



SuMi TRUST  
SUMITOMO MITSUI TRUST HOLDINGS

# TCFD REPORT

2022/2023



SUMITOMO MITSUI TRUST HOLDINGS

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## Message from the President

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As the world begins to increasingly experience abnormal weather in the 21st century, we in the financial industry are also starting to view climate change as a financial crisis, and progress is beginning to be made in terms of building a consensus on carbon neutrality at both the national and corporate levels.

In 2022, various regions of the world experienced natural disasters unlike any they had seen before. In addition, due to the prolonged Ukraine crisis, energy shortage is becoming ever more serious in Europe in particular, which is making us aware not only of the need to shift from fossil fuels to renewable energy in the medium- to long-term, but also of the gravity of short-term issues, such as the consequences of relying on unevenly distributed fossil fuels as an energy source.

Under these circumstances, the establishment of a "Loss and damage" fund was decided at the COP27 held in Egypt in November 2022. This was a significant first step in terms of enabling all countries—including developing countries—to act in concert to address climate change issues. However, participants failed to establish more ambitious reduction targets. Despite the agreement in principle about climate change, there still are numerous areas in which persistent negotiations are needed before reaching an agreement.

The year 2022 marked the 100th anniversary of Japan's Trust Act and Trust Business Act, both of which were enforced in 1922.

Trusts have changed with the needs of the time—including loan trusts, pension trusts, land trusts, and asset securitization trusts—to help resolve issues faced by clients and society. The balance of trust assets under management of the industry as a whole has doubled in the past decade, exceeding ¥1,500 trillion as of the end of March 2022.

Today, finding ways to help resolve the social and climate change issues faced by the world is the main topic relevant to the next 100 years of trusts.

The SuMi TRUST Group has a wide range of contact points with individuals, corporates, investors, and other economic entities, and we are therefore equipped with functions that include investments and loans, asset management, and asset administration.

A huge amount of funding is necessary for both the technological development and capital investment required for decarbonization. We will address funding needs related to corporate transitions through the impact business such as Positive Impact Finance, as well as technology-based finance, which is related to promoting the social implementation of advanced technologies. We will act as a lender to back technological development and capital investments by corporates, while also providing investment opportunities to clients facing difficulty in managing their assets, through measures such as risk reduction, as well as dividing investment opportunities into smaller lots.

Engagement with investee companies is also important in achieving net-zero GHG emissions in the asset management portfolios entrusted to us by investors. The Group's total assets under management amount to ¥127 trillion, one of the largest in Asia. In addition, the two asset management companies in the Group have joined the Net Zero Asset Managers initiative ("NZAMI") and are both conducting unique engagement activities.

Sumitomo Mitsui Trust Asset Management actively participates in international engagement initiatives in collaboration with other asset managers and asset owners, thereby proactively leading dialogues with investee companies, governments, NGOs, and other parties. For example, Sumitomo Mitsui Trust Asset Management is the only Japanese asset manager in the six-member advisory group of the aforementioned NZAMI.

Meanwhile, Nikko Asset Management's strength lies in its unique equities strategies in Japan, Asia, and globally. Nikko Asset also has offices around the world—with its Singapore office positioned as an ESG hub—and conducts engagement aimed at assigning the right talent to the right positions at its various offices, including Japan.

Climate change is not only an environmental (E) issue but also a social (S) issue, in that it represents a risk factor that could prevent the ongoing well-being of people. At the same time, investment in carbon neutrality is a unique opportunity to enrich the next generation by creating a virtuous circulation of funds, assets, and capital.

The SuMi TRUST Group is committed to achieving a prosperous future by contributing to the achievement of a decarbonized society through the power of trusts.

We look forward to your ongoing support.

Director & President  
Sumitomo Mitsui Trust Holdings

*Tom Takakura*

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## Introduction

Prior to becoming a signatory to the Principles for Responsible Investment (PRI) in 2006, the SuMi TRUST Group has been already pursuing initiatives for climate change and other ESG (Environmental, Social, and Governance) through ESG investment as part of our overall investment business, including Nikko Asset Management's (Nikko AM's) Eco Fund (1999) and SuMi TRUST Bank's first SRI fund for pensions (2003). SuMi TRUST Bank also engages in project finance initiatives targeting renewable energy and, in March 2018, the Bank became one of the Japanese banks to start addressing climate change issues from the perspective of investments and loans, including clarifying its coal-fired power generation policy.

In FY2022, SuMi TRUST Holdings set 2030 interim reduction targets of greenhouse gas (GHG) emissions for electric-power-sector in its investment and loan portfolios in line with the framework of the Net-Zero Banking Alliance (NZBA), which the Company joined in 2021. Meanwhile, among the Group companies, Sumitomo Mitsui Trust Asset Management (SMTAM) and Nikko AM have set interim reduction targets for GHG emissions related to their respective assets under management in line with the framework of the Net Zero Asset Managers initiative (NZAMI). In addition, in terms of Group GHG emissions, the Group has made steady progress toward achieving net zero emissions, including SuMi TRUST Bank, which has completed the shift to 100% renewable energy in its domestic offices.

Furthermore, to help realize a decarbonized society, SuMi TRUST Bank has increased its cumulative target in sustainable finance\* by FY2030 from ¥5 trillion to ¥10 trillion (including ¥2.5 trillion of impact equity investment), responding to the increasing need for the environment and climate change related funds, which accelerate initiatives aiming at net zero emissions.

\* For details on sustainable finance, see page 42.

### ■ Initiatives Related to Climate Change

Details	
1999	Launch of Nikko Eco Fund
2003	Full-scale entry into ESG investment (development of SRI funds)
2004	Start of initiatives on environmental finance
2006	Signatory to the Principles for Responsible Investment (PRI)
2016	Signatory to the Equator Principles
2018	Announcement of support of TCFD recommendations and policy on coal-fired power generation
2019	Signatory to the Principles for Responsible Banking (PRB)
2020	Review of policy concerning environmental and social considerations for loans, and signatory to the Poseidon Principles
2021	SuMi TRUST Group Carbon Neutral Commitment Joins the Net-Zero Banking Alliance (NZBA) (SuMi TRUST Holdings) Joins the Net Zero Asset Managers initiative (NZAMI) (Sumitomo Mitsui Trust Asset Management, Nikko Asset Management)
2022	Disclosure of 2030 interim reduction targets in line with the NZBA/NZAMI framework Add corporate finance (new/expansion) to our target of reducing a loan balance to zero for coal-fired power generation by 2040

## ■ Main Updates in 2022

	Details	Pages
Chapter 1: Governance	<ul style="list-style-type: none"> <li>• Changed to the stock-based (share delivery trust) remuneration system and incorporate a stronger emphasis on ESG</li> </ul>	P7
Chapter 2: Strategy	<ul style="list-style-type: none"> <li>• Expanded scenario analysis related to climate change               <ul style="list-style-type: none"> <li>- Implemented transition risk analysis targeting Japanese corporations</li> <li>- Implemented physical risk analysis targeting real estate finance</li> </ul> </li> <li>• Identified climate change opportunities</li> <li>• Made a roadmap for achieving carbon neutrality</li> <li>- Pursued initiatives aimed at reducing GHG emissions</li> </ul>	P12 P13 P18 P20 P21
Chapter 3: Risk Management	<ul style="list-style-type: none"> <li>• Established a Climate Change Risk Management Policy and clarified our general risk management policy, etc. based on the consideration of climate change</li> <li>• Set up a Climate Change Risk Management Team in the SuMi TRUST Bank Risk Management Department</li> <li>• Reviewed policies for specific sectors and clarified the policies based on existing risk</li> <li>• Made a sector-specific transition risk heat map and identified sectors that are important in terms of transition risk management</li> </ul>	P34  P35 P35 P38
Chapter 4: Metrics and Targets	<ul style="list-style-type: none"> <li>• Disclosed a sustainable finance breakdown</li> <li>• Disclosed information on Group-wide GHG emissions (Scope 1, Scope 2)</li> <li>• Disclosed our electric-power-sector GHG-emission interim reduction targets, part of our investment and loan portfolios</li> <li>• Disclosed our asset-management-portfolio GHG-emission interim reduction targets</li> <li>• Added corporate finance for new construction and expansion to our loan balance target for coal-fired power generation</li> <li>• Expanded the object of disclosure about our carbon-related assets exposure</li> </ul>	P42 P43 P45  P48 P48 P49

