TCFD Report

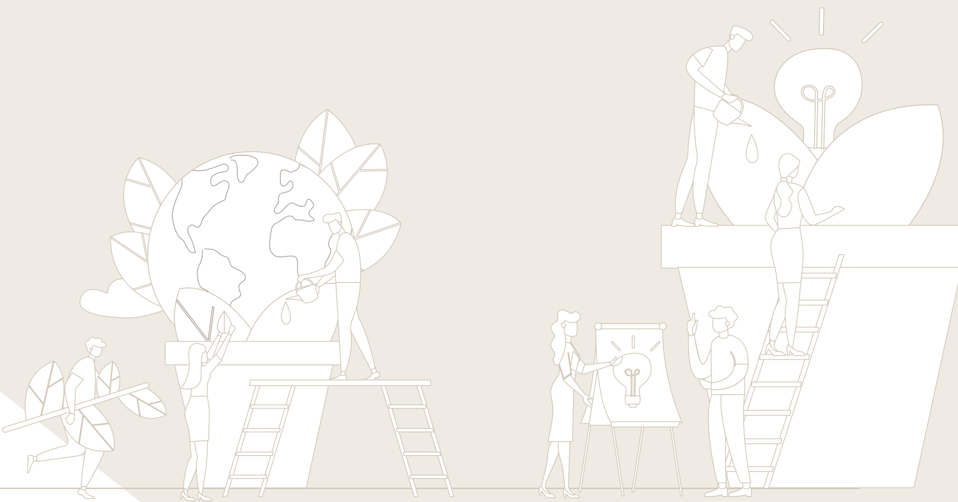
The Earth is humankind's home and our responsibility to protect with care for future generations. In order to protect the one and only Earth, we must tackle climate change, which requires the transition to a low-carbon economy. KB Financial Group is taking the lead in building a sustainable net-zero society by quickly responding to climate change that humankind faces. We will take our role and responsibility as a global leading financial group and faithfully implement our strategy on climate change to turn the risks into opportunities.

Climate change may have a negative impact on the financial market's stability and a company's financial soundness. In particular, a financial institution that conducts business with various companies is exposed to extensive risks and this is why it needs to preemptively respond to climate-related risks.

In response, KB Financial Group established "KB Net Zero S.T.A.R." - a science-based mid- to long-term net zero implementation strategy. We also became the first financial institution in Asia and the first company in Korea to receive Science-based Target Initiative (SBTi) approval, attesting that we are implementing effective climate action. Moreover, we are exploring creative, innovative climate change-countering solutions and striving to lead an eco-friendly financial ecosystem by establishing major climate change response strategies, including "KB Green Wave 2030" and "Risk Management."

The journey to net-zero cannot be travelled alone. All members, including the government, companies, and civic society, must recognize how serious the climate crisis is and gather their strengths. In particular, companies need to thoroughly analyze and manage climate change risks and opportunities and disclose relevant performance to stakeholders, thereby forming a consensus to overcome the climate change crisis.

We have therefore identified risk factors that result from climate change, and analyze whether these factors are reflected in the climate change response governance, management strategies, and risk management. In addition, we set mid- to long-term goals in relation to climate change and transparently disclose implementation outcomes to actively communicate with stakeholders.



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KB's TCFD

The Task Force on Climate-related Financial Disclosures (TCFD) 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 change issues on the financial industry.

KB Financial Group became a supporter of TCFD in 2018 and has been faithfully disclosing its climate change response activities in accordance with the TCFD recommendations. In addition, we became the first financial institution in Korea to publish a separate TCFD report in 2021 amid stronger investor and stakeholder demand for information disclosure, and thus strengthened stakeholder communication about climate change response.

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

Roadmap for the Advancement of the Climate Change Strategy

	2019 - 2021 Setting the Basis for Climate Risk Management	2022 - 2024 Advancing the Climate Strategies	2025 - 2030 Securing Climate Change Leadership
Governance	• Establish the board-level ESG Committee • Establish ESG Committees and responsible teams within subsidiaries • Incorporate ESG in the management's KPI	• Develop board-level metrics and dashboard to address climate change • Nurture climate experts and internalize capability to respond to 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)) • Develop strategy to expand ESG financing • Declare anti-coal financing • Analyze impact on portfolio using scenarios	• Establish carbon emissions management system • Develop and execute net-zero implementation strategies at the Group subsidiary level • Develop a scenario analysis methodology	• Stabilize an integrated management and disclosure of financial and non-financial data • Implement strategies to strengthen climate resilience based on scenarios
Risk Management	• Develop Environmental and Social Risk Management (ESRM) Policy Framework at the Group level • Review environmental and social risks based on the Equator Principles	• Strengthen engagement with high-emission industries • Reinforce credit rating system reflecting climate risks	• Reinforce comprehensive ESG risk management system • Fully utilize the corporate ESG risk assessment system
Metrics & Targets	• Measure and disclose GHG emissions - Operational emissions (Scope 1&2) - 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) • Conduct interim check on the fulfillment of net-zero targets and update targets

Governance

A company can make the right decisions and effectively respond to issues based on systematic governance.

In particular, to promptly respond to internal and external environment changes that result from climate change, each party that constitutes governance should carry out in-depth discussions and decision-making based on expertise, and should be able to accurately understand how climate change risks and opportunities impact the company and reflect these factors in management activities in an integrated way. This will allow a company to overcome risks that result from climate change and actively take on challenges to seize new opportunities.

KB Financial Group has therefore established a systematic governance and is effectively responding to climate change issues.

Our governance structure for climate change response is composed of the Board, the Group management, and subsidiaries. The responsibilities and roles of the Board and management are clearly defined to ensure effective response to climate change. Each party within the governance structure engages in seamless communication to understand the impact of climate change-related risks and opportunities on our business model and reflect the impact in business strategies and financial planning. In addition, climate change response strategies are comprehensively reflected in Group risk management for Group-level responses to climate change issues.

Governance

Climate Change Response Governance

To respond to climate change issues, KB Financial Group operates the ESG Committee, Audit Committee, and Risk Management Committee, with the Board at the center as the Group's top decision-making body. With the Group CEO at the center, the Group CSO and executive in charge of ESG manage the Group's climate change response strategy area, while the Group CRO analyzes the risks that climate change causes to KB Financial Group and establishes management strategies. Each subsidiary has an ESG Committee and ESG-dedicated team, thus taking part in responding to climate change.

BOD Level

To respond to climate change, KB Financial Group has a decision-making system in place, with the Board at the center. The Board establishes Group-level climate change response strategies and goals, and reviews and manages the activities of committees under the Board that were formed to implement the strategies and goals.

KB Financial Group provides training that raises Board members' awareness of ESG and strengthens their relevant capabilities to increase expertise when making decisions that concern climate change response. 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. KB Research provides quarterly research reports on ESG trends at home and abroad, including climate change, to the Board. In 2022, we provided an overview of the Group's ESG strategies and implementation status to newly-appointed non-executive directors and training on overall ESG. Furthermore, we provided ESG training that included climate change issues, such as sustainability reporting standard response strategies, to all non-executive directors, thus helping the Board make the right decisions.

ESG Committee

KB Financial Group became the first in the financial industry to create an ESG Committee in 2020. The ESG Committee is the only committee within the BOD to have all directors as its members, including non-executive directors and executive director. In this way, ESG management leads to actual practice through harmony between the Board and executive management. In particular, the ESG Committee identifies risks and opportunities related to the Group's climate change response and regularly manages and supervises major tasks and execution matters for KB Financial Group's climate change response. Main content includes the implementation status of ESG tasks, operation status of ESG products, investments, and loans, as well as the status of ESG global initiative activities.

Key Resolutions by and Reporting to the ESG Committee (climate-related)

Category		Resolutions and Reports
1st meeting in 2022	Report	• ESG execution performance in the first half of 2022 and implementation direction (plan) for the second half of the year
2nd meeting in 2022	Report	• Group's major ESG execution plans for 2023 - Execution status of the net zero target - Status of ESG financial products - Global initiative activities
1st meeting in 2023	Report	• ESG execution performance in the first half of 2023 and implementation direction (plan) for the second half of the year - Execution status of the net zero target - Status of ESG financial products - Global initiative activities - 2023 ESG materiality assessment results

* Members of ESG Committee

① Gyu taeg Oh, Non-Executive Director (Chairperson)
② Kyung Ho Kim, Non-Executive Director
③ Seon Joo Kwon, Non-Executive Director
④ Wha Joon Cho, Non-Executive Director
⑤ Jung Sung Yeo, Non-Executive Director
⑥ Jae hong Choi, Non-Executive Director
⑦ Sung Yong Kim, Non-Executive Director
⑧ Jong Kyoo Yoon, Chief Executive Officer
⑨ Jae Keun Lee, Non-Standing Director

Governance

Audit Committee

The Audit Committee examines and evaluates the internal control system and work execution processes to enhance shareholder, investor, and customer value. It supervises appropriateness of the performance of duties from an objective, fair perspective so that directors and management can make reasonable management judgments. In particular, the Audit Committee plans to examine appropriateness of establishment of a company-wide response system in consideration of changes in the ESG management environment, and to audit whether the process in which ESG-related issues are reflected in ESG management activities is reasonably executed. KB Financial Group has secured appropriateness and reliability of ESG issue response activities, including ESG training for Audit Committee members.

Risk Management Committee

The Risk Management Committee is a managing and supervising organization that consists of directors. It deliberates major risks that the company faces, including climate change issues, and establishes a relevant response system. To analyze climate change's impact on the Group, KB Financial Group conducted a climate change stress test and reported the results to the Risk Management Committee in April 2023.

Group Management Level

The management of the Group is in charge of executing climate change response strategies. For actual implementation of climate change response strategies, KB Financial Group includes ESG metrics in KPIs for the executive management. By incorporating indicators related to the Group's climate change response strategies, such as reduction of carbon emissions and expansion of ESG financial products, in KPIs, we are strengthening the management's responsibility.

The Group CEO

The Group CEO is responsible for the continuous review of the 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 Chief Strategy Officer (CSO) and Executive in Charge of ESG

The Group CSO and executive in charge of ESG establish climate change strategies as well as KB Financial Group's net zero strategies and implementation plan. To implement the strategies, the Group CSO and executive in charge of ESG spread relevant agenda within the Group, thus encouraging employees to actively take part in ESG activities that cover climate change.

