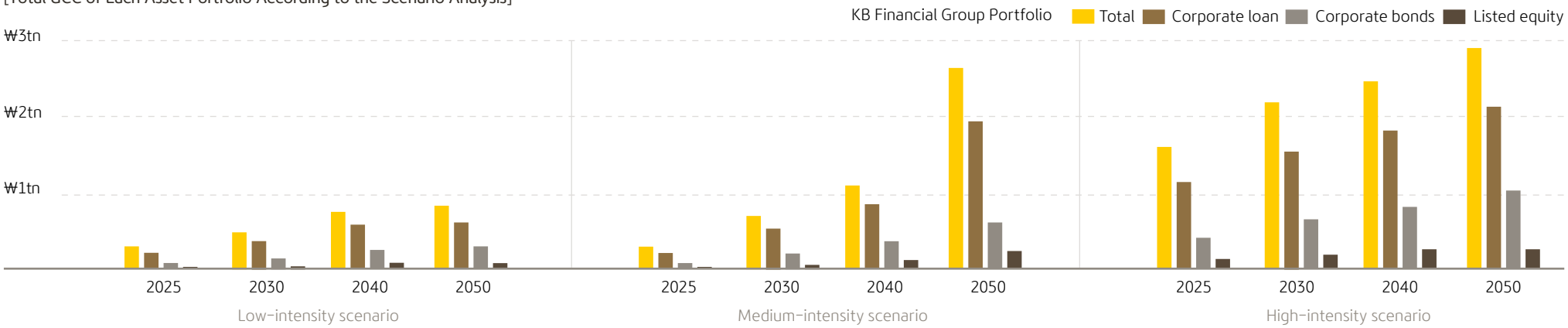
Therefore, financial institutions should pay close attention to managing the industrial sectors with high UCC since the soundness of asset portfolios may deteriorate if UCC is high in their portfolios.

KB Financial Group analyzed high, medium, and low-intensity scenarios based on how much the temperature rise due to climate change could be suppressed, reflecting the UCC's characteristic of changing according to the scenario and base year. The analysis showed that the stronger the scenario, the higher the total UCC of companies within each asset portfolio. This means that as greenhouse gas emissions reduction targets rise and relevant regulations become stronger, companies' financial burden within the asset portfolio increases.

[Scenario Classification]

| | |
|---|---|
| High-intensity scenario | The scenario is based on the OECD and IEA research and assumes that policies to reduce greenhouse gas emissions are implemented according to the goal stated in the Paris Agreement: limiting the average global temperature rise to 2°C by 2100. |
| Medium-intensity scenario | The scenario assumes a reduction in greenhouse gas emissions and success in limiting the average global temperature rise to 2°C in the long run but considers that policy implementation may be delayed in the short term.<br>Another assumption is that countries that failed to meet the 2°C scenario's target in the short term will ramp up their short-to-medium term greenhouse gas abatement efforts. |
| Low-intensity scenario | The scenario assumes a situation where every country fully implements NDCs according to the Paris Agreement based on the OECD and IEA research. |

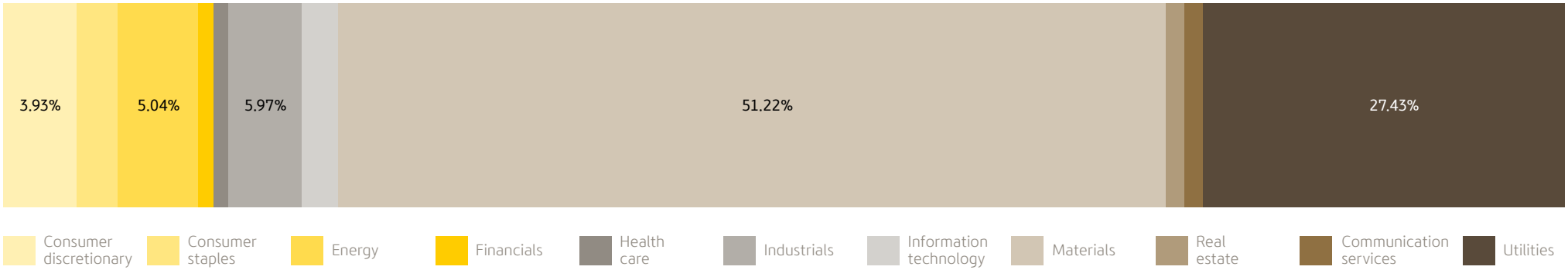
[Total UCC of Each Asset Portfolio According to the Scenario Analysis]



Furthermore, KB Financial Group analyzed the share of UCC of each industrial sector in the asset portfolio based on the high-intensity scenario. The materials (51.22%) and utilities (27.43%) sectors showed the highest UCC in the Group's asset portfolio when the high-intensity scenario was applied. The two sectors need attention when responding to climate risks since the analysis revealed that their share of carbon emissions and carbon intensity are also high.

In addition, we also discovered that 9.67% of our asset portfolio could be exposed to a negative margin risk if all the companies pay UCC. This implies that climate risks not only serve as a financial burden on businesses within the asset portfolio but also on the Group itself. Against such a backdrop, KB Financial Group plans to thoroughly respond to transition risks, focusing on industrial sectors with a high share of UCC such as utilities and materials, based on the scenario analysis results.

[Share of UCC of Each Industrial Sector]



# Scenario Analysis on Physical Risk

The frequency of unusual climate events such as temperature rises and increased precipitation has increased over the last decade. Damage to human life and property, in particular, is rapidly increasing due to an increase in the rainy season on the Korean Peninsula, torrential rain, and changes in typhoon movement routes. As a result, KB Financial Group used physical risk scenario analysis to determine the potential impact and size of climate change on its asset portfolio in the mid-to long-term.
The analysis adopted the Representative Concentration Pathways (RCP) scenario. The scenario, discussed in the 5th IPCC Assessment Report in 2013, projects the level of regional risks based on greenhouse gas concentration. We analyzed physical risks by applying three scenarios: RCP 2.6, 4.5, and 8.5. The accuracy and reliability of the analysis were enhanced by adding an RCP 2.6 scenario to the existing analysis. To compare each scenario, RCP 2.6 assumes a situation with the lowest level of climate risk, while RCP 8.5 assumes a situation with the highest level of climate risk. We analyzed the impact of physical risks by comparing each scenario.

[RCP Scenario-Scenario Definition]

| | | |
|---|---|---|
| **RCP Scenario** | | · A set of scenarios created by the Intergovernmental Panel on Climate Change (IPCC) assuming the different outcomes of climate change depending on the performance of greenhouse gas emissions policies. It refers to the degree of influence force that changes the energy balance of greenhouse gases, etc. |
| **Low** Level of climate risks **High** | **RCP 2.6** | · A scenario that assumes that the earth cannot recover from the impact caused by human activities on its own (not possible) |
| | **RCP 4.5** | · A scenario that assumes a situation where the majority of greenhouse gas reduction policies substantialize |
| | **RCP 8.5** | · A scenario that assumes a situation where greenhouse gas is emitted at the current pace |

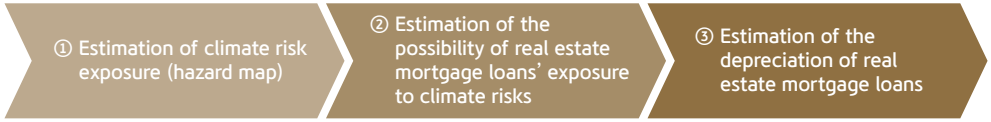
[RCP Scenario - Projection Per Scenario]

| Scenario | $CO_2$ concentration in 2100 | Projection of temperature rise from 2081 to 2100 | | Projection of sea-level rise from 2081 to 2100 | |
|---|---|---|---|---|---|
| | | Average | Range | Average | Range |
| RCP 2.6 | 421ppm | 1.6℃ | 0.9~2.3℃ | 0.49m | 0.35~0.69m |
| RCP 4.5 | 538ppm | 2.4℃ | 1.7~3.2℃ | 0.59m | 0.41~0.82m |
| RCP 8.5 | 936ppm | 4.3℃ | 3.2~5.4℃ | 0.89m | 0.54~1.13m |

## Analysis Methodologies

KB Kookmin Bank calculated the "climate risk exposure" of 250 cities and counties nationwide and estimated the possibility of damage to real estate collateral loans, considering the frequency of flood damage in the past, the relative difference of torrential rain-related factors due to climate change, and landslides derived from torrential rain.
Kookmin Bank estimated the impact of physical risks on real estate mortgage loans through the RCP scenario analysis according to the three following procedures.

[Physical Risk Scenario Analysis Procedure]




### ① Estimation of Climate Risk Exposure (Hazard Map)

KB Kookmin Bank synthesized regional meteorological factors (annual precipitation, precipitation intensity, number of days of heavy rain) and landslide prediction warning occurrence information for the next 10 years based on the frequency of occurrence of flood damage in the past, and estimated regional climate risk exposure to assess physical risks from climate change.