## ■ Response to TCFD Recommendations

	Details
Governance	<ul style="list-style-type: none"> <li>• Set up a Climate Change Adaptation and Mitigation Project Team to promote our cross-Group climate change response. The Executive Committee decides on important responses based on deliberation by project steering committees, the Business Risk Management Committee, etc.</li> <li>• Reported climate change response details and policies to the Board of Directors as well as the Risk Committee, an advisory body to the Board of Directors</li> <li>• Stipulated our Climate Change Risk Management Policy for our Risk Management Rules through the Board of Directors and clarified the roles and responsibilities of the Board of Directors, Executive Committee, and directors and officers as well as our three-lines-of-defense system and our risk management policies, etc. based on climate change considerations specific to each risk category</li> <li>• Changed to a system for which climate change and other ESG items are applied to performance evaluations in terms of the stock compensation of executive compensation</li> </ul>
Strategy	<ul style="list-style-type: none"> <li>• Identified transition and physical risks related to climate change. Conducted a scenario analysis based on portfolio characteristics to understand climate change related risks</li> <li>• Identified the demand for funds stemming from changes in social and industrial structures for carbon neutrality as opportunities and promoted transition support and impact evaluations</li> <li>• Created a roadmap for achieving carbon neutrality and promoted initiatives aimed at achieving net zero GHG emissions in the Group, investment and loan portfolios and asset management portfolios</li> </ul>
Risk Management	<ul style="list-style-type: none"> <li>• Positioned climate change risks as top-priority risks and integrated them into our Group-wide risk appetite framework while setting and managing risk appetite metrics</li> <li>• Identified climate change as a "risk driver" with cross-sectional influence on each risk category and stipulated risk management policies specific to climate change respectively</li> <li>• Clarified policies for specific sectors based on existing risk</li> <li>• Created a sector-specific climate change transition risk heat map to identify sectors important for our strategy</li> </ul>



#### ■ Response to TCFD Recommendations (Continued)

Metric	Target	Result
Group GHG emissions Scope 1, Scope 2	2030: net zero	23,763 t-CO <sub>2</sub> (end of March 2022)
GHG emissions in relation to our investment and loan portfolios	2050: net zero	83.1 million t-CO <sub>2</sub> e (end of March 2022)
Electric power sector	FY2030 138 to 173 g-CO <sub>2</sub> eq/kWh	249 g-CO <sub>2</sub> eq/kWh (end of March 2021)
GHG emissions in relation to our asset management portfolios		
Sumitomo Mitsui Trust Asset Management	2030: halves the emission intensity compared to 2019 for 50% of all assets under management* <sup>1</sup> 2050: net zero	—
Nikko Asset Management	2030: halves the emission intensity compared to 2019 for 43% of all assets under management* <sup>2</sup> 2050: net zero	—
Total amount of cumulative sustainable financing	Cumulative amount from FY2021 to FY2023: ¥10 trillion	¥0.83 trillion (end of March 2022)
Loan balance for coal-fired power generation	FY2040: zero	Project finance ¥142.7 billion (end of March 2022) Corporate lending (new/expansion) ¥20.1 billion (end of March 2022)
Exposure of carbon-related assets	—	¥15.6 trillion (end of March 2022)

\*1 Equal to approximately ¥43 trillion, or 50% of the total of ¥85 trillion in assets under management as of the end of June 2021

\*2 Equal to approximately ¥13 trillion, or 43% of the total of ¥31 trillion in assets under management as of the end of December 2021



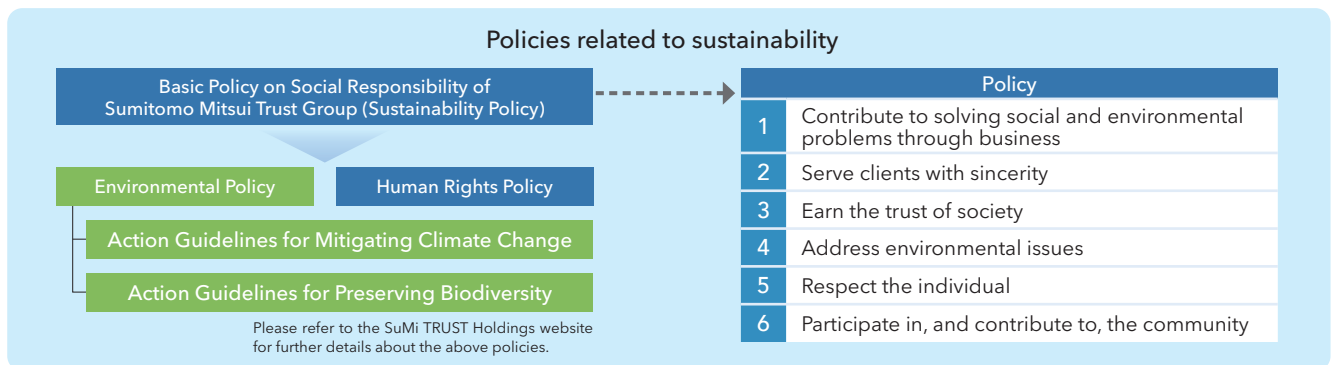
# Chapter 1

## Governance

### Climate Change Policy

The Group's Medium-Term Management Plan focuses on balanced creation of both social value and economic value, with the basic strategy of generating positive impacts geared towards solving social issues. Since climate change and other sustainability issues are one of

the most important social issues that the Group must resolve on a priority basis, we are working to develop Group-wide strategies and initiatives in collaboration with international organizations.



We have developed the following Environmental Policy as part of our policies related to sustainability.

#### Sumitomo Mitsui Trust Holdings Environmental Policy

##### 1. Provision of Products and Services

We will strive to reduce environmental risks and enhance environmental value for the society as a whole by providing financial products and services that contribute to the preservation of the global environment and the realization of a sustainable society.

##### 2. Environmental Load Reduction

We will strive to preserve the environment and realize a sustainable society through efforts toward energy conservation, resource conservation, and resource recycling based on the recognition of the burden imposed on the environment by the consumption of resources and the discharge of wastes involved in our business activities.

##### 3. Pollution Prevention

We will strive to ensure continuous verification and improvement of our environmental activities and make efforts to prevent pollution.

##### 4. Regulatory Compliance

We will comply with the laws, regulations, rules, and agreements concerning the preservation of the environment.

##### 5. Monitoring

We will strive to ensure the continuous improvement of our environmental activities by setting and periodically reviewing and revising environmental objectives and targets.

##### 6. Education & Training

We strive to ensure group-wide awareness of compliance with the Environmental Policy and to provide appropriate environmental education.

##### 7. Information Disclosure

We will strive to promote activities to preserve the environment through communications with external organizations by publicly disclosing the Environmental Policy.

In addition, we have established Action Guidelines for Mitigating Climate Change under our Environmental Policy, and we are making all directors, officers, and employees aware of this.

#### Action Guidelines for Mitigating Climate Change

##### 1. Implementation of Measures and Support to Help Mitigate Climate Change

In addition to actively taking measures to reduce greenhouse gas emissions in our own business operations, we are making efforts, as a corporate citizen, to support activities that mitigate and adapt to climate change.

##### 2. Provision of Products and Services

We are working on developing and providing products and services that help mitigate climate change. Our financial functions are being leveraged to promote energy conservation and encourage the use of renewable energy.

##### 3. Collaboration with Stakeholders

We engage in dialogue and cooperation with our stakeholders as we work to mitigate climate change.

##### 4. Education and Training

We will ensure that these guidelines are fully implemented at Group companies, and will actively conduct education and training to mitigate climate change.