Group Chief Risk Officer (CRO)

The Group CRO reflects ESG risks including climate change risks in the risk management system and manages them. In particular, the Group CRO strives to lay a stable management foundation by preemptively managing direct/indirect/potential risks stemming from environmental and social impact.

Subsidiary Level

KB Financial Group's subsidiaries operate ESG Committees and responsible teams to faithfully implement climate change response strategies. Each subsidiary's climate change response activities are managed to be in line with the Group's ESG strategy direction and are regularly shared at the company-wide level.

ESG Committees

KB Financial Group established ESG Committees that oversee ESG issues to promote each subsidiary's ESG management. Each subsidiary's ESG Committee voluntarily makes a Board report once a year on the major status of ESG issues including climate change.

ESG-dedicated Teams

KB Financial Group and each subsidiary have formed ESG teams, based on which we are enhancing working-level ESG capabilities. The teams carry out ESG activities, including those related to climate change, by taking each subsidiary's unique characteristics into consideration and share them through the one-firm strategy meeting. Each ESG team supports the tasks of the Board and ESG Committee, thereby implementing ESG management.

Strategy

Climate change includes various risk factors. In particular, financial institutions, which have business relations with many companies, are exposed to countless risks which can threaten the stability of finance.

However, climate-related risks can provide new growth opportunities when strategic responses are taken towards the climate change. Many companies are already attempting a shift to eco-friendly businesses which is becoming an opportunity for financial institutions to create new markets and businesses.

KB Financial Group thoroughly analyzes and strategically responds to climate change-related risks and opportunities, and strives to create new business opportunities.

To this end, we first identified climate change risks and opportunities that the company faces in accordance with the TCFD recommendations. In addition, by analyzing climate change scenarios, we identified the actual impact of transition and physical risks on the company's management activities. Based on this, KB Financial Group establishes and implements strategies for climate change response, thereby developing new growth drivers and promoting sustainable growth.

Risk Analysis on Climate Change[1)]

KB Financial Group categorizes risks caused by climate change into transition risks and physical risks in accordance with the TCFD recommendations. Transition risks are risks that arise from the shift towards a low-carbon economy such as policy and legal/ technology/market/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 each risk as well as the risks' influence on the financial industry and established a climate change response system.

Category			Potential impact on finance	Impact on the financial industry
Transition Risk	Policy and Legal Risk	• Strengthening of carbon regulations, such as the emissions trading scheme, and increase in emission prices • Introduction of new environmental disclosure standards and strengthening of disclosure duties • Increase in environment-related lawsuits • Enforcement of the Inflation Reduction Act (IRA) in the US • The EU's adoption of the Carbon Border Adjustment Mechanism (CBAM)	• Increase in operating expense following the rise of greenhouse gas emissions permit prices • Increase in financial burden due to unsecured emissions permits and exceeding the cap • Decline in industrial competitiveness and the value of tangible assets due to regulations against high-carbon businesses • Confusion caused by the mismatch between the existing and new disclosure standards • Increase in costs from environment-related lawsuits • Exclusion from subsidies and tax deductions when requirements are not met with the enforcement of IRA • Increased burden over costs from additional carbon emissions with the adoption of EU CBAM	• Increased financial burden stemming from compliance with environmental regulations, including purchasing of emissions permits • 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 • Limitations in customer and investor communication due to disclosure standard mismatch • Increased costs from converting to eco-friendly factors, including electric vehicles and alternative energy • Increased regulations on the financial industry with the adoption of IRA and greater demand for compliance • Costs incurred from climate change-related risk assessments and establishment of response strategies in case of adoption of EU CBAM
	Technology Risk	• Transition to green and low carbon technologies • Improvement of energy efficiency and increase of technology investments to cut emissions • Possibility of investment failure in new technologies	• Increase in costs related to the research, development, and adoption of new technologies • Increase in financial risks due to failures in new technology investment • Amortization and early disposal of existing assets	• Profitability changes of loan borrowers and investment companies following the adoption of new technologies • Deterioration of reliability and profitability of supply chain and asset portfolio when partner companies, loan borrowers, and investment companies avoid the adoption of green and low-carbon technologies
	Market Risk	• Changes in consumer behavior • Shifts in demand and supply for raw materials, products, and services • Increase in uncertainty due to changes in market conditions	• Decrease in the demand for high-carbon products • Fluctuations in production costs following the changes in raw material prices and waste treatment costs • Changes in value due to asset revaluation	• Increase in the necessity to develop green products and services, and build an eco-friendly asset portfolio • Decline in demand and operating profits if a product or service is found to have an adverse environmental impact • Deterioration of investor trust and withdrawal of investment if eco-friendly management is not implemented
	Reputational Risk	• Changes in customer and investor preference • Increase in negative feedback from stakeholders	• Increase in costs from changes in strategies for the shift to eco-friendliness • 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 ESG washing issues • 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 typhoons, floods, and wildfire	• Production suspension and fall in operating profits due to increased damage to business sites and supply chain • Increase in costs to restore business sites damaged from climate change	• Increase in nearby customers' inconvenience if a physical risk causes damage to financial institutions' branches • Restrictions on the use of online customer services in the event of computer network damage • 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		

1) Risk analysis on climate change included the company's business operations as well as upstream and downstream activities

Strategy

Opportunity Analysis on Climate Change

Climate change is a crisis to companies but also a strategic opportunity to create new business areas. Many companies have recently been shifting from traditional carbon-intensive businesses to renewable energy and eco-friendly business-centered businesses to respond to climate change. To identify the impact that the industrial paradigm shift caused by climate change has on the financial industry, KB Financial Group classified opportunities into resource efficiency, energy resources, products and services, markets, and resilience according to the TCFD recommendations, and analyze the potential financial impact and impact of opportunity factors on the financial industry and reflect them in its management activities.

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

Strategy

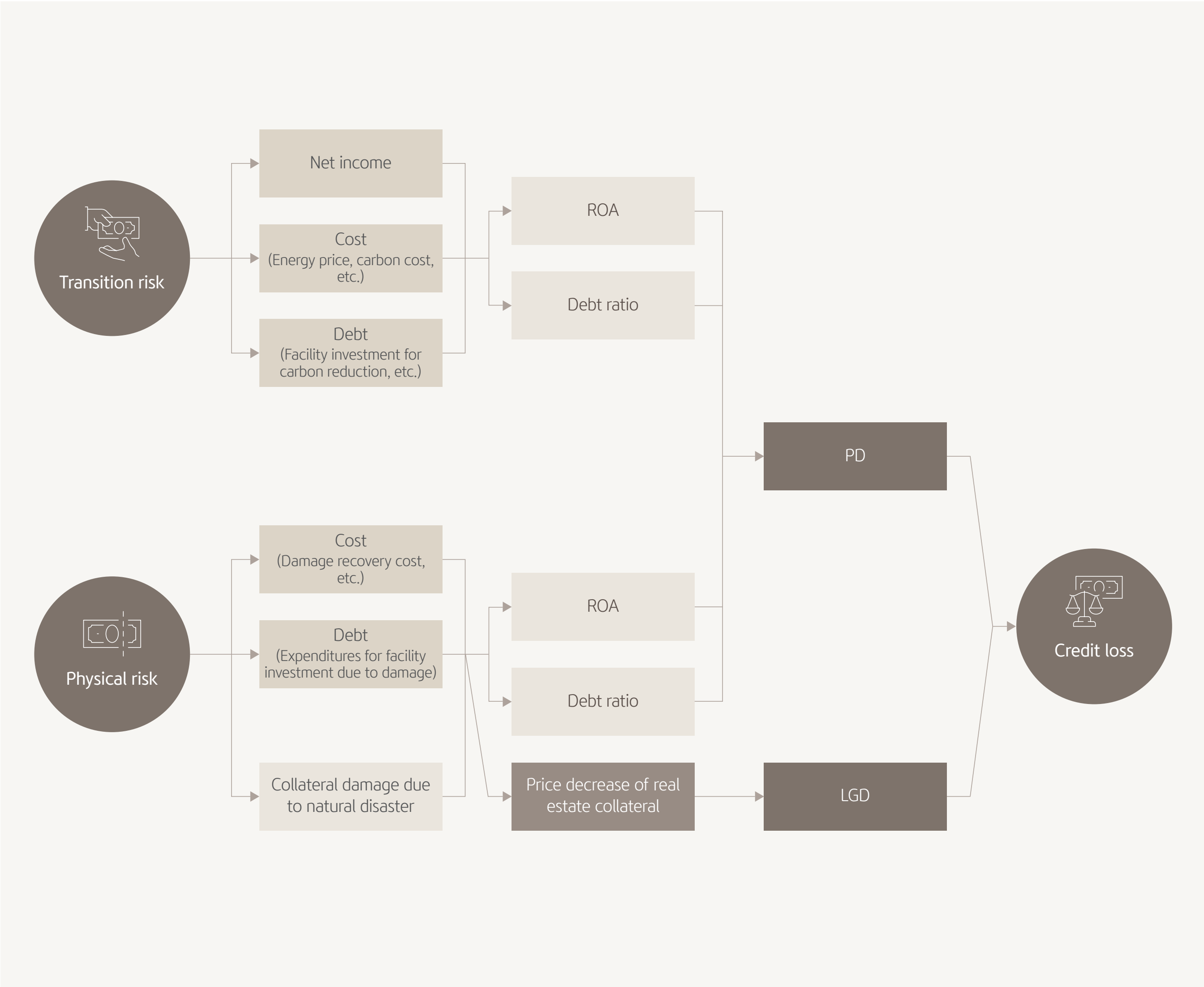
Scenario Analysis on Climate-related Risks

Financial authorities and relevant organizations in major countries around the globe are strengthening climate risk supervision, changing climate risk management from a recommendation to an obligation, amid an assessment of climate change as a significant risk of financial systems. In December 2022, the Financial Supervisory Service amended the "Climate Risk Management Guidelines" for the financial industry by reflecting the climate risk management principles of the Basel Committee on Banking Supervision (BCBS), as a way to induce the financial industry to effectively manage climate risk by using the guidelines.