[Climate Risk Exposure Estimation Method]

| Frequency of flooding in the past | + | Regional meteorological factors | + | Landslide prediction information | |
|---|---|---|---|---|---|
| Regions affected by flooding such as typhoons and heavy rainfalls [1] | | Prediction data on annual precipitation, precipitation intensity, and days of precipitation per RCP scenario [2] | | Regions of landslide alert/warning [3] | Climate risk exposure |

As a result of analyzing the climate risk exposure according to the aforementioned procedures, we came up with the climate risk exposure based on the RCP scenario for 250 cities, counties, and districts across the country.

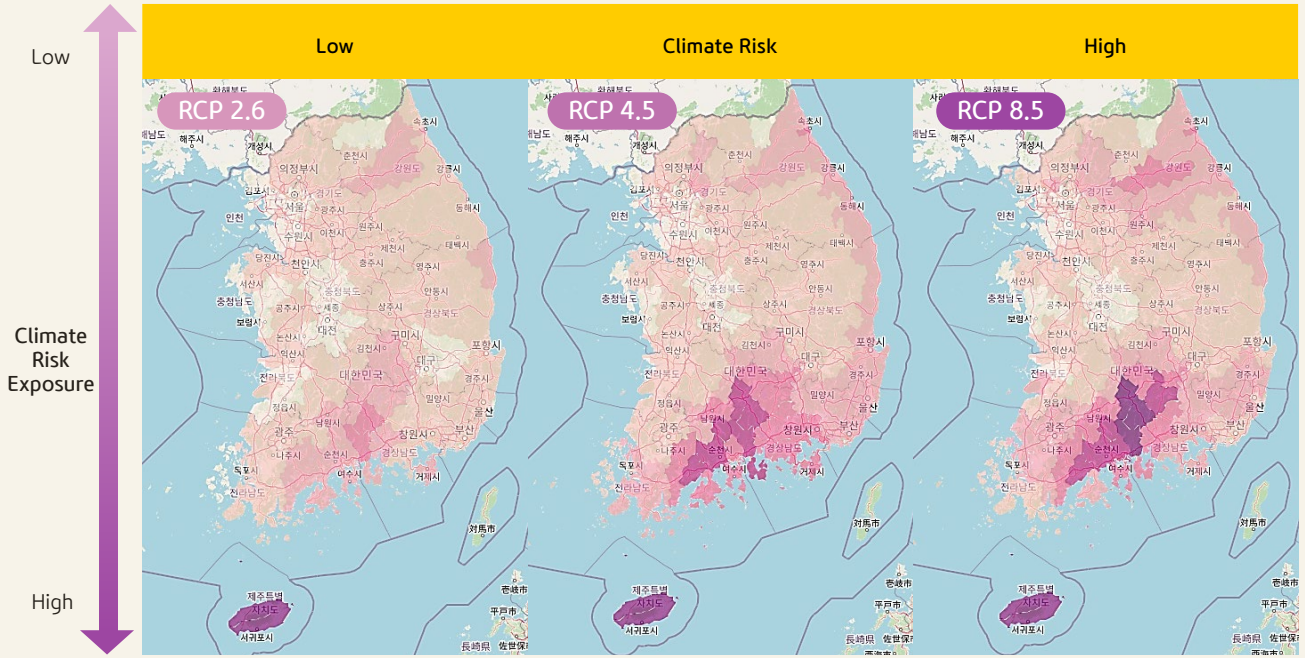
1) LX
2) Climate Information Portal, Korea Meteorological Administration
3) Landslide Information System, Korea Forest Service

[Status of Flood Damage Frequency by Region]

1) Goyang City had flooding damage during 2006~2010, but it did not occur after 2010. Wonju City has not experienced any flooding damage since 2013.
2) Since Busan, Gyeongnam, and Ulsan are located on the typhoon's moving route, five recent flooding damages have occurred.
3) Due to the typhoon, there was torrential rain in Jeju area and flood damage occurred.


According to the results of the simulation of climate risk exposure analyzed by KB Kookmin Bank, if the RCP changes from 2.6 to 8.5, the exposure to climate risk has increased across the country, including Seoul, Gyeonggi, and Chungcheong. On the other hand, some areas of Jeju, Gyeongnam, Jeonnam, and Gangwon were found to have high exposure to climate risks in all scenarios (RCP 2.6, 4.5, and 8.5).

[Simulation on Climate Risk Exposure per Scenario]



### ② Estimation of the Possibility of Exposing Climate Risk to Real Estate Collateralized Loans

KB Kookmin Bank analyzed how much KB Kookmin Bank's real estate collateral loans were exposed to climate risk by overlapping real estate collateral loans in the analysis of climate risk exposure by region. First, KB Kookmin Bank analyzed the size of loans with increased climate risk exposure and the size of loans with continuously high climate risk exposure as climate change increases through a comparative analysis between RCP scenarios.

As shown below, if climate risk increases from scenario I (RCP 4.5) to scenario II (RCP 8.5), the loan for expanding climate risk is the ● section (Group A → Group B · C, Group B → Group C). Also, loans with high climate risk exposure were selected in the ★ section (Group C → Group C).

In this way, the size of collateral loans for the ● and ★ sections was identified.

KB Kookmin Bank compared RCP 2.6 with RCP 4.5, RCP 4.5 and RCP 8.5 using a comparative analysis between scenarios, and identified the size of loans whose exposure to climate risk increases when changing scenarios. According to an analysis of the risk exposure level of collateral loans worth ₩99.7tn in domestic real estate as of March 2022, it is analyzed that collateral loans worth about ₩7.9tn are exposed to climate risk if they move from RCP 2.6 to 4.5. On the other hand, if climate risk intensifies from RCP 4.5 to RCP 8.5, it can be confirmed that up to ₩25.3tn in real estate collateral loans, or 25% of the loans analyzed, are exposed to climate risk. In other words, the total amount of loans that are expected to worsen climate risk exposure due to current scenario changes is ₩25.3tn.

[Methodologies to measure the climate risk exposure level of real estate mortgage loans]

① Basic Assumption: Scenario II has a higher climate risk than Scenario I and moves from Scenario I to Scenario II
- Scenario I (RCP2.6) -> Scenario II (RCP4.5)
- Scenario I (RCP4.5) -> Scenario II (RCP8.5)

② Screening the sections for increasing climate risk exposure and maintaining high risk exposure
- Increasing climate risk exposure : ● section (A group→B,C group, B group→C group)
- Maintaining high risk exposure : ★section (C group→C group)

| Climate Risk Exposure | | Climate Change Scenario II | | |
|---|---|---|---|---|
| | | Group A | Group B | Group C |
| Climate Change Scenario I | Group A | | ● | ● |
| | Group B | | | ● |
| | Group C | | | ★ |

★ Loans that maintain a high level of climate risk exposure

● Loans that maintain a high level of climate risk exposure

※ 250 cities, counties, and districts across the country were classified as Group A to C based on their level of exposure to climate risk.
- Group A: Exposure to climate risk – less than 0.2
- Group B: Exposure to climate risk – 0.2 to less than 0.4
- Group C: Exposure to climate risk – 0.4 or more

[Result of Climate Risk Measurement Level of Real Estate Collateralized Loans]

| | RCP 2.6→4.5 | RCP 4.5→8.5 |
|---|---|---|
| Loans subject to analysis | ₩99.7tn | |
| Exposure increasing group | ₩6.8tn | ₩23.4tn |
| Group A→Group B,C | ₩4.7tn | ₩23.3tn |
| Group B→Group C | ₩2.1tn | ₩0.1tn |
| Maintaining high Exposure | ₩1.1tn | ₩1.9tn |
| Loan amount exposure to climate risk | ₩7.9tn | ₩25.3tn |