##### 5. Information Disclosure

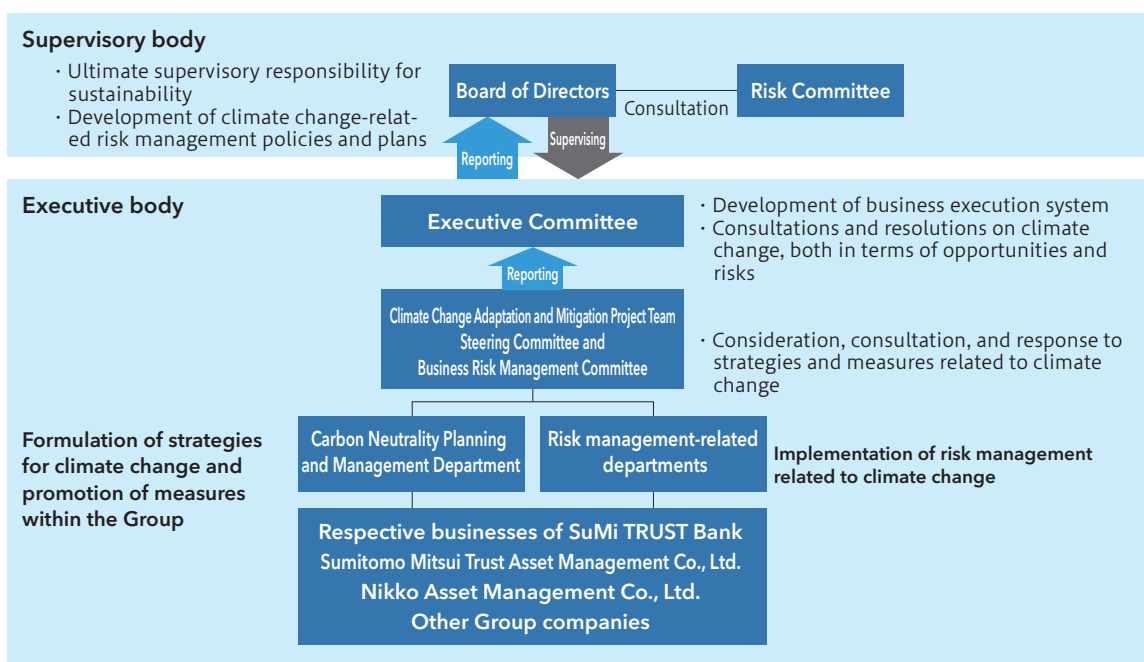
We will actively disclose information related to our efforts to mitigate climate change.

## Governance in the Context of Climate Change

SuMi TRUST Holdings recognizes climate change as a factor of risk and opportunity that can have a significant impact on financial markets and has established a governance system of supervision and execution centering on the Board of Directors. The Board of Directors, which is the supervisory body, has established the Risk Committee as its advisory body. This committee checks the execution status of the Company's climate change countermeasures and conducts flexible and in-depth discus-

sions on climate change for appropriate supervision. The Executive Committee, which is an executive body, has established the Business Risk Management Committee as its advisory body. It has also set up the Climate Change Adaptation and Mitigation Project Team to formulate strategies and take action on climate change across the Group. With these efforts, we have a system in place to address issues related to climate change through collaboration between each business and other Group companies.

### Climate Change Response Promotion Framework



### (1) Supervision

#### 1. Board of Directors (chairman: external director)

The Board of Directors establishes the Basic Policy on Social Responsibility (Sustainability Policy) and Environmental Policy to be implemented by each Group company and communicates information on the Group's climate change and sustainability course both within and outside of the Group. In addition, based on these policies, the Board of Directors receives reports from the execution side on the situation of initiatives related to climate change issues and utilizes the Risk Committee and other advisory bodies to the Board of Directors to supervise the situation.

In FY2022, to issue this report, the Board of Directors had four discussions based on climate change reports.

#### 2. Risk Committee (chairperson: external expert)

As an advisory body to the Board of Directors, the Risk Committee checks the status of the Group's adaptation status to climate change, conducts flexible and in-depth discussions on climate change, which include outside directors who possess exper-

tise on the subject, and reports to the Board of Directors on the Group's policies and strategies for addressing climate change.

In FY2022, to issue this report, the Risk Committee had four discussions based on climate change reports.

### (2) Execution

#### 1. Executive Committee (chairman: director and president)

The Executive Committee formulates various policies related to our response to climate change, develops business execution systems, and promotes our climate change response. During each term, this committee also confirms the status of our response, provides instructions on reviewing measures, and takes other steps to ensure a precise response.

In FY2022, the Executive Committee reported on the details of the activities of the Climate Change Adaptation and Mitigation Project Team while also discussing GHG-emission interim reduction targets for our electric-power-sector investment and loan portfolios in line with the NZBA framework as well as the establishment and revision of regulations for managing climate change risks.



## 2. Business Risk Management Committee (chairpersons: officers in charge of the Corporate Planning Department and Financial Planning Department (concurrently held position))

As an advisory body to the Executive Committee, the Business Risk Management Committee discusses matters related to the business management of the Group, ensuring financial soundness and the appropriateness of operations as well as managing risk and compliance. It also discusses and monitors these matters from the perspective of risk management because climate change risks affect both the financial and non-financial value of SuMi TRUST Holdings.

In addition, the Business Risk Management Committee discusses matters to be decided on or reported to the Executive

Committee in advance.

## 3. Climate Change Adaptation and Mitigation Project Team (PT)

The Climate Change Adaptation and Mitigation Project Team conducts Group-wide activities, including considering and promoting measures aimed at achieving the Carbon Neutral Commitment targets established by the Group in October 2021 as well as considering the strategies necessary to fully demonstrate the Group's functions and actively promote the transition to a decarbonized society. The status of this project team's activities is regularly discussed by this team's steering committee and the Business Risk Management Committee and then reported to the Executive Committee.

## Executive Compensation

In principle, compensation is paid with a combination of monthly compensation (comprising fixed compensation and individual role performance compensation), bonuses for directors and executive officers (performance-linked bonuses), and stock compensation (share delivery trust).

Given the increasing importance of the Group's sustainability management as well as the increasing focus of stakeholders on how executive compensation is affected by the ESG evaluation, the Compensation Committee has repeatedly discussed how to review executive compensation so that it will more effectively function as a sound incentive for ESG. As a result, for the FY2022 compensation system for directors and executive officers, the decision has been made to more heavily emphasize ESG in the stock compensation (share delivery trust) performance evaluation system.

### Main changes

- The previous system of taking qualitative assessments of ESG as a component added on to the near-term earnings-linked performance evaluation into account has been changed to a system under which a 1:1:1 ratio for near-term earnings, medium-term financial metrics, and ESG is reflected in the performance evaluation for stock-based remuneration.
- The ESG assessment categories have been reviewed in light of materiality and now comprise the following five categories: climate change, fiduciary duties (FD) & client satisfaction (CS), employee engagement, D&I (empowerment of women, etc.), and ESG assessment organizations. We have therefore changed to a system in which the Compensation Committee determines an overall ESG score by quantitatively and qualitatively assessing these five categories and reflecting it in executive compensation.

### Overview of the Compensation System

Types of compensation		Variable Fixed	Compensation weighting (standard)	
			President	Other than president
■Monthly compensation				
Fixed compensation	Fixed amount based on position held	Fixed	Around 40%	Around 45%
Individual role-linked performance compensation	Compensation that reflects a qualitative evaluation of mainly medium- to long-term earnings contributions and capabilities based on the expectations of the individual's role during the fiscal year (evaluated across five stages).	Variable	Around 20%	Around 25%
■Bonus for directors and executive officers				
Performance-linked bonus	Allocated according to the performance evaluation of each individual from the total amount determined with reference to the following indicators of near-term earnings: consolidated net business profit and net income attributable to owners of the parent.	Variable	Around 20%	Around 20%
■Stock compensation				
Share delivery trust	Stock compensation utilizing a trust scheme. Points are awarded every fiscal year and delivered in the form of shares upon resignation/retirement with reference to the following indicators of near-term earnings (consolidated net business profit and net income attributable to owners of the parent), medium-term earnings (consolidated shareholders' equity and ROE, consolidated CET1 ratio, etc.), and ESG-related activities. Malus (reduction/forfeiture prior to share delivery) and clawback (returned after share delivery) clauses are also applied.	Variable	Around 20%	Around 10%

## Performance Evaluation Indicators and Evaluation System

Category	Indicators (KPIs) for performance-linked compensation	KPI selection reason	Evaluation weight	Calculation method	Final determination method
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### ■ Bonus for directors and executive officers (Performance-linked bonus)

Linked to near-term earnings	1. Consolidated net business profit	Considered them as appropriate indicators of the Company's business results and capabilities in the fiscal year under review	66.7%	Calculated based on a weighted average with a 2:1 weighting on the achievement rates for 1 and 2, respectively	Determined by the Compensation Committee with special factors and the business environment taken into full account
	2. Net income attributable to owners of the parent		33.3%		