KB Financial Group conducted a climate change stress test to analyze climate change's impact on KB. Our climate change stress test was internally developed based on the ECB model that was announced by the European Central Bank in 2021, and has applied climate change crisis situation scenarios presented by Network of Central Banks and Supervisors for Greening the Financial System (NGFS).

Through the climate change stress test, we analyzed the physical risks that climate change causes to KB and the transition risks that arise in the process of transitioning to low carbon. We also evaluated climate risk's impact on KB Financial Group, including KB Kookmin Bank loan borrowers' default risk and decrease in collateral value.

Main Process of the Climate Change Stress Test Methodology



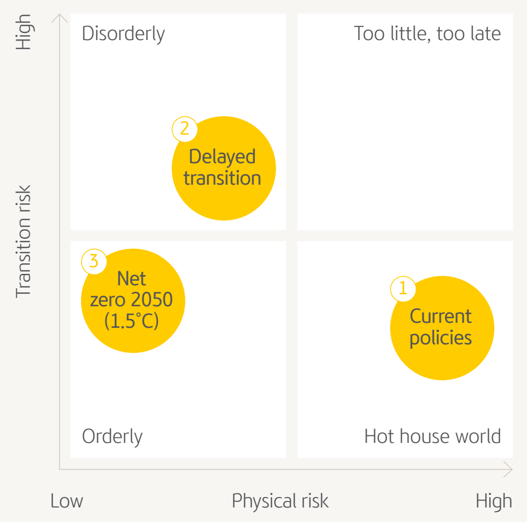
Strategy

NGFS Climate Scenarios

The climate change stress test was conducted after making a categorization into three situations – ① Current policies, ② Delayed transition, ③ Net zero – in accordance with the climate change crisis situation scenarios presented by NGFS[1].

The GDP growth rate is high in the early phase of the current policies scenario but becomes low over the long term. In the delayed transition scenario, low-carbon policies are rapidly implemented starting in 2030 to result in minus growth. Carbon emissions are expected to remain at the current level in the current policies scenario, steadily go down after 2030 in the delayed transition scenario, and sharply decrease from 677 million tons in 2021 to 27 million tons in 2050 in the net zero scenario. Furthermore, it was assumed[2] that carbon emissions prices will be the highest in the delayed transition scenario and the lowest in the current policies scenario, in which current policies are maintained.

NGFS Climate Scenarios



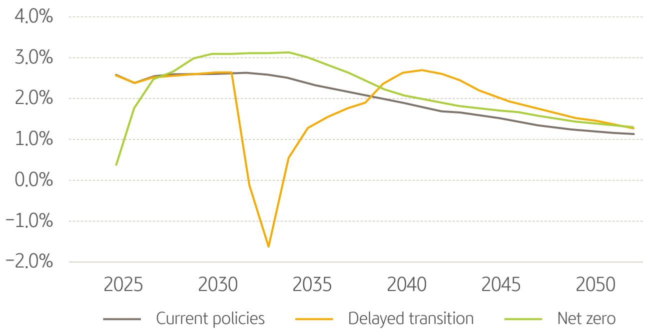
① Current policies: GHG reduction policies are not adopted. Maximum physical damage.

② Delayed transition: In the "delayed transition" scenario, GHG emissions are not reduced until 2030 and then strong GHG reduction policies are implemented after 2030 to limit global warming to below 2℃ by 2050.

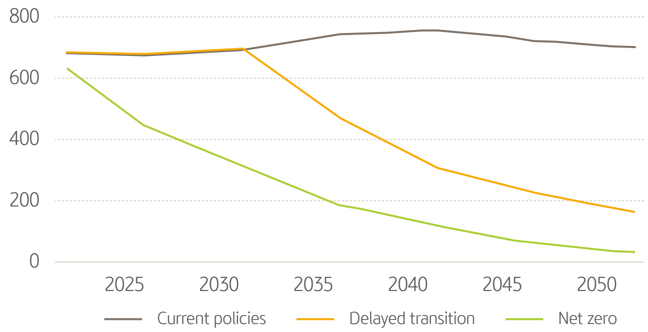
③ Net zero: GHG reduction policies are implemented since 2021 to limit the rise in the Earth's average temperature to below 1.5℃ from pre-industrial levels in around 2050

Estimated GDP Growth Rate, Carbon Emissions, and Carbon Price by Scenario

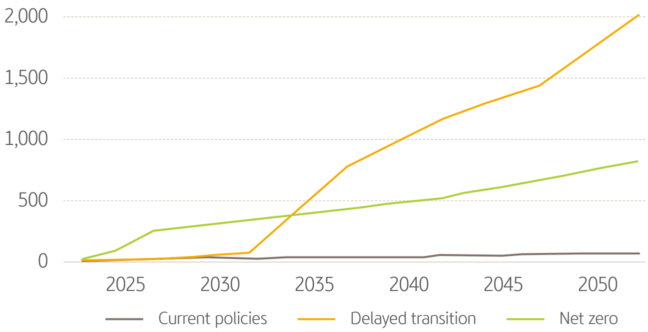
GDP Growth Rate



Carbon Emissions



Carbon Price



[1] Network of Central Banks and Supervisors for Greening the Financial System. A global council created by each country's central bank and supervising organization to discuss climate change and environment-related financial risk management supervision standards.

[2] In case of companies that did not disclose carbon emissions, estimations were made using a regression equation. Each country's carbon price was not reflected.

Strategy

Climate Change Stress Test Methodology

KB Financial Group conducted a climate change stress test as follows to analyze the impact of climate change on KB Financial Group.

In addition, we categorized climate risks into material damages (physical risks) caused by climate change (rise in the Earth's average temperature, etc.) and negative impact (transition risks), including a rise in costs from the implementation of carbon reduction policies, and analyzed climate risks' impact on the real economy and KB Financial Group's asset portfolio.

Outline of the Climate Change Stress Test

Category	Key description
Analysis target	• Estimate credit loss impact, targeting corporate borrowers that have carbon emissions data or corporate borrowers that have financial information based on which carbon emissions can be estimated • Impact from performing a stress test for each individual company * Borrowers subject to analysis: ① Borrowers with carbon emissions data, ② In case of borrowers that do not have carbon emissions data, estimations are made based on a regression equation, using sales data of companies that have carbon emissions data and industry information
Analysis criteria	• Conducted an impact analysis for the next 30 years (until 2050) based on assets as of the end of 2021
Scenarios	• Transition risk scenario: Macroeconomic and carbon emissions/price scenario – 3 scenarios presented by NGFS – current policies, delayed transition, and net zero 2050 • Physical risk scenario – Estimated the amount of damage by region by using the Korean Meteorological Administration's precipitation information and typhoon and flooding damage statistics and regional precipitation information of the Ministry of the Interior and Safety's "Annual Disasters" *Estimated the amount of damage by region by using environmental variables (highest temperature, typhoon and flooding damage amount distribution, etc.) of 16 metropolitan cities and provinces every 5 years through 2050

Category	Key description
Physical risk	• Rise in average temperatures, meteorological disasters, and other such shock trigger a specific region's productivity change, property loss, etc., leading to such ripple effects as increased credit risk of a borrower that suffered damages and a drop in asset value (collateral value)
Transition risk	• The impact that GHG reduction, development of low-carbon technologies, etc. in the process of transitioning to a low-carbon economy has on the company and real economy • In case a financial institution has significant exposure to companies with considerable carbon emissions, this results in a financial institution risk

Transition Risk Scenario Analysis

Analysis Outline

Carbon regulations on overall industries are becoming stricter all across the globe due to climate change. As a result, there is increasing risk, such as companies' carbon cost burden to transition to a low-carbon economy. We conducted a scenario analysis to analyze the impact that transition risks stemming from strengthened carbon regulations have on the overall financial industry and KB Financial Group's asset portfolio.

Analysis of KB Financial Group's Asset Status

To identify the impact of stronger carbon regulations on each industrial sector in the asset portfolio and KB Financial Group, we compared exposure and carbon emissions of each industrial[1] sector and analyzed carbon intensity. The analysis scope is the corporate finance portfolio, including corporate lending, corporate bonds, and stocks.

Major Business of Each Industrial Sector

Category	Description
Consumer discretionary	Automobiles (including the parts industry), construction, consumer durables (home appliances, fashion accessories, apparel, 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.

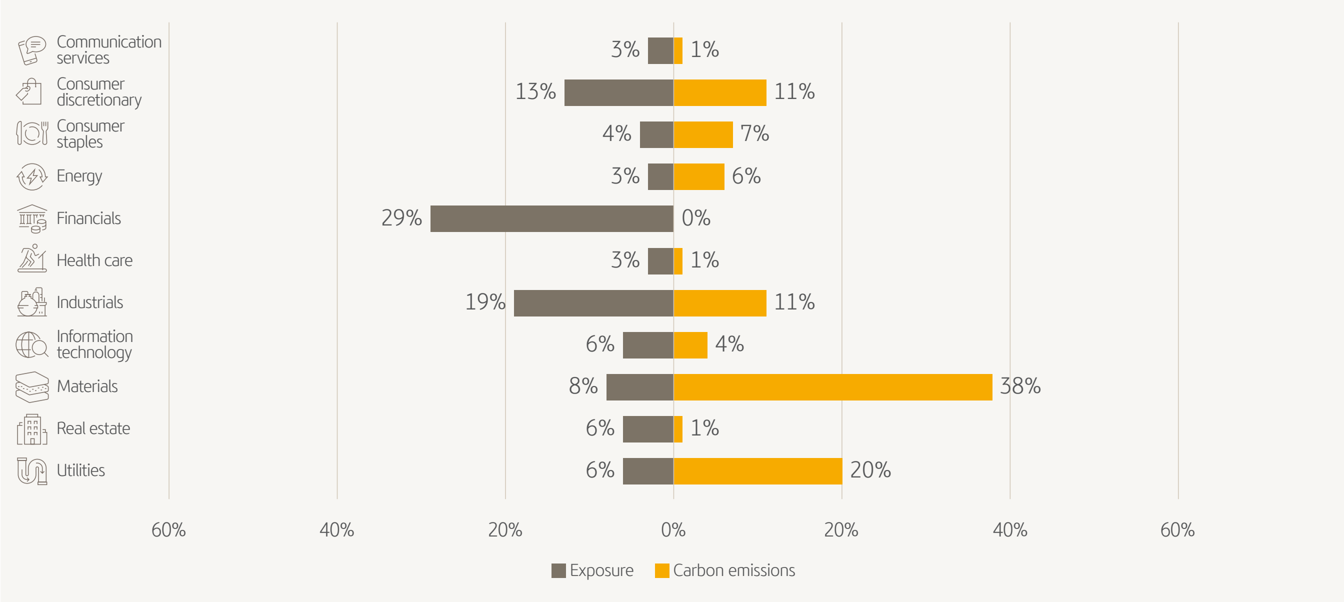
[1] Industrial sector categorization followed the Global Industry Classification Standard (GICS)

Strategy

The industrial sectors with high exposure (Value of Holdings, VOH) in the asset portfolio were finance (29%); general sectors such as capital goods, commercial service, and transportation (19%); and consumer discretionary (13%). Materials (38%), utilities (20%), consumer discretionary (11%), and general sectors (11%) 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. KB Financial Group is therefore building a response system that considers both indicators to manage transition risks in our asset portfolio.