### ③ Estimation of Damage on Real Estate Mortgage Loans

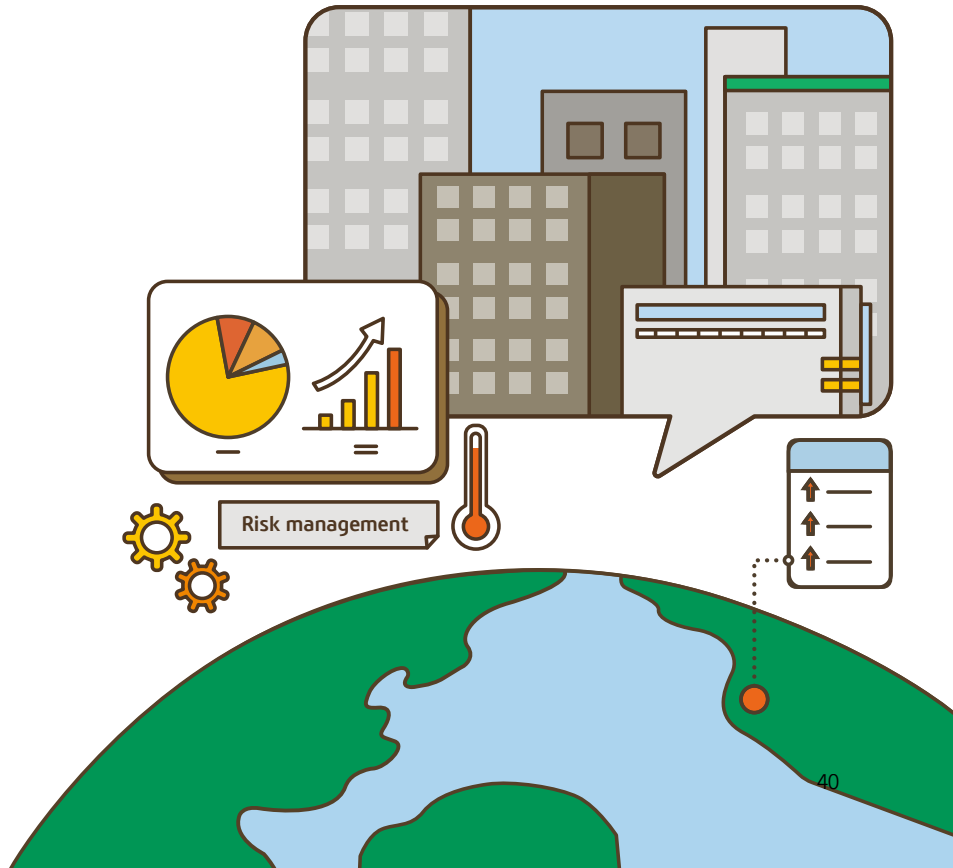
KB Kookmin Bank analyzed the scale of damage to real estate mortgage loans caused by climate change. The estimation was made by identifying the impact of natural disasters on loans that could take place if the average temperature rises by 3℃ compared to pre-industrial levels.

[Estimation of Damage to Real Estate Mortgage Loans]

| Real estate mortgage loans' market value | Economic losses upon the occurrence of regional natural disasters | Climate change scenario weighed value | Estimation of damage to real estate mortgage loans |
|---|---|---|---|
| National total ₩236tn | Calculated through [(Damage from natural disasters + disaster relief cost) ÷ GRDP] | · 1.5℃ increase: 2.6-3.4x<br>· 2℃ increase: 4.2-6.2x<br>· 3℃ increase: 7.2-11x | **₩4.7tn~7.1tn** |

The maximum amount of damage increased from ₩5.5tn, the figure from the 2021 scenario analysis, to ₩7.1tn. This is attributable to the expansion of collateral following the increase in loans, and the rise in collateral value with real estate price hikes, which lead to the overall increase in the market value for real estate mortgage loans. Moreover, the amount went up also due to more frequent natural disasters such as landslides after torrential rains which translated into an increase in economic loss.

Physical risks from climate change are being aggravated. Real estate mortgage loans' exposure to and scale of damage from the risks are also expanding, as shown in the scenario analysis results. Accordingly, we stand ready to identify their impact on the asset portfolio and thoroughly prepare for shifts in the management environment caused by climate change.



CASE STUDY

## Efforts to Respond to Physical Risks by using Digital Technology

KB Insurance is building its technological foundation by adopting diverse technologies to proactively respond to physical risks.

### AI-based Fire Risk Prediction Model

KB Insurance developed an "AI-based fire risk prediction model" to predict buildings exposed to a high level of fire risk in advance.
In Korea, 40 thousand cases of fire broke out annually from 2016 to 2020, leading to average annual property damage of ₩789.2bn. Pre-identification of buildings with a high risk of fire is critical since property damage from unexpected fire incidents increases the loss ratio of fire insurance.
In response, KB insurance developed a technology that predicts buildings with a high risk of fire in advance, by leveraging AI technology. KB Insurance developed an AI-based fire risk prediction model by selecting Gyeonggi province, the region with the highest cases of fire from 2016 to 2020, as a pilot area and chose small and medium enterprises that own relatively many buildings. The final model recorded a precision of 76% and 69% of recall, accurately predicting 7 out of 10 buildings where a fire broke out.

[Results of the AI-based Fire Risk Prediction]


Examples of buildings in Gyeonggi province

Examples of the final model's prediction result

KB Insurance is thoroughly analyzing fire risk cases to enhance model precision, and ultimately, plans to enhance AI technology capability. Moreover, insured buildings that have a high risk according to the prediction model will be subject to an inspection in advance, whereas preemptive measures such as adjustment of coverage for non-insured buildings will be taken to gradually decrease the loss rate of fire insurance.

### GIS Platform

KB Insurance built a Geographic Information System (GIS) platform to detect risks in advance and reflect them in establishing contract policies and analyzing each business site's risks.
GIS platform, a system that transforms geographic information into data, serves as a basis to analyze risks from natural disasters and information about nearby properties on top of basic geographic information about buildings. The platform developed and operated by KB Insurance in 2022, is equipped with features such as risk information retrieval, natural disaster MAP, nearby property information MAP, statistical calculation, and customer service.

[GIS Platform Features]

| | |
|---|---|
| Risk Information Retrieval Feature | Comprehensively displays information offered by the GIS platform by each business site |
| Natural Disaster MAP Feature | Map-based retrieval of information related to business sites' natural disaster risks and nearby risks |
| Nearby Property Information MAP Feature | Provides location-based risk management information of every business site insured by KB Insurance |
| Statistical Calculation Feature | Provides various statistical information based on user requirements (dashboard, by city and province/ by city, county, and district) |
| Customer Service Feature | Swift prevention of typhoon risks by linking to the Meteorological Administrations' real-time typhoon prediction information |

KB Insurance is utilizing the GIS platform in a variety of ways. First, various information including building ledger information of a property, natural disaster risk rating, and information about nearby insured properties is used as a reference in the sales and subscription stage. In addition, a disaster hazard map is being used during property acquisition deliberation and regional statistical data is being harnessed by building a dashboard that categorizes insured properties' information by business, purpose, and product. Furthermore, KB Insurance is swiftly providing location-based natural disaster-related information to its clients by fully leveraging the GIS platform's natural disaster MAP feature. In the case of typhoon-related information, the platform automatically analyzes the affected areas and provides the information to its clients.
Going forward, KB Insurance is looking to actively respond to physical risks related to the properties-to-be-insured by fully utilizing innovative digital technologies such as the AI-based fire risk prediction model and GIS platform. In addition, KB Insurance will enhance its overall work efficiency by expanding the adoption of each technology.

# Strategies for the Climate Change Crisis

KB Financial Group established the following three key climate change response strategies based on the review of climate risks and opportunities: “KB Net Zero S.T.A.R.”, the Group’s strategy to push ahead with carbon neutrality; “KB Green Wave 2030”, the Group’s goal for ESG finance; and “Risk Management”, a strategy to thoroughly respond to climate risks.

STRATEGY 1

## KB Net Zero S.T.A.R.

Operational emissions (Scope 1&2) net-zero by 2040, and financed emissions (Scope 3) net-zero by 2050

STRATEGY 2

## KB Green Wave 2030

Expand ESG products, investments, and loans to ₩50tn by 2030 (₩25tn in environment sector)

STRATEGY 3

## Risk Management

Establish a risk response system and environmental and social risk management standards in accordance with the TCFD recommendations

### KB Net Zero S.T.A.R.

KB Net Zero S.T.A.R. aims to achieve net-zero for operational emissions (Scope 1&2) and financed emissions (Scope 3). The target for operational emissions is to achieve a 42% reduction compared to the 2020 levels by 2030 and net-zero by 2040. For financed emissions, the goal is to reduce 33.3% of the emissions by 2030 and 61% by 2040 compared to the 2019 levels and achieve net-zero by 2050. KB Financial Group utilized the SDA methodology and Temperature Rating method according to the SBTi methodology when setting our financed emissions targets and received an SBTi approval in October 2021. The approval means that KB Net Zero S.T.A.R. and its greenhouse gas emissions reduction targets are objective and reliable strategies and goals that go beyond mere declaration.

### KB Green Wave 2030

The goal of KB Green Wave is to expand ESG products, investments, and loans to ₩50tn by 2030. Particularly, we are planning to increase the products, investments, and loans in the environment sector to ₩25tn. The ultimate goal of expanding ESG finance is to further spread the positive influence the financial industry has on the environment and society through engaging in financial activities that reduce greenhouse gas emissions and support the financially-vulnerable population. KB Financial Group’s ESG products, investments, and loans stood at ₩25.16tn as of December 2021. Please refer to p.60 of this report for further details.