### ■ Stock compensation

Linked to near-term earnings	1. Consolidated net business profit	Considered them as appropriate indicators of the Company's business results and capabilities in the fiscal year under review	33.3%	22.2%	Achievement rate vs. target	Determined by the Compensation Committee with special factors and business environment taken into full account
	2. Net income attributable to owners of the parent			11.1%		
Linked to medium-term financial metrics	3. Consolidated shareholder's equity and ROE	Considered it as appropriate to select key financial indicators in the Company's Medium-Term Management Plan as KPIs	33.3%	11.1%	Evaluation score calculated based on qualitative assessment of progress on achieving Medium-Term Management targets	
	4. Consolidated CET1 ratio (common equity tier 1 capital ratio)			11.1%		
	5. Consolidated overhead ratio (OHR)			11.1%		
Linked to ESG	6. ESG overall assessment (categories: climate change, FD & CS activities, employee engagement, D&I (empowerment of women, etc.), and ESG assessment organizations)	Because—based on materiality considerations—we identified climate change, fiduciary duties (FD) & client satisfaction (CS), employee engagement, D&I (empowerment of women, etc.), and ESG assessment organizations as five important categories, and we decided that it would be appropriate to conduct an overall quantitative and qualitative evaluation of these categories in order to comprehensively evaluate ESG	33.3%	Evaluation score calculated based on overall assessment comprising both quantitative and qualitative evaluations of activities in each assessment category	Achievement rate is capped at 130% with a lower limit of 0%	



# Chapter 2

## Strategy

### Our Approach to Climate Change

#### Awareness of climate change issues

Climate change is one of the most serious environmental issues that threaten the sustainability of the global economy and society. Around the world, abnormal weather—including wind and flood damage in particular—is becoming ever more extreme, and the impact of this is starting to materialize: promoting inequality and poverty, which have a negative effect on the weak including developing countries, and becoming a financial risk of traditional financial businesses such as loan and insurance services for companies, individuals, real estates and projects.

At the same time, to control global warming—the main cause of climate change—at a level consistent with the Paris Agreement, it is essential to develop new technologies which help reduce, absorb and utilize greenhouse gases and to socially implement them in various countries and regions. Financial institutions have a mission that includes not only responding to massive funding demands—which cannot be covered by financial support from the government alone—but also organically integrating the knowledge and know-how of parties related to climate change such as companies, local governments and researchers and actively facilitating commercialization of them.

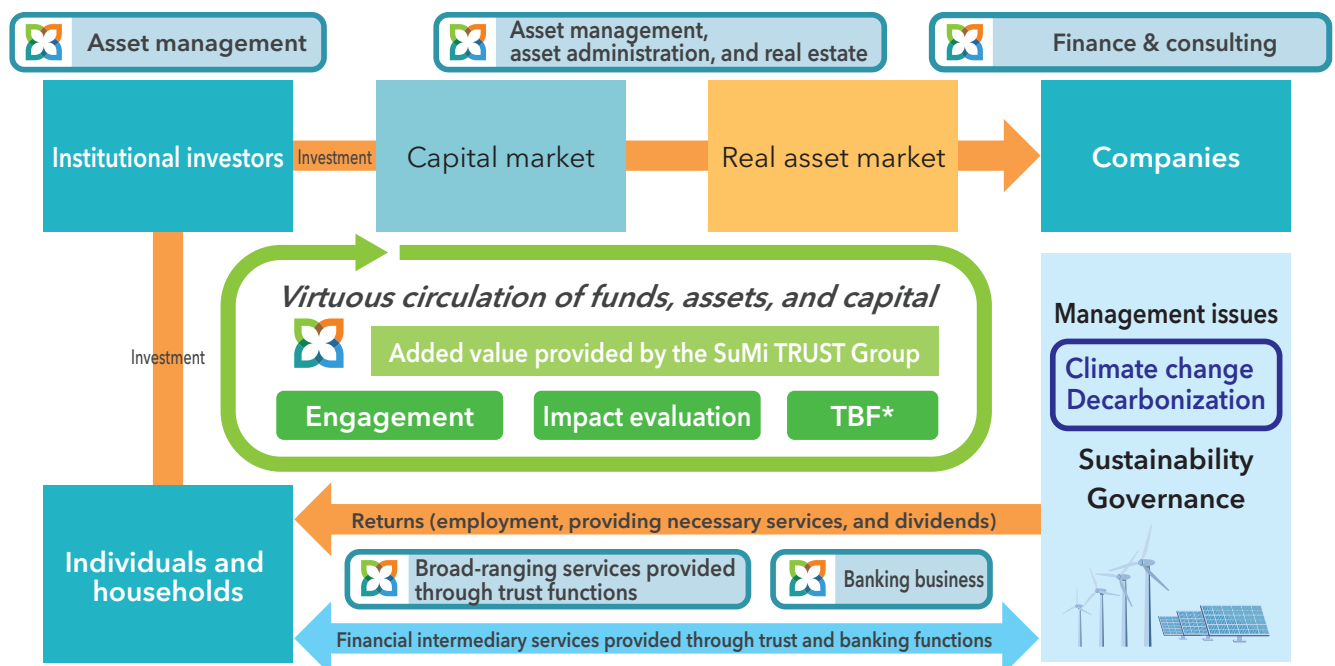
In addition, to resolve climate change issues, it is also necessary to deal with complicated interests which derive from existing legal systems, life styles and corporate activities. It is therefore important to steadily promote the transition to a carbon-neutral society, while collaborating with a diverse range of stakeholders and considering the negative effects on the weak.

#### The Group's risks and opportunities

Given the above, we consider the most important factors that facilitate or inhibit the Group's value creation process to be issues of "materiality," one of which is "ESG/Sustainable management," which includes "climate change". Under the Group's shared Action Guidelines for Mitigating Climate Change, we strive to maintain an appropriate awareness of risks and opportunities stemming from climate change, and—through our diverse lines of business as a trust banking group—we endeavor to minimize our negative impact while maximizing our positive effects.

More specifically, we have defined physical damage to social infrastructure and nature due to medium- to long-term climate change and abnormal weather (physical risks) as well as the rapid transition to a low-carbon society through changes of climate change-related policies, changes of market preferences/social norms, and technological innovations (transition risks) as climate change-related risks, and we strive to limit greenhouse gas emissions due to our business activities while also implementing risk management and monitoring targeting our orderly investments and loans, which are governed by policies for specific sectors, etc. At the same time, we hope to contribute to the circulation of funds between individuals (households), companies, and investors, by providing investments and loans that promote the use and utilization of solar power, wind power, and other forms of renewable energy, creating new opportunities for investment—such as in the establishment of locally produced and consumed renewable energy business—and making the Group's own investment a trigger.

#### Virtuous circulation in sustainable areas

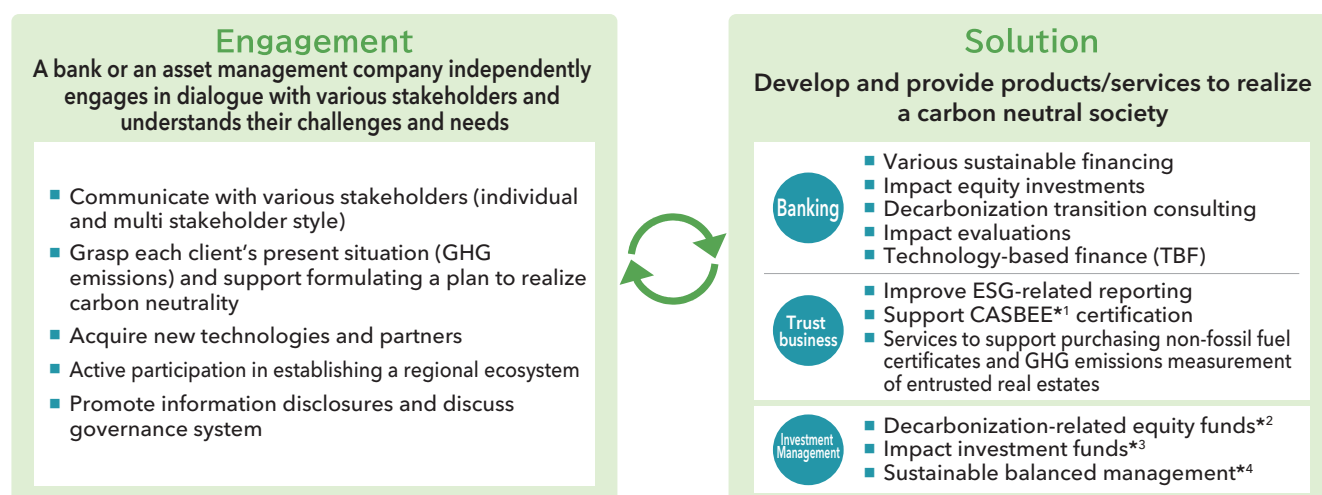


\*Technology-based Finance Team

## Engagement & Solutions

When pursuing these initiatives, the Group will engage in sincere dialogue with various stakeholders regarding climate change issues and emphasize various approaches (engagement) based on a deep understanding and analysis of the relevant issues and needs. In addition, the Group will fully utilize its in-

ternal functions—including banking, trusts, real estate, asset management, and asset administration—to take on the challenge of developing and providing innovative products and services (solutions), thereby contributing to the transition of borrowers and investees as well as society as a whole.