In general, the absolute value of carbon emissions is high in case of industrial sectors with high exposure. However, the share of an industrial sector's exposure is not proportionate to the amount of carbon emissions. For this reason, financial companies need an objective indicator when choosing industrial sectors that need attention. In addition, KB Financial Group calculates and manages the carbon intensity of each industrial sector and asset portfolio. Carbon intensity is used as an objective indicator of comparison since it minimizes the impact of scale when comparing carbon emissions.

Exposure and Carbon Emissions Ratio



Carbon Intensity of Each Industrial Sector and Asset Portfolio (C/R intensity)[1]

(Unit: tCO_2eq/KRW million)

Category		Industrial Sector										
		Financials	Health care	Communication services	Real estate	Industrials	Information technology	Consumer discretionary	Consumer staples	Energy	Materials	Utilities
Portfolio	Total	0.03	0.09	0.10	0.18	0.23	0.23	0.26	0.46	0.61	1.27	2.12
	Lending	0.04	0.09	0.09	0.17	0.22	0.23	0.26	0.49	0.60	1.31	1.54
	Bonds	0.03	0.10	0.11	0.19	0.26	0.22	0.25	0.37	0.62	1.12	2.23
	Stocks	0.04	0.16	0.07	0.09	0.24	0.26	0.32	0.26	0.78	1.08	1.87

Low carbon intensity ← → High carbon intensity

[1] Carbon intensity against sales

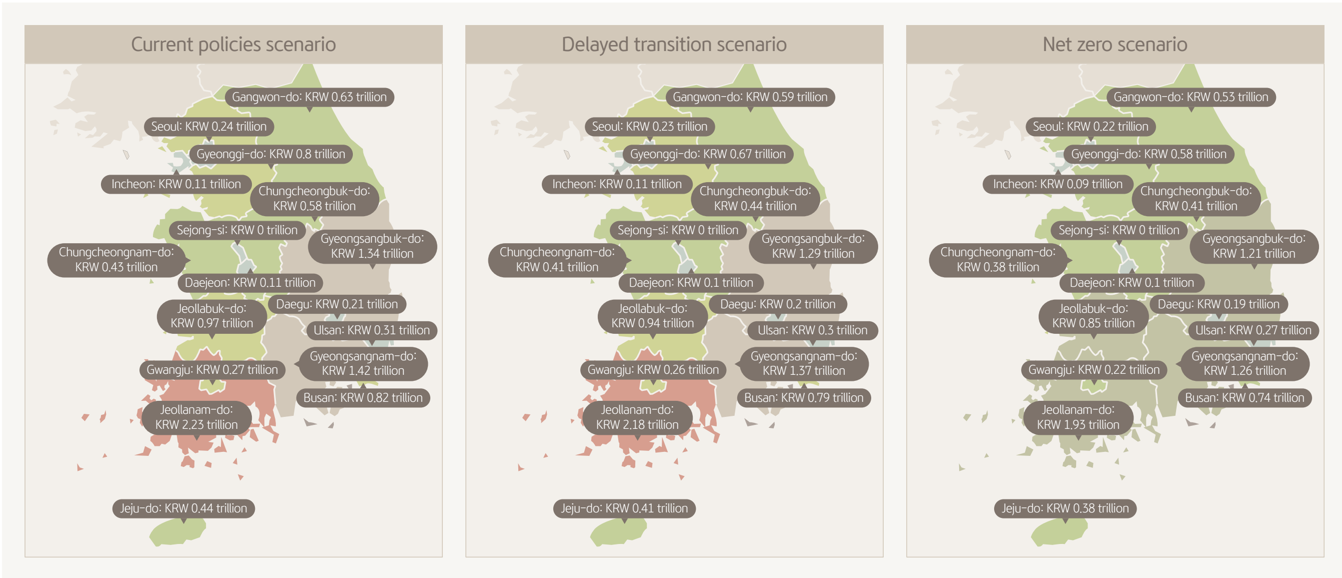
Strategy

Scenario Analysis on Physical Risk

Analysis Outline

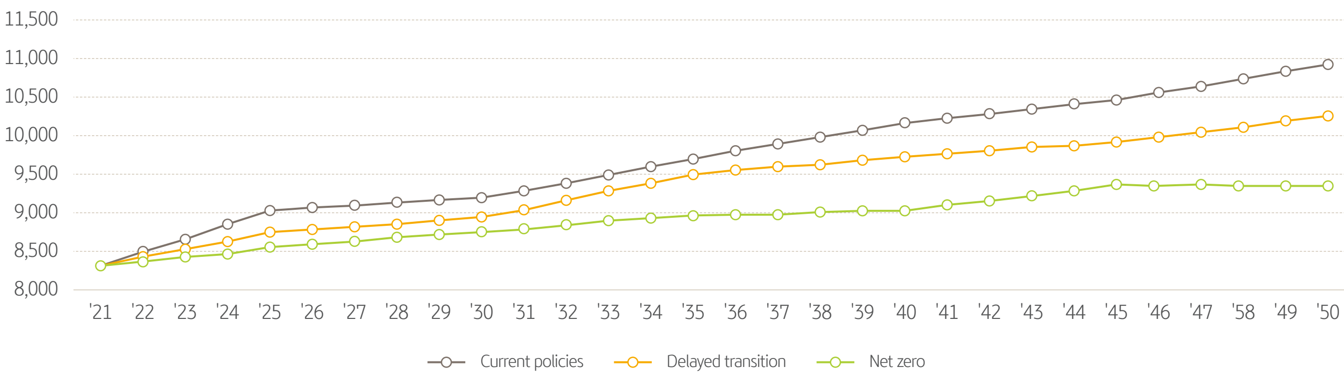
In August 2021, the Intergovernmental Panel on Climate Change (IPCC) made a forecast that unusual climate events, such as heat waves, cold waves, and large wildfires, would frequently occur if global warming continues at the current trend. In fact, we've experienced unusual, unpresented climate events in the past ten years, and they are becoming more frequent and severe. By conducting a scenario analysis on physical risk, KB Financial Group forecast the scale of damages caused by typhoons and flooding and identified potential impact of climate change on our asset portfolio.

Damage Simulation by Scenario



National Damage Due to Typhoon and Flood by Scenario

(Unit: KRW billion)



Strategy

Physical Risk Analysis on KB Kookmin Bank's Real Estate Collateral Loans

In addition to the stress test that applied NGFS scenarios, KB Kookmin Bank used RCP scenario analysis (RCP 2.6, 4.5, 8.5) to identify climate change's physical risk (impact and scale) to asset portfolio. The RCP scenario is an analysis method that predicts the level of regional risks based on GHG concentration. The Bank calculated the "climate risk exposure" of 250 cities and counties nationwide and analyzed climate risk exposure for its real estate collateral assets and the damage size of collateral loans.

First of all, the Bank calculated climate risk exposure (hazard map) by region from climate change for the next 10 years based on information on regional meteorological factors (annual precipitation, frequency of occurrence of flood damage in the past, landslide prediction information, etc.). The next step was overlapping of KB Kookmin Bank's real estate collateral loans with the climate risk exposure that was calculated per region to analyze the size of loans of which climate risk exposure increases with climate change. According to RCP scenario analysis, based on a scenario change (RCP 2.6 → RCP 4.5, RCP 4.5 → RCP 8.5), real estate collateral loans worth about KRW 7.9 trillion and KRW 25.3 trillion, respectively, are exposed to climate risk.

Lastly, KB Kookmin Bank analyzed the scale of damage to real estate collateral loans caused by climate change. If the average temperature rises by 3℃ compared to pre-industrial levels, the scale of damage-expected collateral loans is forecast to be KRW 4.7 trillion – KRW 7.1 trillion.

As indicated above, KB Kookmin Bank identifies climate change's financial impact on asset portfolio through scenario analysis and reflects it in its management decision-making.

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 (RCP 2.6) → Scenario Ⅱ (RCP 4.5)
- Scenario Ⅰ (RCP 4.5) → Scenario Ⅱ (RCP 8.5)

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

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

Results of measuring the climate risk exposure level of real estate collateral loans in 2022

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

Strategy

Results of Climate Change Stress Test Analysis

KB Financial Group carried out an impact analysis on the next 30 years through 2050 based on assets as of the end of 2021. We estimated credit loss impact on 2,910 corporate borrowers that have carbon emissions data and 52,654 corporate borrowers for which carbon emissions can be estimated through corporate financial information (sales) and industry information although they do not have carbon emissions data, and conducted a stress test on individual companies.

Results of Estimating Probability of Default (PD)

We estimated the PD based on the transition risk scenario by using a regression equation that adopts companies' past PD as a dependent variable and GDP, profitability index, debt ratio, etc. as independent variables.

We estimated that PD will continue to rise through 2050 in the current policies scenario. In the delayed transition scenario, PD is similar to that of the current policies scenario up to 2029. However, starting in 2030, facility construction and carbon costs will increase due to strong enforcement of GHG reduction policies, leading to greater increases in PD. However, PD will go down again after 2033. In the net zero scenario, costs continue to arise as GHG reduction policies are enforced from the beginning, resulting in greater PD increases. However, we estimated that PD will steadily decrease afterwards.