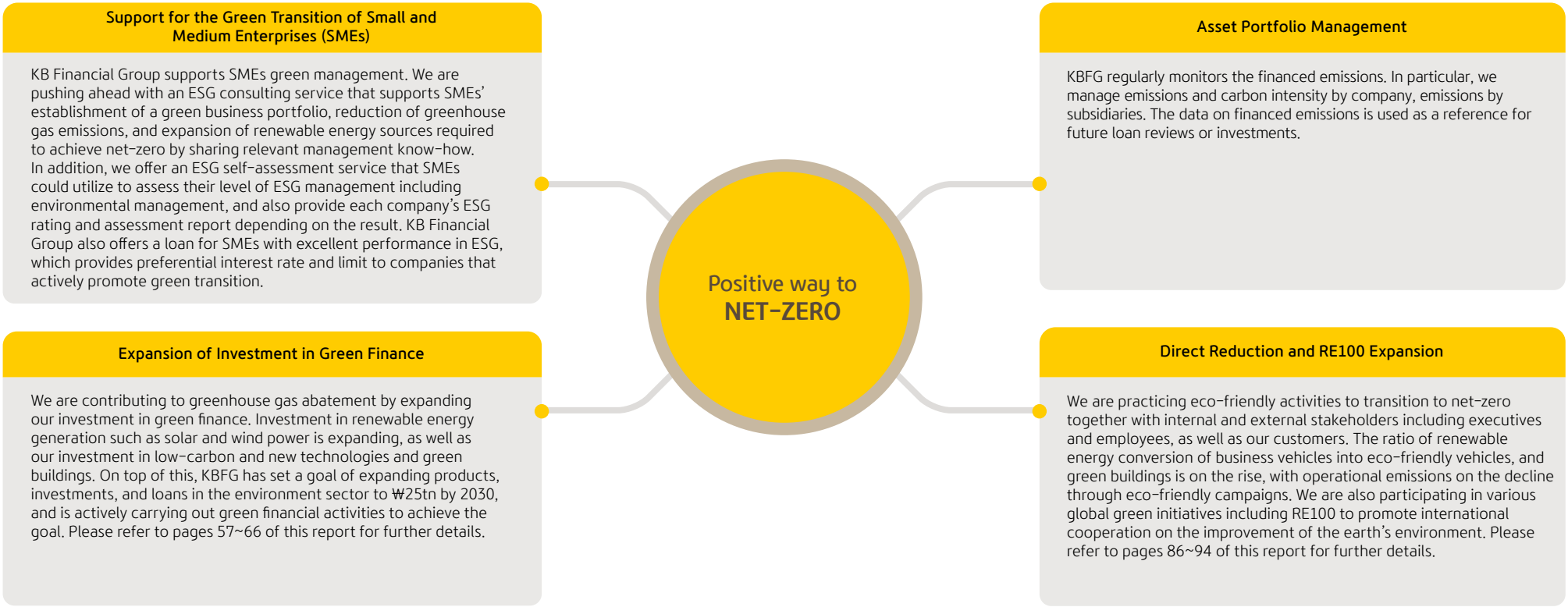
### Risk Management

Risk management is a core task and goal in our response to climate issues. KBFG is managing transition and physical risks in accordance with the TCFD recommendations, which are integrated into the Group-wide risk management system. Furthermore, we developed a policy framework to preemptively predict and manage financial activities’ environmental and social impact and are conducting thorough environmental and social risk reviews for large-scale projects. Please refer to p.45-50 of this report for further details about KB Financial Group’s climate risk management.

## Pathway to Achieve Net-zero

KB Financial Group is carrying out activities based on four initiatives to achieve net-zero in accordance with "KB Net Zero S.T.A.R.". In particular, we are focusing on the positive method to move towards a net-zero society with our customers. The negative method that rules out high-carbon industries or imposes cuts in greenhouse gas emissions could be effective in the short-term but has limitations in achieving net-zero as a society.

Accordingly, we are seeking to achieve net-zero based on the positive method by supporting our clients' transition to green business models and reduction of greenhouse gas emissions as well as continuing our own efforts to cut greenhouse gas emissions.



### Raising Awareness of Stakeholders

KB Financial Group is running various educational programs to raise awareness of internal and external stakeholders on climate change issues. KB Kookmin Bank provides ESG Live special lectures and expert special lectures to raise awareness of the climate change crisis and eco-friendly practices of all executives and employees, and provides various environmental education contents.

[Training on the Environment for Executives and Employees of KB Kookmin Bank]

| | |
|---|---|
| **ESG Live special lecture** | · How to Overcome the Climate Crisis with Our People (Tyler Rash) |
| **Special lectures by ESG experts** | · Internal and external trends and challenges of ESG and green finance (Dae-woong Lim, Representative, UNEP FI KOREA)<br>· Climate risk, making a bold transition amidst accelerating changes (Professor Chun-ho Cho, Kyunghee Cyber University)<br>· Energy transition and our future (Dr. Sun-kyo Kim, Korea Institute of S&T Evaluation and Planning)<br>· Trends of the global hydrogen economy and directions of national policies (Seung-hoon Lee, Director, H2KOREA) |
| **ESG training contents** | · Training courses on the implementation of the Equator Principles for the internalization amongst executives and employees<br>· Green bubble: Expansion of the private carbon credit market and its problems<br>· New challenges of offshore wind power and wind power<br>· Current green bond market conditions in China and its future prospects |

In particular, in June 2022, Tyler Rash, the author of 'There is No Second Earth', was invited to host a training session on 'How to Overcome Climate Crisis with Our People'. The training was carried out in accordance with the 'Environmental Training Cooperation MOU to Achieve a Sustainable Future', signed with the Ministry of Environment. With Tyler Rash's lecture as a start, KB Kookmin Bank plans to host various training sessions to create an environment for voluntary participation in carbon neutrality-related efforts. Moreover, it plans to discover social contributions projects about environmental training to form a consensus among stakeholders on the necessity of transitioning to net-zero.

KBFG is also endeavoring to raise external stakeholders' awareness of climate issues. KB Research and KB Securities Research Center continue to publish reports on ESG issues including climate change. They also regularly host ESG forums and seminars for institutional investors and corporate clients. Furthermore, KBFG holds the ESG Global Summit in connection with external institutions, suggesting a direction for the expansion of ESG management.

[Special Lecture on How to Overcome Climate Crisis with Our People]

# Risk Management

Rapid changes in the management environment are bringing about more diverse risks for businesses. KB Financial Group categorizes and manages key risks that affect the Group's management with relevant teams for climate change response at the center, including the risk management team.

Climate risks not only directly bear on the Group's management activities but also trigger key risks, impacting the Group in various aspects. Accordingly, we identified the relationship between climate change risks and the Group's key risks following the TCFD recommendations to manage climate change issues within the Group-wide risk management system.

Furthermore, KB Financial Group is pushing ahead with response activities by identifying the extent and duration of climate risks' impact on businesses. We are also running an Environmental and Social Risk Management (ESRM) system after developing an environmental and social risk policy framework to thoroughly manage the risks related to the economic activities of the recipients of our financial services. Each industry is managed by dividing it into Areas for Exclusion, Attention on Climate Change, and Support for Green Industries depending on inherent risks, and financing of large-scale projects are being reviewed based on the Equator Principles. We will continue to faithfully implement risk management activities to minimize the negative impact of the Group's management activities on the environment and society.

# Climate Change Risk Management

KB Financial Group is reflecting the analysis results of climate risks and opportunities in the overall business activities. In particular, we seek to take climate change as a turning point for growth instead of a crisis by considering climate-related opportunities when identifying climate risks and responding to the pre-identified risks. We divided the impact and duration of each risk to understand the urgency of response as follows: high/medium/low for the impact and short-term/medium-term, and long-term for the duration.

| Risk | | Impact | Duration* |
|---|---|---|---|
| Transition Risk | Policy and Legal Risk | High | Short-term/Mid-term/Long-term |
| | Technology Risk | Medium | Short-term/Mid-term/Long-term |
| | Market Risk | High | Short-term/Mid-term/Long-term |
| | Reputation Risk | Medium | Short-term/Mid-term |
| Physical Risk | Acute Risk | Medium | Short-term/Mid-term |
| | Chronic Risk | High | Mid-term/Long-term |

*For the duration, short-term is 1-5 years, medium-term is 5-10 years, and long-term is over 10 years.

KB Financial Group aims to bring about tangible changes in the process of responding to climate risks. Accordingly, we are managing climate risks by taking into account quantitative factors such as project scale, the number of customers, profit, and operating cost, as well as qualitative factors including customer satisfaction and reputation. In particular, we are responding thoroughly to each risk based on what we have identified as the potential financial impact of each risk and its influence on the financial industry.