## Contribution to realizing a carbon neutral society, utilizing SuMi TRUST Group's functions

\*1: Environmental performance evaluation system developed as a joint project with industry, government and academia, and supported by the Ministry of Land, Infrastructure, Transport and Tourism

\*2: Equity funds which invest in global companies active in decarbonization

\*3: Equity funds which aim to realize both measurable environmental/positive impact on the society as well as economic returns

\*4: Investment products for corporate pensions which make diversified investments in domestic and foreign bonds and stocks, while pursuing restraint of CO<sub>2</sub> emissions in portfolios

## Awareness of Climate Change Risks

### SuMi TRUST Bank scenario analysis

The Group has conducted scenario analysis to better understand how transition and physical risks will affect our investment and loan portfolios in the future.

SuMi TRUST Bank considers scenario analysis to be a tool for confirming the sustainability of our business model and strategy, confirming effects on our management plan, and achieving climate change dialogue and engagement with clients, and we have started implementing initiatives based on portfolio characteristics, etc.

Regarding transition risks, in 2020, we began our analysis

with the electric power sector, which accounts for a high percentage of carbon-related assets. In 2021, we selected the marine transportation sector, which is extremely important in terms of our investment and loan portfolios, conducted a fiscal-simulation-based scenario analysis, and exchanged opinions with clients.

Regarding physical risks, we conducted risk analyses assuming damage by river flooding as acute-risk-scenario analyses, targeting mortgage loans in 2020 and real estate non-recourse loans in 2022.

### SuMi TRUST Bank's scenario analysis and initiatives until now

Risk type	Sector	Fiscal year	Main analysis results
Transition risks	Electric power sector	FY2020	If electric power companies do not invest in renewable energy, their credit ratings will be downgraded by two to three notches on average.
Physical risks	Mortgage loans	FY2020	¥7 billion increase in total credit costs compared to 2019.
Transition risks	Marine transportation sector	FY2021	There is a major difference in the financial impact depending on the assumed scenarios in terms of the carbon price, increase in costs due to the shift to alternative fuel, etc. We also exchanged opinions with borrower and clients.
Physical risks	Real estate sector (non-recourse loans)	FY2022	Limited effect on the credit rating. Issues include the need to refine the estimated amount of damage in the city center as well as potential risks that include damage to underground infrastructure and the effects of such damage becoming chronic.

For our most recent transition risk analysis, we expanded the target sectors to include all domestic sectors and the target borrowers to include all domestic corporate borrowers (loan balance: ¥16,905.6 billion), and we conducted a simulation of changes in credit ratings up through 2050 for each NGFS (Network of Central Banks and Supervisors for Greening the Financial System) climate change scenario to analyze potential effects on total credit costs. Regarding our analysis method, we conducted a credit-rating simulation analysis that combined a top-down sector-level analysis covering every sector, with a bottom-up fiscal simulation analysis at the individual company level covering sectors judged to have a high transition risks according to our climate change transition risk sector heat map (see page 38).

For our most recent physical risk analysis, we selected real estate investment trusts (REITs) (loan balance: ¥840.9 billion) from the real estate sector as the target, we added storm surges to the river flood-

ing conventionally included in the acute risk targets, and we utilized our property data to analyze the financial impact of climate change up through 2100.

Based on our analysis, in terms of our transition risk analysis, we found that, compared to the Current Policies (3.0°C) scenario, total credit costs will increase by ¥9.2 billion on a cumulative basis by 2050 in the case of the Net Zero 2050 (1.4°C) scenario and by ¥13.5 billion in the case of the Delayed Transition (1.6°C) scenario. Similarly, in the case of the Below 2°C (1.6°C) scenario, we calculated that total credit costs will decrease by ¥1.2 billion.

In terms of our physical risk analysis, we found that the effect on total credit costs would be limited to around ¥20 million even if it is assumed that all properties are suffered damage by a disaster expected to occur only once in 500 years at the same time.

#### ■ Scenario analysis overview

Risk type	Transition risks	Physical risks
Risk details	Policy and regulatory changes Supply and demand changes	Flood damage (river floods, storm surges (to be added))
Scenarios	NGFS scenarios • Current Policies (3°C scenario) • Below 2°C (1.6°C scenario) • Net Zero 2050 (1.4°C scenario) • Delayed Transition (1.6°C scenario)	IPCC*1 RCP2.6*2 (2°C scenario) RCP8.5 (4°C scenario)
Analysis targets	Domestic sectors Domestic corporations	Domestic real estate sector Domestic real estate investment trusts (REITs) (to be added)
Analysis period	Up through 2050	Up through 2100
Analysis indicators	Amount of financial impact on total credit costs	Amount of financial impact on total credit costs
Analysis results	Cumulative basis compared to Current Policies • Below 2°C: -¥1.2 billion • Net Zero 2050: +¥9.2 billion • Delayed Transition: +¥13.5 billion	Even if every property owned by each REIT sustains damage expected to occur only once in 500 years—based on the RCP8.5 scenario—damage is expected to be limited to a maximum of approximately ¥20 million on a single year basis.

	Scenario		Assumptions, etc.
NGFS scenarios	Orderly	Net Zero 2050	A scenario that limits global warming to 1.5°C through stringent regulations and innovation, reaching net zero CO <sub>2</sub> emissions by around 2050
		Below 2°C	A scenario that gradually increases the stringency of regulations, giving a 67% chance of limiting global warming to below 2°C
	Disorderly	Delayed Transition	A scenario that assumes that GHG emissions do not decrease until 2030, which means strong policies would then be needed to limit global warming to below 2°C
	Hot house world	Current Policies	A scenario that assumes that only currently implemented policies are maintained, leading to high physical risks
IPCC scenarios	RCP2.6 scenario		A stringent scenario aimed at limiting the future global temperature rise to below 2°C. Under this scenario, the global temperature is predicted to rise by 0.3 to 1.7°C by 2100 (compared to before industrialization).
	RCP8.5 scenario		An extremely high GHG emission scenario. Under this scenario, the global temperature is predicted to rise by 2.6 to 4.8°C by 2100 (compared to before industrialization).

\*1 The Intergovernmental Panel on Climate Change (IPCC): Established by the United Nations Environment Programme (UNEP) and World Meteorological Organization (WMO), this organization comprehensively evaluates and analyzes anthropogenic climate change, its effects, and policies to adapt to and mitigate it from a scientific, technical, and socioeconomic perspective and then recommends measures based on the results.

\*2 Representative Concentration Pathways. The numbers, such as 2.6 and 8.5, indicate the global warming effect (called radiative forcing).