Results of Estimating Loss Given Default (LGD)

When estimating LGD, we reflected the scale of damage by region that was estimated by using the Korean Meteorological Administration's precipitation information as well as typhoon and flooding damage statistics and regional precipitation information of the Ministry of the Interior and Safety's Annual Disasters. The scale of damage of each region is the result of estimations that were made by using the highest temperature, typhoon and flood damage amount distribution, and other environmental variables of 16 metropolitan cities and provinces every five years through 2050.

In case of typhoon and flood damage caused by physical risk, it is the highest at around KRW 11 trillion in the current policies scenario as of 2050 and the lowest at around KRW 9 trillion in the net zero scenario. This impacts an increase in the LGD ratio of each scenario. Results of analyzing the impact of decreased collateral value, resulting from physical risk impact, on LGD indicate that the collateral value decrease rate is around the mid to higher 2% range in 2050 in the current policies scenario. The collateral value decrease rate is not high. As such, we estimated that there is no significant impact on the LGD increase rate from the occurrence of physical risk.

In conclusion, we analyzed that the PD increase impact from transition risk is larger than the LGD increase impact from physical risk. This is because, due to the characteristics of the domestic industrial structure, the scale of credit loss resulting from an increase in facility investment costs for the transition to low carbon and carbon regulations of different countries is relatively large.

Results of Estimating Credit Loss Amount and BIS Ratio

Results of estimating the credit loss amount per scenario indicate that, in 2030, the credit loss amount is highest at KRW 875.8 billion in the delayed transition scenario, and in 2050, the credit loss amount is the highest at KRW 1,413.2 billion in the current policies scenario. We estimated the BIS capital adequacy ratio by reflecting the size of increase in the credit loss amount by scenario which indicated that the BIS capital adequacy ratio was 17.47% in the fourth quarter of 2021, which is the basis point, and decreased to 17.07% in the current policies scenario.

Future Plan

KB Financial Group internally developed a model for climate change stress test analysis and reports analysis results to the Risk Management Committee. A climate change stress test analyzes the climate change impact for 30 years from a long-term perspective. Because the results can be significantly different depending on the analysis model and scenario, it is important to continually improve the analysis methodology and stress scenario. To this end, we will provide support so that companies that do not have carbon emissions data can measure and disclose carbon emissions. In addition, we will advance the scenario application of each industry's carbon reduction device installation costs and each country's carbon price, while improving physical risk's estimation methodology to improve the analysis model.

Strategy

Establishment of Climate Change Response Strategy

KB Financial Group's Climate Change Response Strategy

KB Financial Group established climate change response strategies by reviewing climate change risks and opportunities. We established and implement three major climate change response strategies, which are "KB Net Zero S.T.A.R." for the Group's net-zero implementation, "KB Green Wave 2030" for expansion of ESG finance, and "Risk Management" to respond to climate change risks.

KB Net Zero S.T.A.R.

NET ZERO S.T.A.R.

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

By implementing KB Net Zero S.T.A.R., we seek to achieve a 42% reduction in operational emissions 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. We used the SDA methodology and Temperature Ratings methodology 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.

KB Green Wave 2030

KB GREEN WAVE 2030

Expanding ESG products, investments, and loans to KRW 50 trillion by 2030 (KRW 25 trillion in environment sector)

By establishing the KB Green Wave 2030 strategy, we seek to expand ESG products, investments, and loans to KRW 50 trillion by 2030. Particularly, we are planning to increase the products, investments, and loans in the environment sector to KRW 25 trillion. By expanding ESG finance, we seek to continually spread the positive influence the financial industry has on the environment and society such as reducing greenhouse gas emissions and supporting the financially-vulnerable population. Details on our ESG products, investments, and loans are available on pages 38-41 of this report.

Risk Management

Establishing a risk response system and environmental and social risk policy framework in accordance with the TCFD recommendations

KB Financial Group categorized risks in accordance with the TCFD recommendations and is managing them by integrating them into the Group-wide risk management system. Furthermore, we developed a policy framework to predict and manage financial activities' risks to the environment and society and are conducting thorough prior environmental and social risk reviews for large-scale projects. Please refer to pages 62-68 of this report for further details about KB Financial Group's climate change risk management.

Strategy

Pathway to Achieve Net-Zero

In accordance with our climate change response strategy, KB Net Zero S.T.A.R., we established and are implementing four initiatives to achieve net zero which are "support for the eco-friendly management of SMEs, expansion of investment in green finance, asset portfolio management, and direct GHG reduction and RE100 expansion." We especially recognize the limitations of the negative method that rules out high-carbon industries or imposes cuts in greenhouse gas emissions and are focusing on the positive method that supports voluntary, positive movements to realize a net-zero society. Accordingly, we are seeking to transition to a net-zero society based on the positive method by increasing eco-friendly investments and actively supporting our clients' transition to green business models and reduction of GHG emissions as well as continuing our own efforts to cut GHG emissions.

Positive Way to NET-ZERO

Helping SMEs implement eco-friendly management

To support the eco-friendly management of SMEs, we are providing an ESG consulting service for net zero that supports SMEs' establishment of a green business portfolio and reduction of greenhouse gas emissions. In addition, we offer an ESG self-assessment service that SMEs could utilize to assess their level of ESG management. We also offer a loan for SMEs with excellent performance in ESG, which provides preferential interest rate and limit to companies that actively promote green transition.

RE100

Direct GHG reduction and RE100 implementation

We are practicing eco-friendly activities together with stakeholders including employees and customers. We are taking active part in improving the Earth's environment, including the achievement of RE100, by increasing the ratio of renewable energy use in corporate operations, the ratio of converting our fleets to eco-friendly vehicles, and the number of green buildings. In addition, we run eco-friendly campaigns to encourage employees and customers to practice eco-friendliness and to raise their awareness of environmental protection as part of our efforts to reduce GHG emissions.

Expanding green investment

We are contributing to greenhouse gas abatement by expanding our investment in green finance. Investment in renewable energy such as solar and wind power is increasing, as well as our investment in low-carbon and new eco-friendly technologies and green buildings. Moreover, we declared "KB Green Wave 2030" and set a goal of expanding products, investments, and loans in the environment sector to KRW 25 trillion by 2030, and are actively carrying out green financial activities to achieve the goal.

NET-ZERO

Asset portfolio management

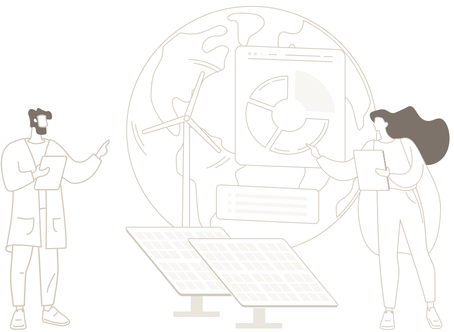
We monitor our financed emissions on a regular basis. In particular, we manage emissions and carbon intensity by company and emissions by subsidiary. The data on financed emissions is used as a reference for future loan reviews or investments.

Strategy

Raising Stakeholder Awareness

KB Financial Group provides diverse education to raise stakeholder awareness of climate change issues. KB Kookmin Bank provided special lectures by experts to all employees on climate change issues and eco-friendly activities, and offers diverse ESG education content in relation to the environment. Details on environmental education for employees can be found on page 84 of this report.

In addition, KB Financial Group's KB Research and KB Securities Research Center continue to publish reports on ESG issues including climate change. KB Securities regularly hosts ESG forums and seminars for institutional investors and corporate clients. In 2022, we held the Net Zero Strategy Forum and invited instructors, including emission trading scheme design/ advisory experts and executives from professional consulting firms, to hold a panel discussion.



Climate-related Policy Communication

KB Financial Group supports the Paris Agreement and climate-related public policies, and thus provides support so that the goals can be accomplished. In 2022, we joined Net-Zero Insurance Alliance (NZIA), a global coalition of insurers and reinsurers, to achieve the net-zero targets based on the Glasgow Financial Alliance for Net-Zero (GFANZ) and Paris Agreement. We also attended a CEO meeting of the Net-Zero Banking Alliance (NZBA) and discussed the strategic direction of NZBA with global banks. In addition, KB Financial Group participated in GFANZ APAC Advisory Board and the Advisory Committee of the Presidential Commission on Carbon Neutrality and Green Growth to actively support climate-related policies in our efforts to achieve the goals.

Furthermore, KB Financial Group takes part in industry associations that impact public policies. The Korea Federation of Banks, which is a leading association, actively carries out relevant activities, such as encouraging citizens to live a green life in relation to climate change policy. In line with government policies, it provides active cooperation for the development of various eco-friendly industries that are presented by the roadmap to 2030 that was derived after the Paris Agreement.

KB Kookmin Bank is a member of the ESG Advisory Committee, which is an internal standing conference body of the Korea Federation of Banks. It makes policy suggestions on the development direction of green finance and suggests that association members take part in the facilitation of green finance. In addition, it conducts internal reviews on whether the Korea Federation of Banks continually participate in climate policies and carry out relevant activities. When there is a significant mismatch between climate-related policies that the Group supports, KB Kookmin Bank reports the matter to the ESG Committee. Through this process, KB Financial Group seeks to strengthen cooperation at the industry-level to respond to climate change.

Industry Association Review Process

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. We recognize climate change risks as important risks that should be managed at the Group level. To manage climate change issues within the Group-wide risk management system, we analyzed and identified the relationship between climate change risks and the Group's key risks following the TCFD recommendations.

Furthermore, KB Financial Group is pushing ahead with response activities by identifying the extent and duration of climate risks' impact on businesses.

First of all, we are running an Environmental and Social Risk Management (ESRM) system after developing an environmental and social risk policy framework to thoroughly manage the environmental and social 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. In case of financing large-scale projects, we evaluate potential risks and impact according to the Equator Principles. We will continue to systematically implement risk management activities to minimize the negative impact of the Group's management activities on the environment and society, thereby contributing to the shift to a low-carbon society.

Climate Risk Management System

KB Financial Group has set in place a climate risk management system, and systematically manage risks with a focus on measurement and disclosure of climate risk, establishment of net-zero targets, and stress test. In addition, we evaluate climate change's vulnerabilities through a climate stress test and reflect the evaluation results in risk management. In this way, we are considering climate risk's impact in the process of establishing and executing business strategies.