[Key Response Activities]

| Category | | Response activity |
|---|---|---|
| Transition risk | Policy and legal risk | · Active implementation of "KB Net Zero S.T.A.R.", the Group's carbon neutrality promotion strategy to cut greenhouse gas emissions<br>· Offering ESG consulting services to support greenhouse gas emissions reduction of businesses and financial benefits to businesses that achieved the reduction<br>· Strengthening of the application of global disclosure standards within the climate change response framework<br>· Restrictions on the investments in high carbon emitting businesses and minimization of climate risks through the declaration of anti-coal financing and Environmental and Social Risk Management (ESRM) framework |
| | Technology risk | · Monitoring of green technologies and research trends<br>· Reflecting the results of monitoring during products and services development and investment decision-making<br>· Expansion of green technology-related investment<br>· Offering financial benefits to businesses that adopt green technologies |
| | Market risk | · Expansion of green products and services<br>· Promote the achievement of ₩25tn in products, investments, and loans in the environment sector by 2030<br>· Pre-identification of ESG risks within products and services following the categorization process of ESG financial products<br>· Securing customer and investor confidence by strengthening environmental management |
| | Reputational risk | · Disclosure of the climate change response status through TCFD report, CDP, and sustainability report<br>· Expansion of internal and external green communication<br>· Enhancement of corporate image by practically implementing environmental management such as the practice of environmental management by executives and employees |
| Physical risk | Acute risk | · Development of climate change response strategies according to the physical risk scenario analysis<br>· Establishment of a response system for serious industrial accidents<br>· Establishment of a Business Continuity Plan (BCP) and execution of mock exercises and emergency evacuation drills |
| | Chronic risk | |

# Environmental and Social Risk Management

## Environmental and Social Risk Policy Framework

KBFG established the "Environmental and Social Risk Policy Framework" in October 2021 to methodically manage direct and indirect risks that financial activities have on the environment and society, including climate change, based on consistent standards. The Policy Framework is composed of a "Policy Framework" that contains the background of the introduction of the Policy Framework, objectives and principles, information disclosure, and training and capability building for executives and employees, with the Environmental and Social Risk Management (ESRM) Framework at the center, along with a document titled "Rationale for Designating Areas for Attention Regarding Climate Change" which provides the rationale for designating businesses and industries (Areas for Attention) that adversely affect climate change.

[Key Content of the Policy Framework and Rationale for Designating Areas for Attention Regarding Climate Change]

| Category | Policy Framework | Rationale for Designating Areas for Attention Regarding Climate Change |
|---|---|---|
| **Definition** | A comprehensive framework designed to identify, evaluate and manage how the economic activities of the recipients of financial services affect the environment and the society | A document that provides the rationale for designating businesses and industries (Areas for Attention) that may adversely affect climate change due to high greenhouse gas emissions, etc. |
| **Key content** | · Objectives and principles of the Policy Framework<br>· Categorization of Areas for Exclusion, Attention, and Support, along with a management plan<br>· Review of environmental and social risks for large-scale projects (based on the Equator Principles)<br>· Environmental and Social Risk Management (ESRM) Framework<br>· Information disclosure<br>· Participation in global collaboration and standard-setting organizations<br>· Training and capability building for executives and employees | · Designating Areas for Attention considering environmental risks (greenhouse gas, biodiversity and habitat, harmful chemical substances) and social risks (human rights in local communities and workers' rights)<br>· Definition of each Area for Attention and monitoring checklist |

## Environmental and Social Risk Management (ESRM) Framework

KB Financial Group is rigorously managing climate change and environmental and social risks caused by financial activities through the "Environmental and Social Risk Management (ESRM) Framework" within the Policy Framework. ESRM is composed of management areas according to the inherent risks of each industry, a review of environmental and social risks for large-scale projects, and directions for establishing a framework for climate risks.

[Management Areas According to ESRM]

| Category | Definition | Item |
|---|---|---|
| **Areas for Exclusion** | Areas to be excluded from financial support given the activities' or industries' profoundly adverse environmental and social impact | · Production or trade of products and activities that are construed to be illegal according to the respective countries' laws and regulations<br>· Cases where child labor is included in the labor put in for production<br>· Transactions related to illegal gambling and pornography industries<br>· Production, trade, and transactions of radioactive substances whose appropriate protection, management, and supervision are deemed unfeasible<br>· Support for new coal mining projects or the expansion of existing coal mining businesses<br>· Support for the construction of new coal-fired power plants or the expansion of existing coal-fired power plants |
| **Areas for Attention on Climate Change** | Areas where carbon emissions reduction and relevant exposure management are significant given the projects' or industries' possibility to have an adverse impact on climate change such as high greenhouse gas emissions | · High carbon emitting industries including coal mining, coal-fired power generation, forestry, and others<br>· Strengthening the monitoring of Areas for Attention and encouraging a shift to a net-zero economy at the same time |
| **Areas for Support for Green Industries** | Areas where preferential financial support is provided considering the impact on overcoming the climate crisis through carbon neutrality and Green New Deal as well as the possibility to support green industries that could serve as a new growth engine | · Activities designated by the "K-Taxonomy and Application Guidelines"<br>· Activities related to the items designated by the "New Deal Fund Investment Guidelines" that are also included in the "K-Taxonomy and Application Guidelines" |

# Environmental and Social Risk Review for Large-scale Projects

KB Financial Group conducts a review of environmental and social risks when dealing with large-scale project financing that is subject to the Equator Principles (over USD 10mn). KB Kookmin Bank adopted the Equator Principles in February 2021 and carries out environmental and social risk reviews according to its own Equator Principles handling process. Moreover, the Bank published the "Report on Equator Principles Implementation 2020" for the first time as a commercial bank in May 2021 to implement the principle of "Reporting and Transparency" of the Equator Principles.

Subsidiaries that did not adopt the Principles also conduct environmental and social risk reviews for large-scale projects in Areas for Attention considering their business areas, roles in the business, and the level of environmental risk management infrastructure. KB Securities established the "ESG Risk Review Guideline" reflecting ESRM in December 2021. KB Insurance reflected environmental and social risks in its asset management guideline, such as suspending new investments in coal-fired power plants and ESRM Areas for Exclusion. On top of this, each subsidiary of KB Financial Group is thoroughly managing the environmental and social risks of large-scale projects by internalizing ESRM.

[Environmental and Social Risk Review Process]

### Pre-Screening

- Identify whether a project is subject to environmental and social risk review (application of the Equator Principles)
- Identify details of a project including its type and objectives
- Identify the borrower's environmental and social impact as well as its management framework using the preliminary environment and social checklist

### Risk categorization

- Categorize environmental and social risk rating of projects subject to review (Category A, B, and C)
  - Category A: Projects with significant adverse environmental and social risks and wide-ranging impacts that are irreversible and unprecedented
  - Category B: Projects with limited adverse environmental and social risks that have low frequency of occurrence and that have site-specific impact where few or if any of them are irreversible and mitigation measures can be readily taken
  - Category C: Projects with minimal or no adverse environmental and social risks and impacts

### E&S impact assessment

- Conduct environmental and social impact assessment of Category A projects and Category B projects deemed to have high environmental and social risks
- Assess detailed impact of environmental and social risks and conduct an on-site inspection if necessary

### Commitment

- Negotiate on the requirements (establishment and maintenance of environmental and social management system, stakeholder participation, grievance mechanism, etc.) between the borrower and lender based on the environmental and social impact assessment
- Reflect the agreement and requirements of the Equator Principles in the financing contract
- Require complementary measures in case of the non-compliance of the agreement, and exercising relief measures, including the declaration of default if needed, when the non-compliance is not resolved within the agreed-upon grace period
- Selectively apply the commitment process for subsidiaries that did not adopt the Equator Principles

### Monitoring

- Decide a monitoring method in the commitment process
- Conduct monitoring at least once a year on the implementation of reduction measures to minimize environmental and social impacts and environmental and social issues in progress

# Implementation of the Equator Principles

KB Kookmin Bank adopted the Equator Principles in February 2021 to establish an ESG framework that meets global standards. In addition, a roadmap for the promotion of the Equator Principles was established to ramp up the application of the Principles as of the period of adoption.

[Roadmap for the Promotion of the Equator Principles ]

**STEP 1 (’21.2)**

- Adoption of the Equator Principles and establishment of a manual
- Raising awareness amongst executives and employees through training
- Publication of the implementation report (May 2021)

**STEP 2 (’22.5)**

- Establishment of the process for the Equator Principles and its inclusion in bylaws
- Defining R&R of relevant departments (Equator Principles-dedicated department, sales and screening department)

**STEP 3 (’23~)**

- Monitoring the compliance of the process for the Equator Principles and continuous strengthening of screening capability
- Continuous improvement of the process

KB Kookmin Bank established a process for the implementation and application of the Equator Principles in May 2022 to reflect the Principles in its management activities. The process determines whether or not the Equator-Principles-applied businesses are subject to environmental and social risk ratings depending on the risk level. Then, environmental and social risk ratings are calculated for high-risk businesses including Project Finance (PF), Project-Related Corporate Loans (PRCL), and project-related refinance or acquisition finance through independent assessment of external specialized institutions. This process was introduced to minimize errors where high-risk businesses are classified as low-risk businesses. Furthermore, KB Kookmin Bank has increased the efficiency of businesses by clearly defining the work scope of relevant departments of each business. 4 recent projects were subject to the Equator Principle, and all 4 projects were confirmed to comply with the Equator Principles.

[Process for the Implementation and Application of the Equator Principles]

| Business category | Environmental and social risk ratings calculation | Defining R&R of relevant departments |
|---|---|---|
| Project Finance | Subject to calculation | Equator Principles-dedicated department + Sales department<br>· Risk ratings classification<br>· Independent environmental and social screening (high-risk businesses)<br>· Signing of a financing contract<br>· Monitoring |
| Project-related Corporate Loans | | |
| Project-related refinance or acquisition finance | | |
| Bridge loans | Not subject to calculation | Sales department<br>· Signing of a financing contract (if needed)<br>· Introduction and counseling of the Equator Principles to borrowers and request compliance, etc. |
| Project finance advisory services | | |

**CASE STUDY**

## Report on Equator Principles Implementation


KB Kookmin Bank published a Report on Equator Principles Implementation in May 2021 for the first time as a commercial bank. The report included an environmental and social risk classification system and the procedures of the Equator Principles that had been established to reflect the Principles in our management activities since adopting the Equator Principles in February 2021. It also stated the scope of work each department is responsible for following the Equator Principles implementation and disclosed training activities carried out to raise executives' and employees' awareness of the Equator Principles.