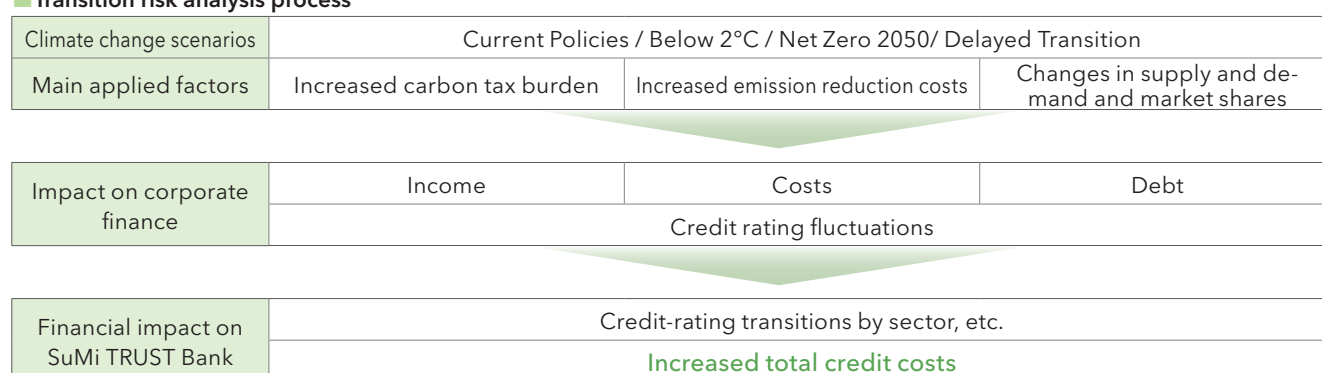
## (1) Transition risk

### Process

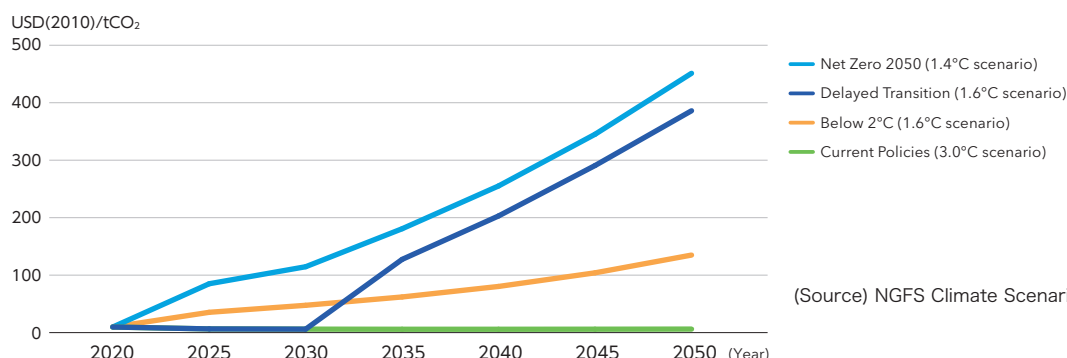
Changes in policies, regulations, and the industrial structure caused by the transition to a decarbonized society are assumed to change the carbon price (carbon tax) and supply and demand, thereby affecting the business of clients. For our recent scenario analysis, we assumed that our exposure as of the end of September 2022 will remain unchanged up through 2050, and we simulated the effects on the credit ratings and total credit costs of borrowers in the case of each climate change scenario.

Note that, for this simulation, we selected a sample of borrowers in each sector, performed calculations to determine credit-rating transitions based on financial data, expected emission data, etc., and estimated the overall sector credit-rating transitions based on this. Individual factors—such as assumed future business model changes as well as capital investment plans aimed at achieving decarbonization and their effects—were not incorporated into this simulation.

### Transition risk analysis process



### Expected carbon price (carbon tax) assumed for each NGFS scenario



(Source) NGFS Climate Scenario Database, REMIND model

### Analysis results

Compared to the Current Policies (3.0°C) scenario, our results indicated a cumulative increase in total credit costs by 2050 of ¥9.2 billion in the case of the Net Zero 2050 (1.4°C) scenario. Similarly, our results indicated a cumulative decrease of ¥1.2 billion in the case of the Below 2°C (1.6°C scenario). Finally, in the case of the Delayed Transition (1.6°C scenario)—which assumes delays in promoting decarbonization initiatives and a rapid rise in the carbon tax—our results indicated an increase of ¥13.5 billion, a major difference compared to the other cases. Even considering the above, our current simulation results suggest a relatively minor financial impact.

### Future issues

Based on our analysis, because the carbon price (carbon tax) level differs considerably between NGFS scenarios, there is a tendency for sectors and companies with high GHG emissions to face a heavy burden, with high total credit costs as a result.

In terms of the burden of decarbonization-related capital investment as well as research and development costs, we will continue endeavoring to make our analysis more sophisticated, such as by suitably incorporating positive aspects, including mitigation effects of carbon taxes, government subsidies that use carbon taxes as funds, and competitive advantages in the market. In this sense, we will reaffirm the importance of engaging with clients to gain a suitable understanding of risks and provide support to help facilitate the transition to a decarbonized society.

## (2) Physical risk

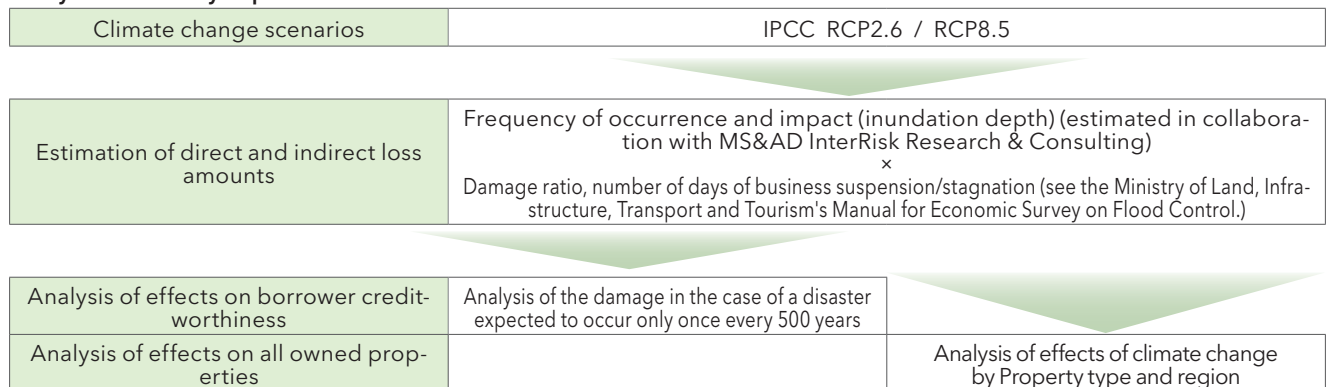
### Process

For this analysis, we collaborated with MS&AD InterRisk Research & Consulting, and—based on the location information of individual properties—we used Jupiter Intelligence's Climate Score Global (CSG) model to estimate the probability of damage due to river floods and storm surges as well as the extent of such damage (inundation depth) based on the geography, changes in precipitation, etc. Based on the above, we used the Ministry of Land, Infrastructure, Transport and Tourism's Manual for

Economic Survey on Flood Control to apply the inundation-depth-specific physical building damage rates (direct impact) and business suspension periods (indirect impact) to our analysis in order to simulate the LTV (Loan to Value, ratio of debt to asset value) and credit ratings.

In addition to analyzing the financial impact of changes in REIT creditworthiness on SuMi TRUST Bank, we also used data on all properties to analyze the degree of the impact of climate change by property type and region.

### Physical risk analysis process



### Analysis results

#### • Effects on borrower creditworthiness

For simplified analysis of the financial impact assuming a stress scenario, we calculated the losses we could expect if every REIT-owned property were hit by a disaster (floods, storm surges) expected to occur only once in 500 years at the same time, and we applied this to the LTV to analyze the resulting effect on credit ratings. As a result, we found that there would only be a minor effect on the total credit costs due to decreased credit ratings, estimated to be no more than around ¥20 million even in the IPCC RCP8.5 (4°C) scenario. In practice, because the properties owned by REITs are diversified in their respective regions, there is little possibility of them being hit by a disaster at the same time, which means that there would likely be even less of an effect on creditworthiness in the event of damage due to an acute risk.

#### • Analysis of owned properties overall

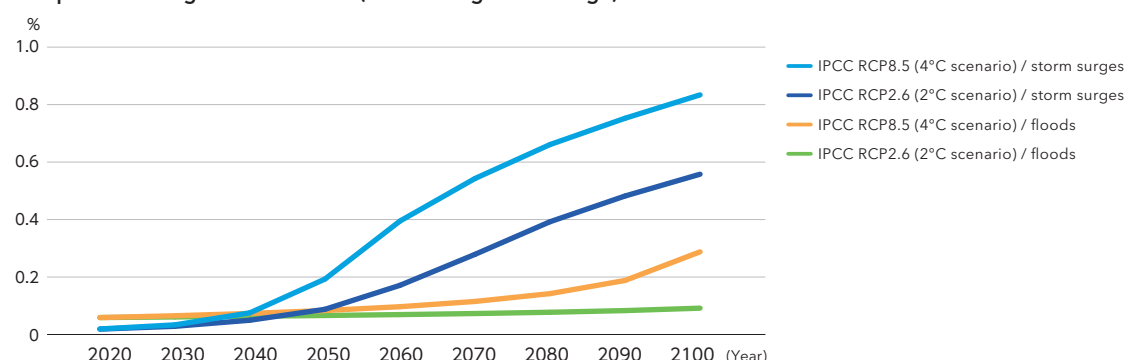
We used the same approach for all the properties owned by REITs to estimate the expected damage ratio (event probability  $\times$  damage ratio) in the case of the IPCC RCP2.6 (2°C) versus the IPCC RCP8.5 (4°C) climate change scenario up through 2100 in order to analyze changes over time by Property type.