KB Financial Group's Climate Risk Management System

Risk Management

KB Financial Group analyzes climate risks' impact on the real economy and financial systems by making a categorization into physical and transition risks, and considers such transmission channels to establish response measures for climate change risks.

Transmission Channels of Physical Risk and Transition Risk

Climate risk → **Transmission channels to real economy** → **Financial risks**

Physical risk

Chronic risk	Changes in climate conditions (temperature rise, increased precipitation, sea-level rise, etc.)
Acute risk	Extreme changes in conditions (heat wave, flooding, typhoon, forest fire, etc.)

Transition risk

- Low-carbon regulations, policies
- Technological development
- Consumer preference changes

Microscopic perspective

Company

- Business closure due to damage to production facilities caused by a natural disaster
- Damage to property, increased capital expenditure
- Changes in consumer preferences and demand
- Failure to alleviate/adapt may lead to increased legal costs
- Increased production costs from emission reduction regulations

Household

- Decrease in household income due to deteriorated health, etc.
- Damage to home and owned asset value due to a natural disaster
- Rise in costs, including energy prices, from low-carbon policies

Macroscopic perspective

- Rise in investment costs resulting from asset depreciation
- Price changes (Supply shock due to climate change)
- Labor market friction in relation to transition/physical risks
- Changes in social and economic structure (consumption pattern, preference changes)
- Shock to international trade, government income, financial capacity, interest rate, exchange rate, etc.

Credit risk

Risk factors	Impact variable
• Increased costs, increased capital expenditures • Reduced sales • Increased energy prices, etc.	PD ↑
• Decrease in real estate prices • Real estate property loss	LGD ↑

↓

Increased credit loss

Reserve, etc.

Interaction of climate risk-economic channels

Interaction of economic channels-financial risks

* Source: NGFS/Bank of Korea

Risk Management

Response to Climate Change Risk

KB Financial Group is reflecting the analysis results of climate change risks and opportunities in the overall business activities. In particular, in the process of pre-identifying climate change risks and responding to the risks, we identify climate change opportunities as well to adopt climate change as a turning point for new businesses and better growth, rather than making the conclusion that it is a crisis.

To analyze climate change risks and opportunities, we divided the impact and duration of each risk to understand the urgency of response as follows: high/medium/low for the impact on the Group and short-term/medium-term/long-term for the duration.

KB Financial Group manages climate change risks by taking into account quantitative factors related to climate change risks 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.

Risk		Duration[1]	Risk subject to transmission
Transition Risk	Policy and legal risk	Short-term/Mid-term/Long-term	Credit, Market, Operational
	Technology risk	Short-term/Mid-term/Long-term	Credit
	Market risk	Short-term/Mid-term/Long-term	Credit, Operational
	Reputation risk	Short-term/Mid-term	Credit, Market
Physical Risk	Acute risk	Short-term/Mid-term	Credit, Market, Operational
	Chronic risk	Mid-term/Long-term	Credit, Operational

[1] For the duration, short-term is 1 year, medium-term is 2-10 years, and long-term is over 10 years

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 implementation strategy to reduce GHG emissions • Offering ESG consulting services to support greenhouse gas emissions reduction of businesses and financial benefits to businesses that achieved the reduction • Strengthening the application of global disclosure standards within the climate change response framework • Setting a limit on the investments in high carbon emitting businesses and minimizing climate risks through the declaration of anti-coal financing and ESRM framework • Providing financial support for carbon reduction technologies and electric vehicle R&D in response to the enforcement of IRA in the US and adoption of the EU CBAM • Managing and monitoring climate risks to minimize the possibility of lawsuits
	Technology risk	• Monitoring green technologies and research trends • Reflecting the results of monitoring during products and services development and investment decision-making • Expanding green technology-related investments • Offering financial benefits to businesses that adopt green technologies
	Market risk	• Expanding green products and services • Increasing green products, investments, and loans to reach KRW 25 trillion by 2030 • Identifying ESG risks within products and services in advance following the categorization process of ESG financial products • 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 • Expanding external green communication • Enhancing corporate image by practically implementing environmental management such as the practice of environmental management by executives and employees • Operating waste resource collection systems and running environmental campaigns to transition to a circular economy
Physical Risk	Acute risk Chronic risk	• Developing climate response strategies according to the physical risk scenario analysis • Establishing a response system for serious industrial accidents • Establishing a business continuity plan (BCP) and conducting mock exercises and emergency evacuation drills

Risk Management

Environmental & Social Risk Management

Environmental and Social Risk Policy Framework

KB Financial Group established the "Environmental and Social Risk Policy Framework" based on the Environmental and Social Risk Management Framework (ESRM) in 2021 to manage risks that financial activities have on the environment and society based on consistent standards.

The Environmental and Social Risk 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, along with a document titled "Rationale for Designating Areas for Attention Regarding Climate Change" which provides the rationale for designating businesses and industries that adversely affect climate change.

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 • Categorization of Areas for Exclusion, Attention, and Support, along with a management plan • Review of environmental and social risks for large-scale projects (based on the Equator Principles) • Environmental and Social Risk Management (ESRM) Framework • Information disclosure • Participation in global collaboration and standard-setting organizations • 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' human rights) • Definition of each Area for Attention and monitoring checklist

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. 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 change risks.

We are restricting investments and loans to industries and companies with high environmental and social risks, and prohibiting the provision of funds that are used in a way that is against social interests or manipulates the law. In the Group's overall business, we restrict and monitor risk factors in environmental and social aspects. Furthermore, we categorize risk management areas into areas for "exclusion", "attention on climate change", and "support for green industries" and systematically manage the environmental and social impact of the Group's business activities.

Risk Management Areas According to ESRM

Risk management area	Details
Areas for Exclusion	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 • Cases where (illegal) child labor is included in the labor put in for production • Transactions related to illegal gambling and pornography industries • Production, trade, and transactions of radioactive substances whose appropriate protection, management, and supervision are deemed unfeasible • Support for new coal mining projects or the expansion of existing coal mining businesses • 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
Areas for Support for Green Industries	Areas where preferential financial support is provided considering climate change response efforts 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 set by the Ministry of Environment

Risk Management

In 2022, major subsidiaries of KB Financial Group applied the Group ESRM to the respective company's internal rules and guidelines. By doing so, they laid the foundation to preemptively identify environmental and social risk factors when reviewing businesses related to loans and investments.

ESRM Application Status of the Group Subsidiaries

Subsidiary	ESRM-applied internal rules (guidelines, etc.)	Application details
KB Kookmin Bank	Industrial Risk Management Guidelines	Creation of an article on climate risk industry management standards and operation of a process (Defined areas for exclusion/attention/support, included corresponding industry classification and selection, asset management policy and procedure, etc.)
KB Securities	ESG Risk Evaluation Guidelines	Enacted KB Financial Group's own ESG risk assessment guidelines
KB Insurance	Guideline on Asset Management (including ESG investment-related content)	Established a climate risk management system
KB Kookmin Card	General Loan Management Guidelines/Investment Guidelines	Reflected financial support exclusion areas
KB Life Insurance	ESG Investment Guidelines	Explained areas for "exclusion/areas for attention"
KB Asset Management	(Alternative Investment Area) Exposure Status of Areas of Caution and Dissemination of Precautions	Established a process-based portfolio in ESG investment funds
KB Capital	Total Exposure Management Guidelines	Set an investment limit for businesses in the "areas for attention"
KB Real Estate Trust	Prior Risk Deliberation Report	Reflected ESG management ratings of constructors in the "Constructor Qualifications Screening Criteria"
KB Savings Bank	Comprehensive Risk Management Guidelines	Established internal rules on limit management for the "areas for attention" and exclusion for "areas for exclusion"
KB Investment	ESG Work Regulations	Conduct negative screening when making ESG investments

Environmental & Social Risk Review for Large-scale Projects

KB Financial Group regards, with importance, environmental and social impact in its investment activities, such as deciding on a loan after performing an environmental and social due diligence on large projects.

In addition, we established an environmental and social risk review process to reflect ESG factors in investments, and also review environmental and social risks of large-scale projects that are subject to application of the Equator Principles.

Environmental and Social Risk Review Process

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
Risk Categorization	• Categorize environmental and social risk rating of projects subject to review (Category A, B, and C)
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 environmental and social risks and impact and conduct an on-site inspection if necessary
Commitment	• Agreement on the requirements between the borrower and lender based on the environmental and social impact assessment • Reflect the agreement and requirements of the Equator Principles[1] in the financing contract
Monitoring	• Using the monitoring method determined in the commitment process to conduct monitoring of risks, issues, and the implementation of reduction/response systems

[1] Principle 8. Covenants from among the Equator Principles

Risk Management

Implementation of the Equator Principles

KB Kookmin Bank adopted the "Equator Principles" in February 2021 to establish an environmental and social risk management system and also fulfill its responsibilities. It conducts a risk analysis based on the Equator Principles or ESG framework when carrying out project financing, and monitors whether PF activities comply with the Equator Principles or ESG framework through an internal expert and independent third-party expert.

In June 2022, KB Kookmin Bank established "The Equator Principles Operating Guidelines," thus securing objectivity of its determination on environmental/social risk grade, in addition to designating an Equator Principles expert as an internal employee in charge to preemptively manage environmental and social risks. Independent, third-party monitoring was specified in the Equator Principles process in "The Equator Principles Operating Guidelines," and an external expert pool was formed for an independent consultant to regularly monitor compliance with the Equator Principles. Based on the Equator Principles process, relevant departments determine ratings in consideration of potential risks, focusing on high-risk businesses, including project finance (PF), project-related corporate loans (PRCL), and project-related refinance or acquisition finance. In 2022, among the projects[1)] handled by KB Kookmin Bank, there were five projects subject to application of the Equator Principles, and it was confirmed that all of the projects complied with the Equator Principles.