# Climate Change Risk Management Activities

## ESG-based Investment and Loan Management

KB Financial Group conducts an ESG-based assessment of each product to enhance the reliability of investment and loan products.
KB Kookmin Bank has its Corporate Loan Guidelines in place, which state that ESG-related items such as the practice of green management, socially responsible management, and ethical management will be reflected in credit rating loans adjustment and loan reviews.
In addition, the Bank informs and receives confirmation from our customers that the credit rating and loan-related decisions could be affected by the ESG-related items when conducting investment or loan reviews. [1)]
We also manage ESG activity assessment results (Grade A-E) of domestic real estate PF, SOC loans worth than ₩30bn and subject to environmental impact assessment through an industrial credit rating system by checking an ESG checklist. [2)] KB Investment established ESG investment policies to strengthen ESG-based investment management and reflects ESG elements throughout the investment process. In particular,
KB Investment is reinforcing ESG-based investment by developing and operating its own ESG Materiality Framework to screen target investment companies and ESG Scoring Framework for the ESG evaluation and diagnosis of target investment companies.

## ESRM Training

KB Financial Group provides training programs for its executives and employees to raise their awareness of ESG risks. An ESRM briefing session was held in November 2021 for 60 employees working for our subsidiaries who are in charge of ESG, risk, review, and business to train them on the key contents of ESRM, ESG global trends, and follow-up measures for each subsidiary after the development of the policy framework.

1) Applied to all credit ratings of corporate type SOHO in accordance with the Corporate Loan Guidelines

2) Items on the ESG checklist: composed of 20 items in total
- 14 items related to the environment (air, water quality, soil, environment, living conditions, etc.)
- 6 items related to social responsibility (social economy, fair economy, social contribution, etc.)

## Declaration of Anti-coal Financing and Restrictions on Loans and Investments in High-carbon-emitting Industries

KB Financial Group declared "coal financing phase-out" which all our subsidiaries participated in for the first time in the financial industry in 2020. After the declaration, we fully suspended the financing of new projects and purchasing of bonds related to coal mining and coal-fired power plant construction at home and abroad.
In addition, KB Kookmin Bank is operating a policy that restricts coal-related loans and investments in line with the Group's anti-coal policy. In early 2022, the Bank established a policy that limits new loans and investments related to coal mining and coal-fired power generation by revising a relevant regulation and is implementing the policy.
KB Kookmin Bank also established a policy to restrict loans and investments in other (unconventional) fossil fuels, on top of coals, that are deemed to cause high carbon emissions and have a high risk of environmental harm. Other (unconventional) fossil fuels include the following three areas: tar sands, oil and gas from the sea in polar regions, and deep-sea oil and gas. The Bank has no exposure to other (unconventional) fossil fuel mining businesses as of June 2022 and plans to continue its restriction on financial support such as loans and investments for the sector in the future.

## Monitoring

KB Financial Group carries out a risk analysis [1)] and monitoring based on its ESG framework through internal experts and independent third-party specialized institutions. The Corporate Loan Guidelines specifies that the practice of ESG is reflected in credit rating adjustment and loan reviews, and an ESG checklist is checked and reflected in decision-making during the initial credit rating for loans. Particularly, we monitor the implementation of the Group's ESG framework by designating an expert of the Equator Principles as an internal person in charge to identify projects subject to the Equator Principles and decide the ratings by taking into account potential risks.
In addition, KB Kookmin Bank has established "The Equator Principles Operating Guidelines" that reflect the Equator Principles manual. The Bank built a management system for the methodical implementation and application of the Principles by including them in its bylaws and is preemptively managing environmental and social risks by making the Equator Principles process and relevant departments' R&R clear.

1) Number of projects reviewed in 2021: 196 (Ratio of reviewed projects to total projects: 100%)
Financially closed projects in 2021: 195, no project was rejected

※ One project was reviewed in 2021 but financially closed in 2022

# Metrics & Targets

## What gets measured gets managed.

Climate-related information of a non-financial-information-centered company is relatively difficult to measure compared to its financial information. However, the management of measurable metrics is critical to identifying the impact of climate risks and opportunities. As the quote "What gets measured get managed" indicates, KBFG is determined to measure and manage climate risks and opportunities, and transparently disclose our progress in delivering our commitment to make a net-zero society a reality.

In the case of financial institutions, their operational emissions and greenhouse gas emissions from energy consumption (Scope 1&2) is relatively low, while Scope 3 financed emissions from financial support including investments and loans account for a higher proportion. Accordingly, KBFG has set and is managing net-zero targets that align with the Paris Agreement's pathway of below 2°C for not only Scope 1 and 2 operational emissions but also Scope 3 financed emissions that come from the asset portfolio. Furthermore, we have established and are promoting our ESG finance expansion goals to provide innovative financial support solutions to help our clients' climate response and predominate climate-related markets.

### Financed Emissions (Scope 3) Measurement Process

KB Financial Group was the first financial institution in Korea to utilize the PCAF [1] methodology to measure financed emissions. The PCAF methodology is a consistent and validated measurement standard that was devised based on the GHG Protocol, a global accounting standard for greenhouse gas emissions.
In addition, we satisfied all the coverage requirements for each of the asset types-corporate financing, electricity generation PF, and commercial real estate-as requested by SBTi [2], a global initiative that enables companies to set science-based emissions reduction targets. As for corporate financing, exposure of ₩3bn and above was defined as the threshold for measurement; even if the exposure is less than ₩3bn, companies subject to a carbon trade scheme and target management system were included in the measurement to expand the range of the analysis.

[Financed Emissions Measurement Process]

| Selection of asset types and emissions threshold to be used for analysis | Data collection and analysis by asset type | Measurement of financed emissions and development of database | Analysis of financed emissions |
|---|---|---|---|
| Selection of analysis target based on PCAF and SBTi methodology | Utilization of internal data and S&P Global Market Intelligence data | Measurement of financed emissions | Detailed analysis on exposures by sector, asset, and intensity |

1) Partnership of Carbon Accounting Financials
2) Science Based Targets initiatives

# Greenhouse Gas Emissions Target and Performance

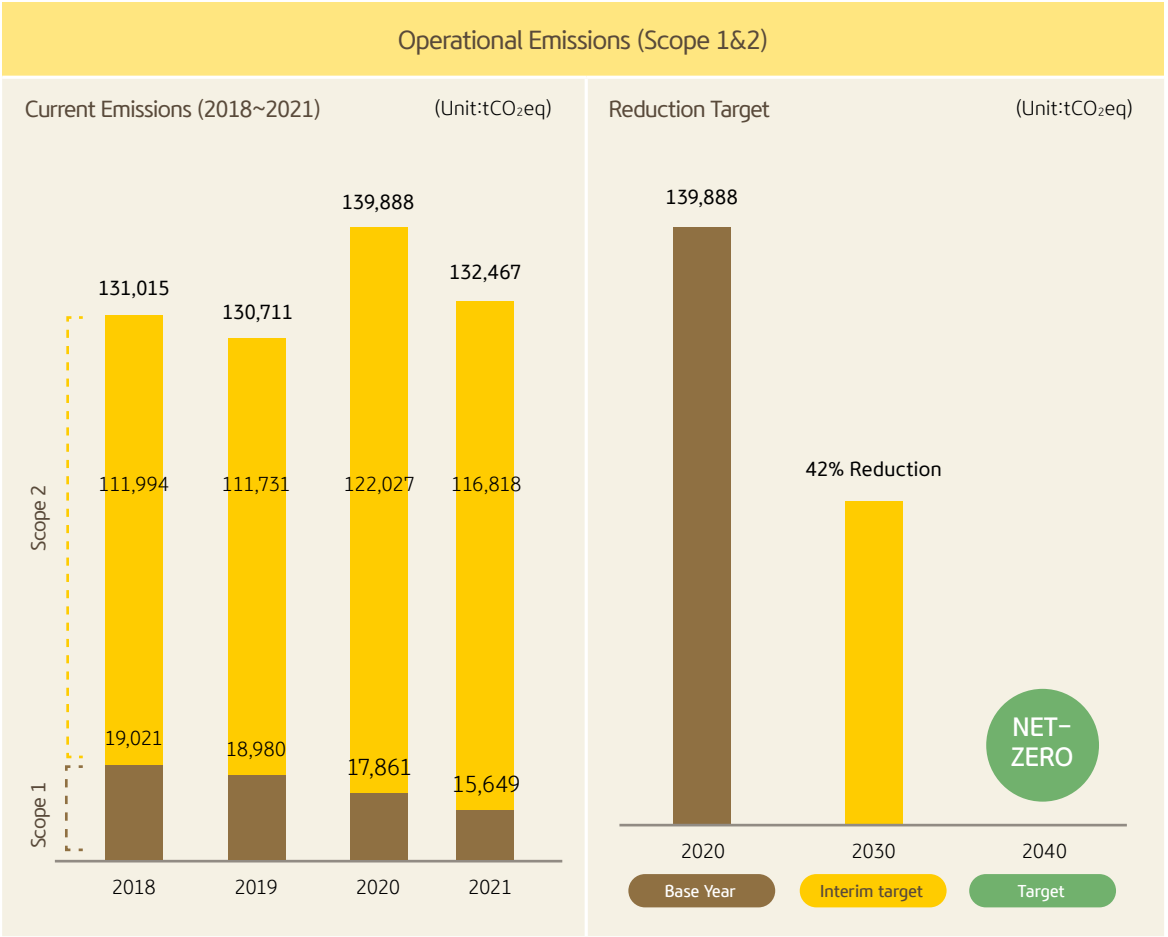
KB Financial Group utilized the latest emissions reduction target setting methodology proposed by the SBTi to establish our net-zero targets, and our carbon abatement target was approved by the SBTi in October 2021. We were the first Asian and Korean financial institution to obtain the SBTi's approval. With the experience and knowledge we gained while establishing a science-based reduction target and obtaining approval, we will proactively support our corporate clients in setting a clear emissions reduction target aligned with the SBTi's standards and achieving carbon neutrality by 2050.