When we look at the changes over time, we can see that, compared to river floods, storm surges have a larger impact, with a rapid increase starting in 2040 in the case of the IPCC RCP8.5 (4°C) scenario in particular.

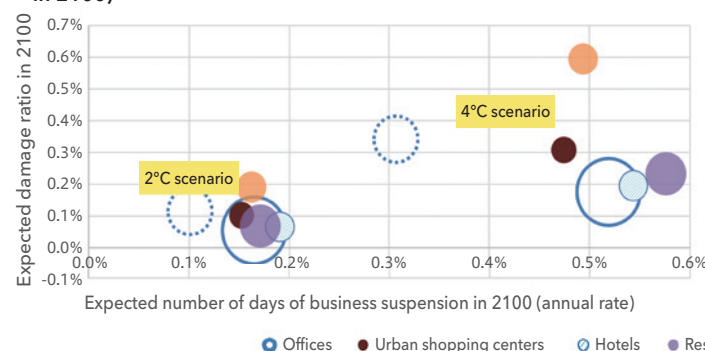
When we look at the results by property type, we can see that—due to location characteristics—logistic facilities and suburban commercial facilities are exposed to relatively higher risk of flood damage.

### Acute risk of river floods and storm surges in the 2°C scenario versus the 4°C scenario

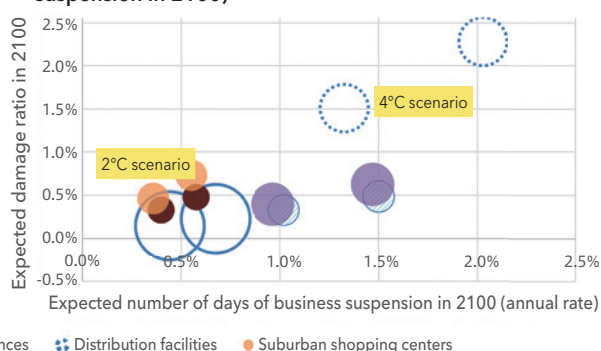
#### Expected damage ratio over time (overall weighted average)



■ Acute risks by climate change scenario (river floods)  
(expected damage ratio and number of days of business suspension in 2100)



■ Acute risks by climate change scenario (storm surges)  
(expected damage ratio and number of days of business suspension in 2100)



### Future issues

- For this physical risk analysis, we assumed that each REIT suffers the maximum disaster-related losses, but—given the disaster-risk correlation between properties as well as the fact that property damage differs depending on the type of the property even assuming the same inundation depth—we believe it is necessary to conduct a credit risk simulation based on the consideration of these and other factors.
- In addition, given that natural disasters are expected to increase in terms of both frequency and severity due to global warming, we have become more aware of the need to effectively communicate with clients—including suitably evaluating risk mitigation measures taken for individual properties to deal with possible disasters (both tangible measures that include setting up floodwalls and drainage equipment and intangible measures that include BCP formulation)—and to provide financial support simultaneously.
- For our property type analysis, because our trial calculations were based on the assumption that taller buildings would have a lower damage ratio than shorter ones, our results suggest a relatively minor effect on office properties. However, we still do not understand the effects of disasters that we have not yet experienced, for example, caused by possible storm surges and river floods in urban areas: cases where underground structures suffer severe damage, cases where regional infrastructures are affected as a whole, and differences between regions in terms of restoration costs and capacity to bear the related financial burden.

Simulations at disasters utilizing digital technologies including simulations of the Integrated Engineering System Research and Development Partnership\*, which SuMi TRUST Bank joins,—and we will work on both accumulating data and improving our analysis.

\* A collaborative project involving the participation of private companies that include general contractors, infrastructure, consulting, IT, and financial institutions as well as researchers from Kobe University, the University of Tokyo, other universities, the RIKEN Center for Computational Science, the Japan Agency for Marine-Earth Science and Technology, and other research institutes in order to a) build a multi-scenario simulation model based on integrated analysis technology by automatically extracting and integrating necessary data from a diverse set of attribute data and b) use this model to pursue research and development related to technologies aimed at increasing the robustness of city disaster prevention efforts. The aim is to achieve a more sophisticated city disaster prevention simulation by utilizing digital twin technology (obtaining information that exists in the real world (physical space) and then reproducing a copy of this information in the virtual world (digital space)).

### (3) Towards future scenario analysis

SuMi TRUST Bank's portfolios have a relatively high degree of exposure to corporations—especially large ones—as well as real estate finance, project finance, and other asset finance.

In the future, we plan to conduct an analysis focused on physical risks related to renewable energy project finance, including solar and wind power, which are becoming more important in terms of SuMi TRUST Bank's asset finance portfolios.

## Climate-related portfolio analysis by Sumitomo Mitsui Trust Asset Management

Sumitomo Mitsui Trust Asset Management (SMTAM) evaluates risks of managed assets related to climate change by asset class first, and then integrating the asset classes and evaluate all owned assets. SMTAM uses two assessment methods: (1) a fixed-point analysis based on information disclosed by companies in our portfolios as well as actual values and (2) a transition path analysis based on future climate change scenarios. An overview of the results of analyzing the domestic and foreign stocks and bonds managed by SMTAM is provided below. Note that an external organization's\*1 data and analysis methods were used for this analysis (reference date: June 30, 2022).

### 1. Fixed-point analysis (GHG emissions, etc.)

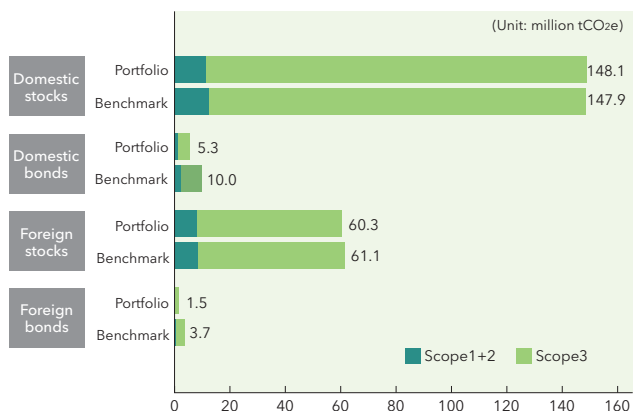
This is an attempt to ascertain the status of GHG emissions and other conditions at a fixed point in time, based on investee companies' disclosure data and other information.

Our analysis considered domestic and foreign stocks and bonds, and the total carbon emissions (Scope 1 and 2) for each asset were both below the benchmark and lower than last year (as of the end of June 2021). However,

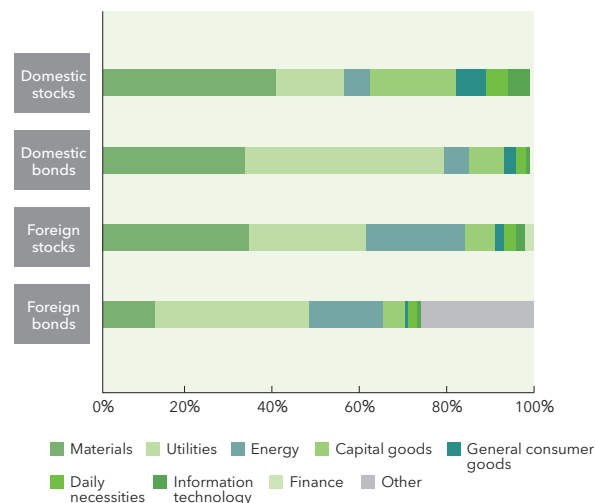
regarding Scope 3, emissions increased from the previous year in three types of assets except foreign bonds, affected largely by changes in the external organization methodology (the use of values announced by companies that fulfilled the conditions, the subdivision of industry categories in the estimation model and the expansion of target categories for estimation). The effect on domestic stocks was especially large, and total emissions (Scope 1, 2, and 3) did an about-face compared to the previous year, ending up slightly higher than the benchmark. The utilities and materials sectors continued to account for a large portion of the total for each asset in terms of emissions by industry.