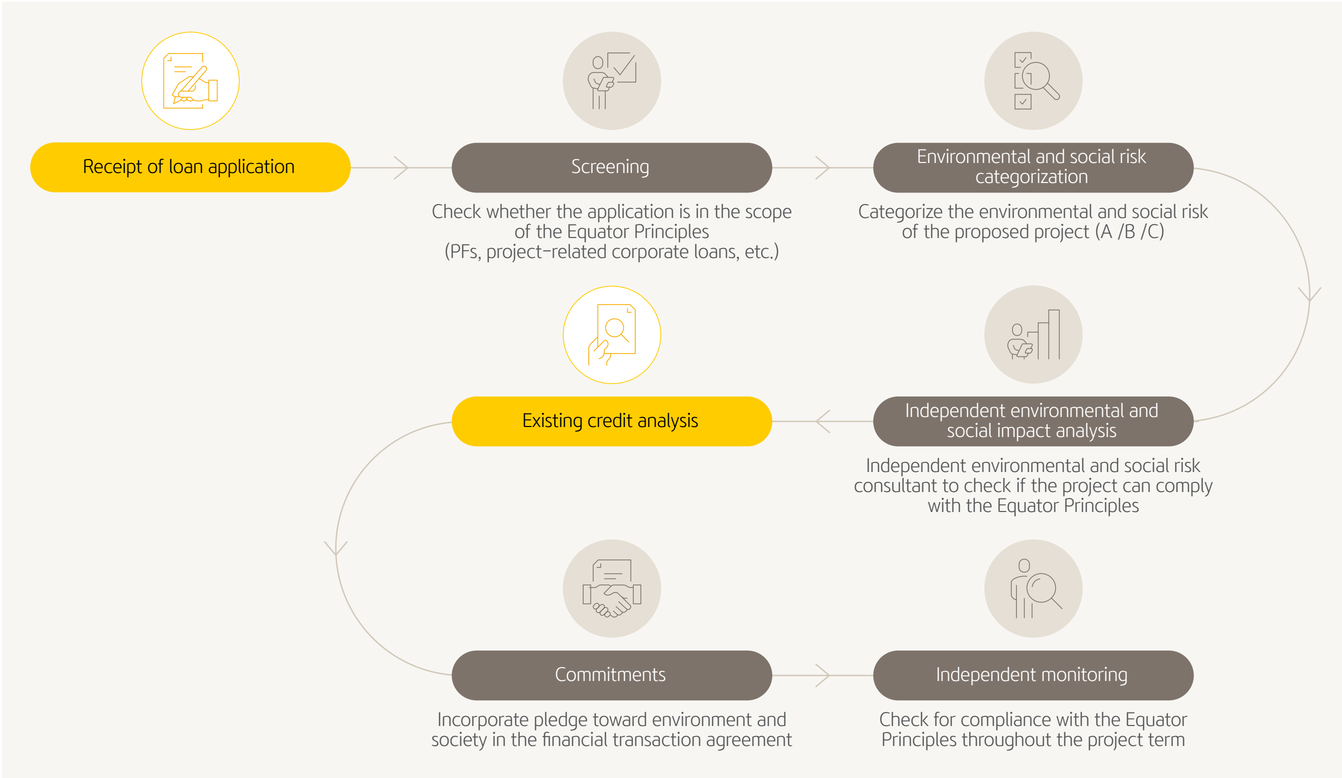
In May 2021, KB Kookmin Bank became the first commercial bank in Korea to publish the "2020 Report on Equator Principles Implementation" and is publishing a report every year in accordance with the "information disclosure and transparency" principle.

2022 Report on Equator Principles Implementation of KB Kookmin Bank

Equator Principles Implementation Roadmap

STEP 1	STEP 2	STEP 3
2021-	2022-	2023-
• Adopted the Equator Principles and established a manual (Feb. 2021) • Published the implementation report (May 2021)	• Established the process for the Equator Principles and its inclusion in bylaws (Jun. 2022) • Defined R&R of relevant departments (Jun. 2022)	• Conduct monitoring of the process compliance for the Equator Principles and make improvements

Equator Principles Procedure



1) No. of projects reviewed in 2022: 249 cases (Percentage of reviewed projects from among total projects: 100%), No. of projects completed financial close in 2022: 241 cases, No. of rejected projects: 0
* 8 projects were reviewed in 2022 followed by the financial close in 2023

Risk Management

Climate Change Risk Management Activities

Review and Management of ESG-reflected Investments and Loans

KB Financial Group manages ESG-related risks, including climate change risks, by applying ESG standards to investment/loan reviews. KB Kookmin Bank reflects ESG-related items in credit rating adjustments and loan reviews in accordance with the "Corporate Loan Guidelines." In addition, the Bank informs customers that the credit rating and loan-related decisions could be affected by the ESG-related items when conducting investment or loan reviews. It also manages ESG activity assessment results of loans worth more than a certain amount, including those of large companies and externally audited companies, through an industrial credit rating system by checking an ESG checklist.

KB Investment established ESG investment policies to strengthen ESG-based investment management and reflects ESG elements in its overall investment process. In addition, it uses its internally developed ESG Materiality Framework and ESG Scoring Framework for thorough screening of companies subject to investment and is strengthening ESG-based investments through ESG evaluations and due diligence.

ESG Investment Process of KB Investment

Process	Sourcing & Screening	Due Diligence & Assessment	Execution	Monitoring & Value-up	Exit
Procedure	Check if it is subject to investment	Main due diligence	Negotiate investment conditions	Sign an investment contract	Review withdrawal
	ESG screening	ESG evaluation and assessment	Set ESG-related goals	ESG management	Whether ESG improvements were made
	Preliminary due diligence	Review risks	Sign an investment contract	Follow-up fund management	
	Preliminary review and deliberation	Deliberate investment		Value creation activities	Deliberate withdrawal
				Monitoring	

Declaration of Anti-coal Financing

To preemptively respond to the climate change crisis and take the lead in implementing environmental and social responsibilities as a leading ESG group, KB Financial Group became the first financial group in Korea in 2020 to declare "anti-coal financing," which puts an end to new investments in coal-fired power plant construction. After the declaration, we fully suspended the financing of new projects and purchasing of bonds related to coal-fired power plant construction at home and abroad. We are actively discovering new business investment opportunities that consider eco-friendly factors and are increasing investments in private environmental investment projects and eco-friendly ships and automobiles, thereby continually expanding investments and loans related to new and renewable energy.

Climate-related Risk Training

KB Financial Group provides training to raise employee understanding of climate change-related risks. In July 2022, KB Kookmin Bank provided training on environmental and social risk reviews that consider the Equator Principles to loan officers. In August, we provided training on the content of the Equator Principles and operation process to the sales department.

Metrics & Targets

A company's climate-related information includes non-financial factors and therefore is difficult to accurately measure unlike financial factors.

However, the management of measurable metrics is important to identifying climate change risks and opportunities. This is because what gets measured gets managed.

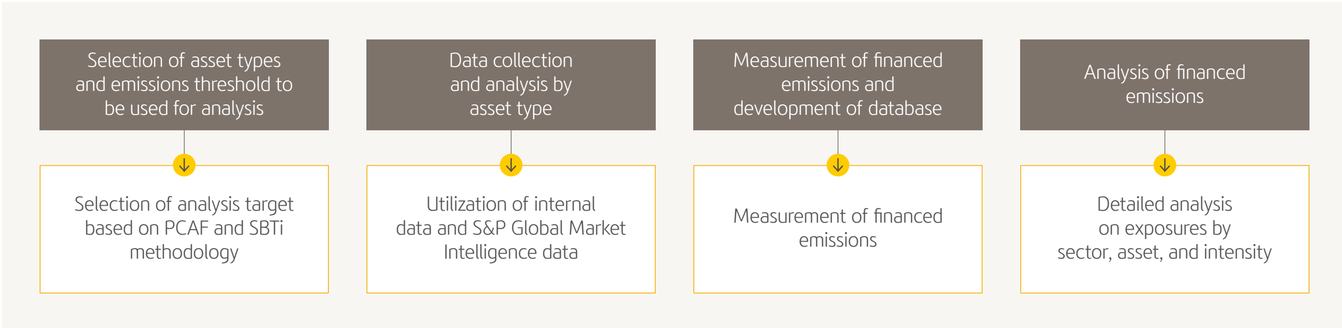
KB Financial Group will measure climate change risks and opportunities accurately, manage them properly, and disclose the outcome transparently, in its efforts to realize the transition to a net-zero society.

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 for financial institutions to internally measure and report GHG emissions, and was established 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. In particular, we included automobile loan and personal mortgage loan in the scope of financed emissions measurement and expanded the 2021 corporate financing emissions measurement target from exposure of KRW 3 billion to KRW 2.5 billion. Even if the exposure is less than KRW 2.5 billion, companies subject to a carbon trade scheme and/or target management system as well as listed companies were included in the analysis scope.

Financed Emissions (Scope 3) Measurement Process



[1] An initiative that develops a common methodology for evaluating and disclosing greenhouse gas emissions that are connected to financial companies' loans and investments and presents a methodology to set science-based emissions reduction targets

[2] An initiative that provides general services (methodology development and advice) that are needed for companies to set GHG emissions reduction targets based on scientific scenarios to achieve the goals of the Paris Agreement and that is in charge of approving reduction targets

Metrics & Targets

Greenhouse Gas Emissions Target and Performance

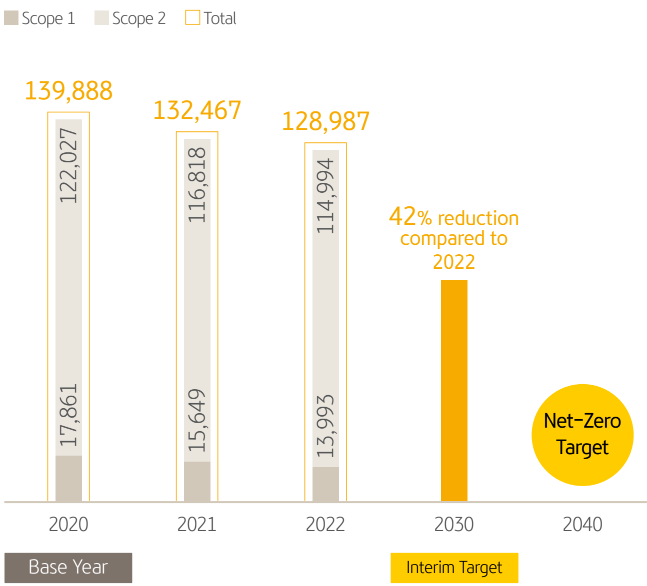
KB Financial Group utilized the emissions reduction target setting methodology proposed by the SBTi and UNEP FI Guidelines for Climate Target Setting for Banks to establish our net-zero targets, and our carbon reduction target was approved by the SBTi in October 2021. With the experience and knowledge 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 net-zero by 2050.