## Operational Emissions (Scope 1&2)

KB Financial Group has set our operational emissions (Scope 1&2) targets by using the 'Absolute Contraction Approach (ACA).' The Approach applies the same amount of absolute reduction required by the scenario each year by setting an absolute emissions reduction target to cut the overall greenhouse gas emissions in the target year compared to the base year. Following the SBTi recommendations, we plan to achieve a minimum of 4.2% greenhouse gas emissions abatement by setting 2020 as our base year and applying the 1.5℃ scenario. Ultimately, we aim to achieve 42% of greenhouse gas reduction by 2030 and net-zero operational emissions (Scope 1&2) by 2040 compared to the base year, by reflecting the 1.5℃ scenario's reduction rate.

## Financed Emissions (Scope 3)

KB Financial Group has set our financed emissions (Scope 3) target based on the SBTi methodology. The 'Sectoral Decarbonization Approach (SDA)' was applied as a basis, and the corporate finance sector—excluding electricity generation, steel, cement, aluminum, and paper—applied the Temperature Rating method.



KBFG's 2020 financed emissions (Scope 3) were about 28.06 million tCO2eq, an increase of about 1.3 million tCO2eq from the 2019 emission. The main reason is that financed emissions (about 490,000 tons) of Prudential Life Insurance, which was newly incorporated into the group in 2020, were additionally reflected, and asset scope increased as the group's assets grew. Since the financed emissions of financial company (Scope 3) can increase as assets grow, 'carbon intensity' must be managed in parallel to measure the level of mid-to long-term transition to achieve carbon neutrality. Carbon intensity refers to carbon emissions per unit, which are used to eliminate the impact of asset size and compare relative emissions levels between portfolios. The carbon intensity of KBFG asset portfolio in 2020 decreased compared to the previous year in all types of assets such as corporate finance, project financing, and commercial real estate. The lower carbon intensity of corporate financial assets means that KBFG's corporate financial assets have changed their portfolio composition, focusing on "companies with good carbon efficiency". The lower carbon concentration of power generation project financing and commercial real estate assets means a decrease in carbon emissions per area or generation of those assets.

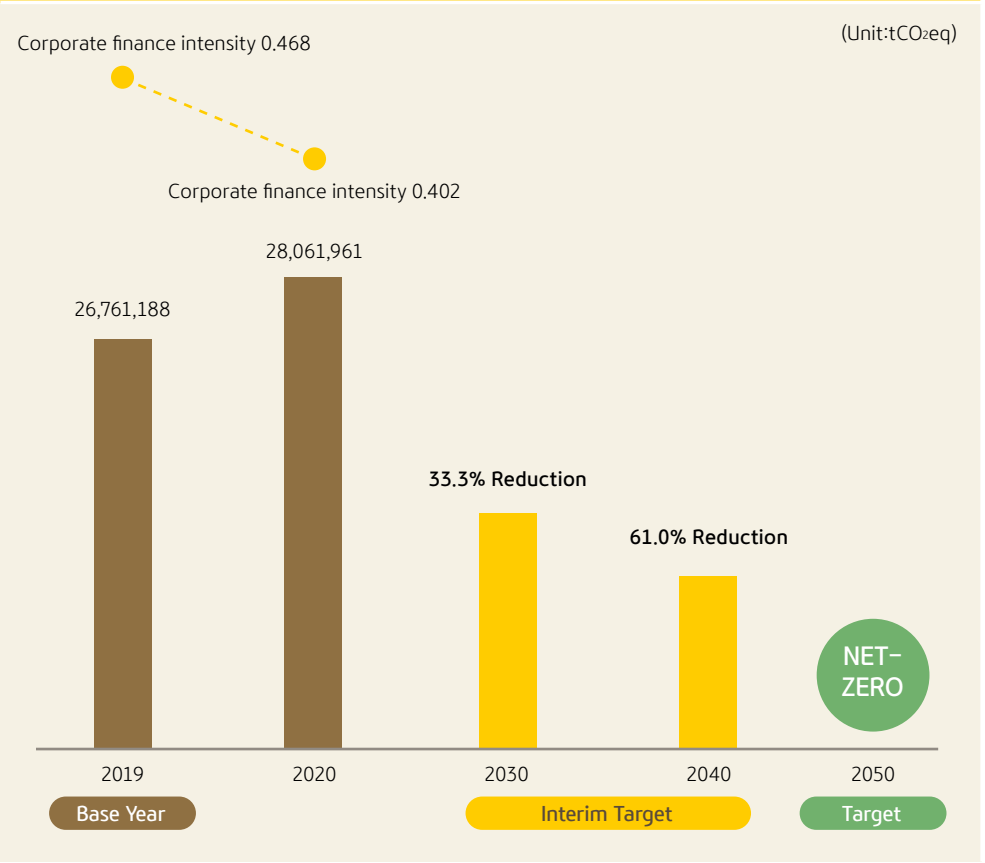
[Current Financed Emissions of Asset Portfolios]

(Unit:₩tn, $tCO_2eq$)

| Type | 2019 | | | 2020 | | |
|---|---|---|---|---|---|---|
| | Asset | Emision | Intensity [1] | Asset | Emision | Intensity |
| Corporate Finance | 51.5 | 24,526,555 | 0.468 | 66.9 | 25,714,931 | 0.402 |
| Electricity generation PF | 1.2 | 2,172,390 | 0.441 | 1.3 | 2,310,499 | 0.439 |
| Comercial Real Estate | 2.1 | 62,243 | 0.09 | 2.7 | 36,531 | 0.052 |
| Total | 54.8 | 26,761,188 | - | 80.9 | 28,061,961 | - |

1) Intensity : WACI(Weighted Average Carbon Intensity) is applied for corporate loan, physical intensity is applied for electricity generation PF and commercial real estate.

Financed emission (Scope 3) Target and performance



# SBTi Methodology

In accordance with the SBTi methodology, we used the Sectoral Decarbonization Approach (SDA) and Temperature Ratings method when measuring financed emissions (Scope 3) and setting targets.

## Sectoral Decarbonization Approach (SDA)

The Sectoral Decarbonization Approach (SDA) is an approach that sets industrial sector-specific reduction targets, considering that the speed at which each industrial sector reaches carbon neutrality is different. The Approach uses carbon intensity as a key indicator in setting reduction targets, and best fits the financial sector since it is the only approach in which a sector-based portfolio assessment is possible amongst the SBTi methodology. KBFG calculated the carbon intensity of our financed emissions, and based on this, set the target as follows: achieve a 33.3% reduction by 2030, 61% by 2040, and net-zero by 2050 compared to the 2019 levels. In addition, industrial sector-specific (electricity generation, steel, cement, aluminum, paper&pulp, electricity generation PF, and commercial real estate) targets and pathways were established.