Operational Emissions (Scope 1&2)

KB Financial Group has set its operational emissions (Scope 1&2) reduction 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, by setting 2020 as our base year and applying the 1.5℃ scenario, we plan to achieve 42% of GHG reduction by 2030 compared to the base year and realize net-zero operational emissions (Scope 1&2) by 2040.

KB Financial Group's 2022 operational emissions (Scope 1&2) were 128,987 tCO_2eq, indicating a year-on-year decrease of around 3,480 tCO_2eq. This is attributable to active energy-saving programs, including increased self-installation of renewable energy facilities, increased conversion to electric vehicles, and enhanced energy efficiency. However, our operational emissions reduction amount in 2022 decreased from that of 2021, mainly attributable to increased use of work facilities, including the training center, with the adoption of "living with COVID-19." To achieve our reduction target for 2023, we are implementing active reduction plans, such as conducting more active energy-saving campaigns and increasing the supply of renewable energy. Our total energy consumption in 2022 was 313,730 MWh which is around 5,952 MWh less than our reduction target (319,682 MWh).

Operational Emissions (Scope 1&2) Targets and Progress (Unit: tCO_2eq)



(Unit: tCO_2eq)

Category	2020	2021	2022	YoY	
				Amount	Ratio
Scope 1	17,861	15,649	13,993	(1,656)	-10.6%
Scope 2	122,027	116,818	114,994	(1,824)	-1.6%
Total	**139,888**	**132,467**	**128,987**	**(3,480)**	**-2.6%**
Target for Scope 1&2 emissions	-	134,013	128,137	-	-
Reduction against target	(Base Year)	+1,546	-850	-	-

Total Energy Consumption Target and Progress (Unit: MWh)

Category	2020	2021	2022	YoY	
				Amount	Amount
Energy consumption	348,998	330,131	313,730	(16,401)	-5.0%
Energy consumption target	-	334,340	319,682	-	-
Reduction against target	(Base Year)	+4,209	+5,952	-	-

Metrics & Targets

Financed Emissions

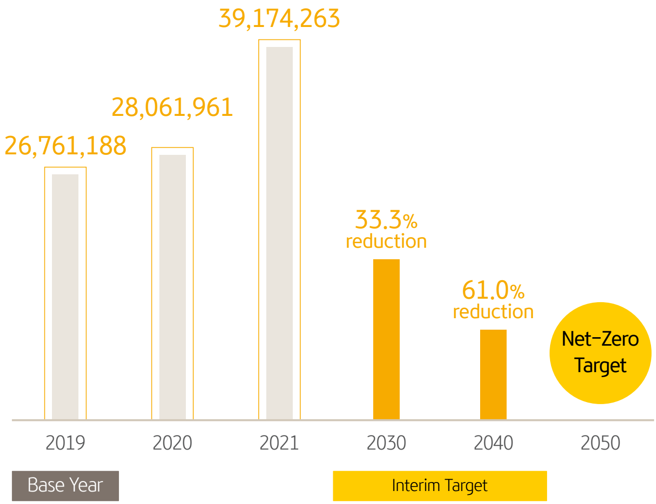
KB Financial Group set its financed emissions target based on the SBTi methodology. We applied the “Sector Decarbonization Approach (SDA)” to power generation PF, power generation, steel, cement, aluminum, paper & pulp, and commercial real estate industries, and applied the “Temperature Ratings” method to the corporate finance sector excluding the above.

In addition, we newly adopted the avoided emissions concept, which means the level of contribution made to avoid carbon that is emitted by “previous fossil fuel-based power plants” by investing in renewable energy power generation PF. As of the end of 2021, the exposure of the renewable energy power generation PF under management was KRW 498 billion. We calculated avoided emissions in accordance with the guidance for power generation PF of the PCAF Financed Emissions Standard to find that avoided emissions totaled around 150 thousand tons. When calculating avoided emissions, we applied the power generation amount per case of renewable energy power generation PF, each country’s avoided emissions coefficient, and KB allocation ratio.

KB Financial Group’s 2021 financed emissions stood at about 39.17 million tons, an increase of around 11.11 million tons from the 2020 emission. This rise is attributable to an increase in the measurement scope of corporate finance assets and the adoption of measurement for new asset groups. In case of corporate finance, measurement coverage was expanded from KRW 3 billion or more in loan and investment exposure to KRW 2.5 billion or more. In addition, we adopted measurement for new asset groups such as automobile loans and mortgage loans to ultimately lead to a rise in total emissions.

Financed Emissions Targets and Progress

(Unit: tCO_2eq)



Since the financed emissions of a financial company 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.

In KB Financial Group’s 2021 asset portfolio, carbon intensity decreased for corporate finance and commercial real estate, but increased in power generation project financing. The lower carbon intensity of corporate financial assets means that emissions per sales of companies that belong to KB Financial Group’s portfolio decreased or that the companies that constitute the portfolio improved to low-carbon companies. The decrease in carbon intensity of commercial real estate is assessed to result from lower energy consumption per unit area owing to the social distancing policy. The rise in carbon intensity of power generation project financing is from the impact of new operations of coal-fired power plants in Korea.

Financed Emissions Status

(Unit: KRW trillion, tCO_2eq)

Category		2019			2020			2021		
		Exposure	Emissions	Intensity	Exposure	Emissions	Intensity	Exposure	Emissions	Intensity[1]
Asset type	Corporate finance	51.5	24,526,555	0.468	76.9	25,714,931	0.402	103.9	35,331,842	0.391
	Power generation PF	1.2	2,172,390	0.441	1.3	2,310,499	0.439	1.5	2,887,589	0.452
	Commercial real estate	2.1	62,243	0.09	2.7	36,531	0.052	5.1	65,629	0.046
	Automobile loan[2]	-	-	-	-	-	-	6.8	521,308	0.159
	Mortgage loan[2]	-	-	-	-	-	-	47.8	367,895	0.033
Total		54.8	26,761,188	-	80.9	28,061,961	-	165.1	39,174,263	-

[1] • Weighted Average Carbon Intensity (WACI) was applied to corporate finance, while intensity per production unit (physical intensity) was applied to power generation PF and commercial real estate
• Corporate finance: tCO_2eq/KRW million, power generation PF: tCO_2eq /MWh, commercial real estate/mortgage loan: tCO_2eq /m^2, automobile loan: $kgCO_2eq$ /km

[2] New measurement items

Metrics & Targets

SBTi Methodology

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

Sectoral Decarbonization Approach

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 net-zero 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 (industrial area)-based portfolio assessment is possible amongst the SBTi methodology. KB Financial Group 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 compared to the 2019 levels, and net-zero by 2050. In addition, electricity generation, steel, cement, aluminum, paper & pulp, electricity generation PF, commercial real estate, and other industrial sector-specific targets and pathways were established.

Temperature Ratings

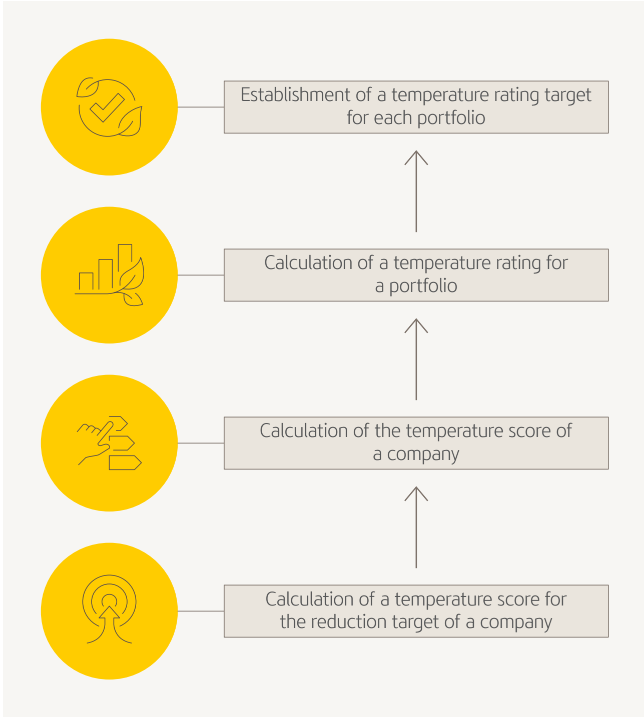
KB Financial Group used SBTi's Temperature Ratings Methodology to set targets for other sectors within corporate finance where the SDA methodology was not applied when setting reduction targets for financed emissions. The method converts companies' net-zero targets into a more intuitive temperature rating 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. The higher the carbon emissions reduction targets of companies in KB Financial Group's asset portfolio, the lower the temperature score of the companies and the lower the temperature rating of KB Financial Group's asset portfolio.

We divided other sectors within corporate finance into loans, stocks, and bond portfolios and established carbon reduction targets according to the temperature rating of each portfolio. For each portfolio asset (loans, stocks, bonds), we aim to achieve the temperature rating of 1.75℃ for Scope 1&2 and 2.0℃ for Scope 1&2&3 by 2040. To reduce each portfolio's temperature rating, we are providing support so that companies in our asset portfolio can set and implement carbon emissions reduction targets.

Target-Setting Based on the SDA

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

Target-setting Based on the Temperature Ratings Method



Metrics & Targets

Reduction Target and Pathways of Financed Emissions

KB Financial Group established each industrial sectors' reduction targets according to SDA based on which it set pathways and manages financed emissions.

For financed emissions that do not apply SDA, we use the Temperature Ratings Methodology to set and manage reduction targets. In 2021, the temperature rating of our overall portfolio decreased from 2020, but temperature ratings rose in some portfolios. There are two main reasons: First, as a result of expanding the analysis target, there was an increase in the number of companies without a carbon emissions reduction target, from among the newly-included target companies. Second, there was an increase in emissions of some assets that belong to the loan and stock portfolio. We seek to achieve our financed emissions reduction target by actively strengthening engagement activities so that companies in our portfolio can establish carbon reduction targets.

Each Industrial Sector's Reduction Targets and Pathways based on the SDA

(Unit: tCO_2eq)

Metrics & Targets

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