[Target-Setting Based on the Sectoral Decarbonization Approach]

| | | |
|---|---|---|
| 1 | Target | Electricity generation, steel, cement, aluminum, paper&pulp, electricity generation PF, commercial real estate (based on the SBTi recommendations) |
| 2 | Base year | 2019 |
| 3 | Measurement of financed emissions' carbon intensity | ① Measurement of the total carbon emissions of a loan or investment company<br>· Operational (Scope 1&2) and financed emissions of a target company<br>② Measurement of financed emissions<br>· Measurement of emissions that come from financial institutions<br>③ Measurement of financed emissions' carbon intensity<br>· Measured as "financed emissions/activities per asset type" |
| 4 | Establishment of a carbon neutrality target | Establishment of reduction targets and pathways based on the well-below 2℃ scenario |

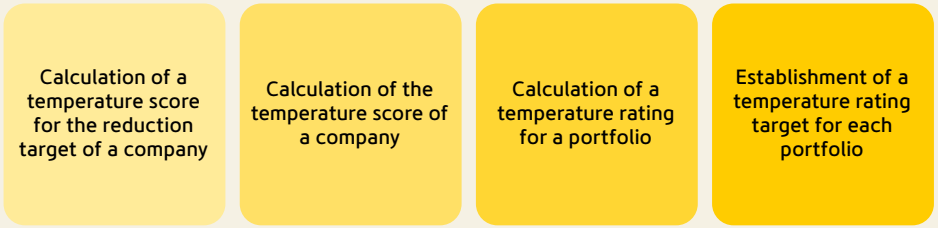
## Temperature Ratings

KBFG used SBTi's Temperature Ratings method to set goals for other sectors within corporate finance where the SDA methodology was not applied when setting reduction targets for financed emissions (Scope 3). The Temperature Ratings method is a method of converting companies' carbon-neutrality goals into a more intuitive temperature rating by connecting them with their long-term temperature targets.

For instance, the temperature rating for a goal of 30% reduction in carbon emissions by 2025 is 1.8℃, which means that achieving the target will suppress the temperature rise below 1.8℃ as of 2100.

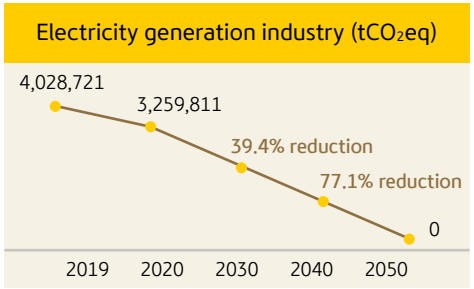
We divided other sectors within corporate finance into loans, stocks, and bond portfolios and established carbon abatement goals according to the temperature rating of each portfolio. The interim targets for 2025 were set for each portfolio which were achieving the temperature rating of 1.75℃ for operational emissions (Scope 1&2) and 2℃ for financed emissions (Scope 3) compared to 2040.

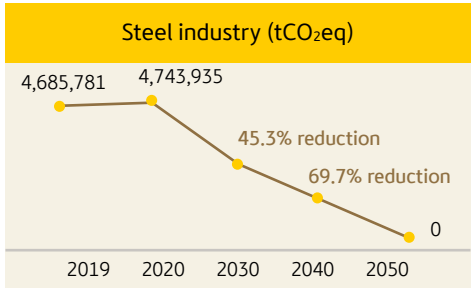
[Target-setting Based on the Temperature Ratings Method]

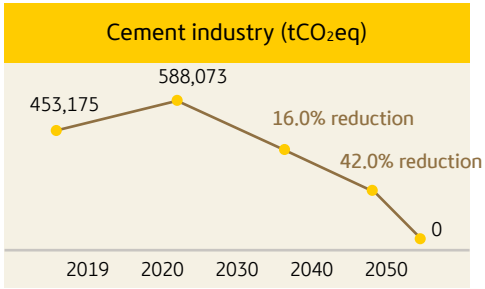


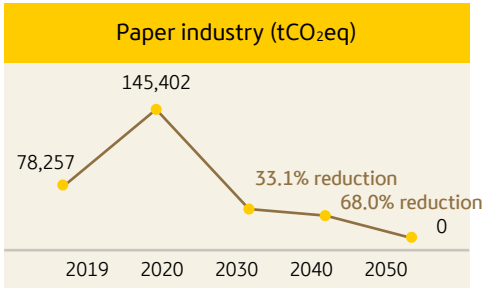
# Reduction Target and Pathways of Financed Emissions

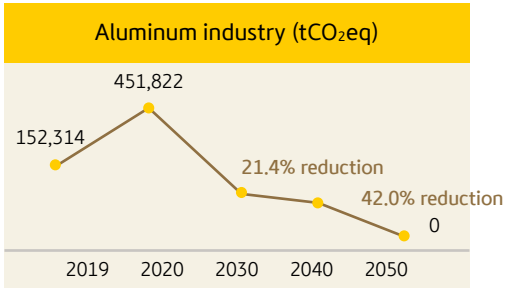
[Each industrial sector's reduction targets and pathways based on the Sectoral Decarbonization Approach (SDA)]

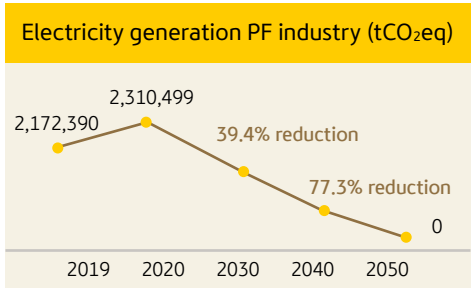


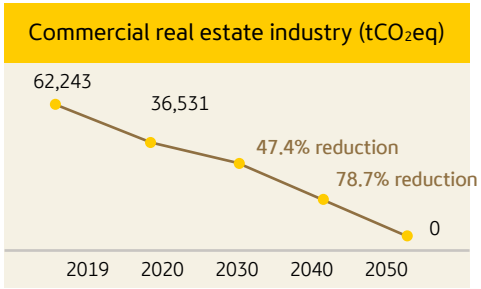



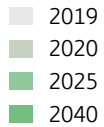



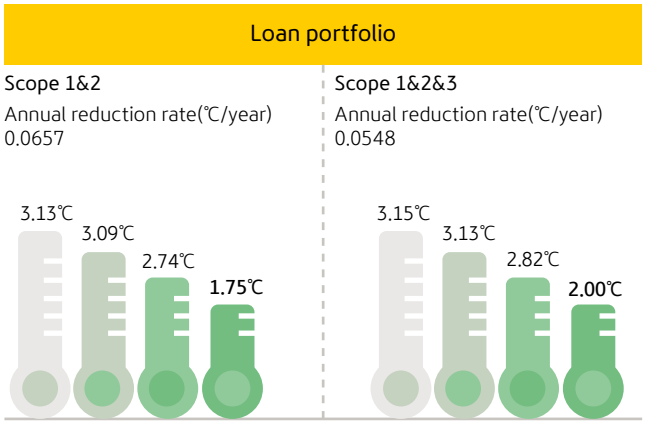



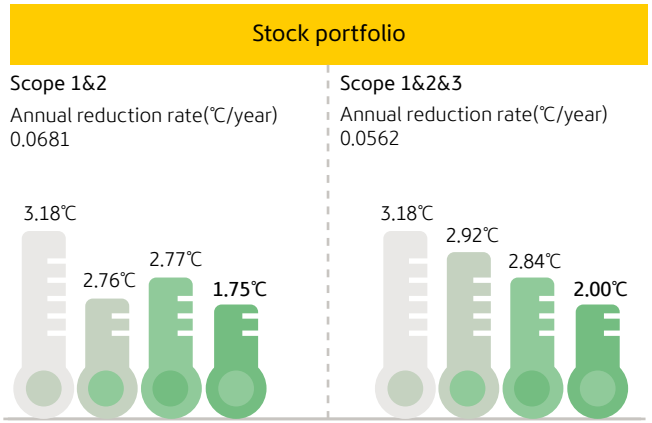



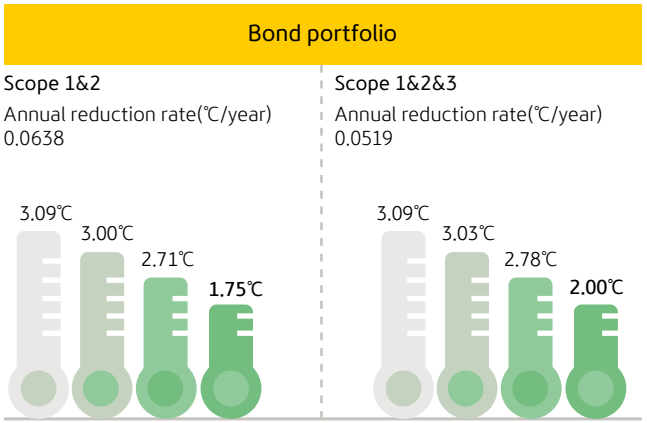




[Each industrial sector's reduction targets and pathways based on the Temperature Ratings method]



# Next Steps

## Climate change is the greatest crisis yet confronted by humanity.

No single country or company can resolve climate change that is threatening the lives of the present and future generations alone. Accordingly, countries across the globe are working shoulder to shoulder to overcome the climate crisis, and research on this topic is well underway.

## We must take the self-made crisis into our own hands.

Climate change is anthropogenic. An in-depth analysis of the risks and fundamental solutions must precede to address this human-induced crisis.

## We will responsibly spearhead climate response as a top global financial group.

We will take the lead in combatting climate change based on our sense of responsibility and duty for the environment and society. We have thoroughly reviewed the risks and opportunities of climate change and established key climate change response strategies based on the review. We will guide our society towards sustainable green growth by implementing greenhouse gas reduction, ESG finance expansion, and climate risk management, placing response strategies that aim to transition to a low-carbon economy at the center.