At the same time, as was also the case last year, the weighted average carbon emissions (emissions per unit of sales, Scope 1 and 2) are also lower than the benchmark for each asset. The large value of domestic bonds is likely due to the large share of the utilities sector, including electric power companies. Although foreign stocks are also large in value, this could be due to the relatively large holdings of stocks issued by companies in the utilities and materials sectors in China and Asia.

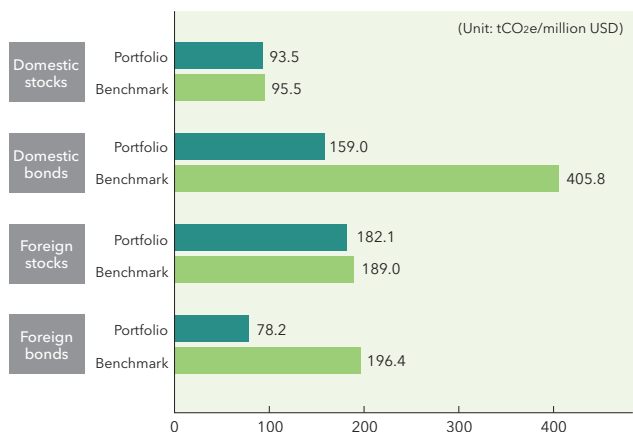
■ GHG emissions by asset class \*2 \*4 \*5



■ Composition of GHG emissions by industry \*3 \*5



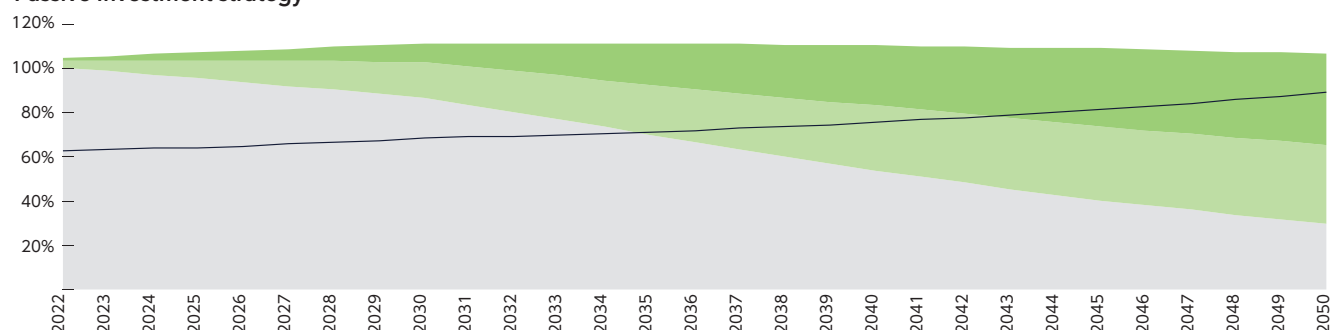
■ Weighted average carbon emissions (emissions per unit of sales) \*3 \*4 \*5



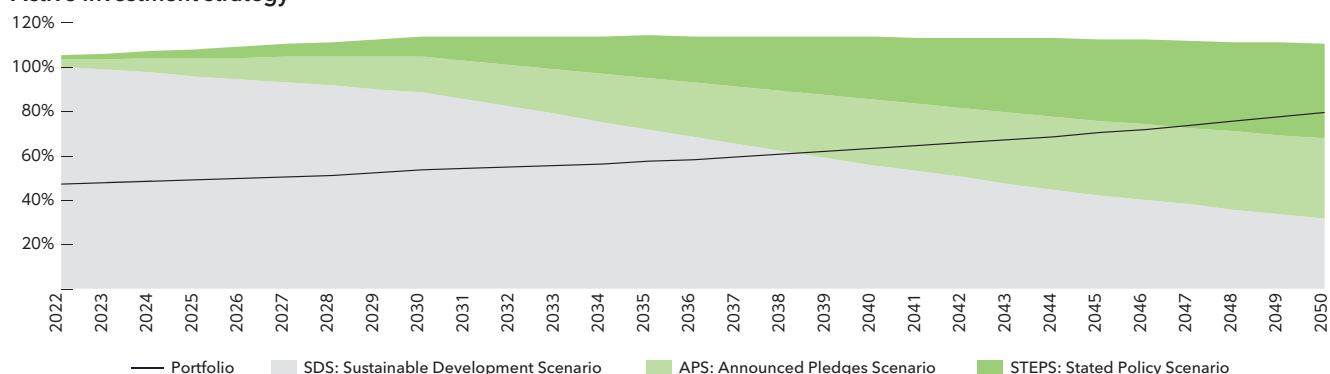
## 2. Transition path analysis

■ Comparison of projected pathways of GHG emissions for all SMTAM-managed assets and emission budgets for each climate change scenario \*5 \*\*

### Passive investment strategy



### Active investment strategy



Transition pathway analysis assesses how the portfolio's climate change risks will change in the face of different scenarios for future climate change. The estimates of the portfolio's future GHG emissions are compared with the projected carbon budgets calculated according to different climate change scenarios, and this produces an assessment of the portfolio's compatibility with different climate change scenarios (climate resilience). The evaluation is based specifically on three scenarios: the International Energy Agency's (IEA's)\*7 SDS\*8 (Sustainable Development Scenario), STEPS (Stated Policy Scenario), and APS (Announced Pledged Scenario).

For this report, we decided to separately disclose our analysis for our passive investment strategy and active investment strategy. Our analysis confirms that the total emissions of all SMTAM-managed assets (domestic and foreign stocks and bonds) are likely to reach the level permitted under the SDS scenario in 2035 in the case of our passive investment strategy and in 2039 in the case of our active investment strategy. Last year, we confirmed that the total emissions of all managed assets (active investment strategy + passive investment strategy) were likely to reach the level permitted under the SDS scenario by around 2032, but there have been improvements since then. The relative inferiority of our passive investment strategy is due to the fact that, compared to our active investment strategy, we own a larger share of stocks and bonds in the domestic and foreign (especially Asia) utilities and materials sectors.

Based on our overall analysis results until now, in order

to effectively reduce greenhouse gases emitted as a result of SMTAM-managed assets, we believe it is important to do two things for domestic and foreign stocks by assets as well as investee companies in the materials, utilities, and energy sectors over all assets: a) further enhance initiatives aimed at addressing climate change issues through engagement and the exercising of voting rights and b) identify investment opportunities by considering climate change-related risks and opportunities and then present such opportunities to clients.

\*1 ISS (Institutional Shareholder Services)

\*2 Based on Scope 1, 2, and 3

\*3 Based on Scope 1 and 2

\*4 The benchmarks are as follows:

Domestic stocks: TOPIX

Domestic bonds: NOMURA-BPI Overall (corporate bonds only)

Foreign stocks: MSCI-ACWI (ex-Japan)

Foreign bonds: Bloomberg Global-Aggregate (excluding Japan) (corporate bonds only)

\*5 Adjusted for each asset. Calculated on the basis of assets owned by SMTAM against the corporate value.

\*6 All industries except fossil fuel producing industries: Scope 1 and 2

Fossil fuel producing industries: Scope 3, Electric power: Scope 1

\*7 International Energy Agency (IEA): An autonomous agency set up under the framework of the OECD that handles tasks including conducting surveys, research, etc. related to energy policies.

\*8 Sustainable Development Scenario (SDS): A scenario aimed at sustainable development of the world. This scenario is aligned with the goal of the Paris Agreement to stay well below +2 degrees Celsius and limit global warming to +1.5 degrees Celsius.

Stated Policy Scenario (STEPS): A scenario for achieving policy measures and for achieving the goals stated by the government (+2.6 degrees Celsius at the end of this century).

Announced Pledges Scenario (APS): A scenario of announced pledges, and that assumes that various countries fulfill the ambitious targets they have declared (+2.1 degrees Celsius at the end of this century).



### 3. Survey of climate-related targets

Before, SMTAM confirmed that there are more than a few investee companies in the managed asset portfolio that are not actively addressing climate change issues. We therefore consider it important to increase the number of investee companies that have set ambitious targets and are committed to the SBTs\*<sup>9</sup> or have obtained SBT accreditation, and we actively approach investee companies in this regard. Based on the results of this survey, the percentage of companies with SBT accreditation increased from 18% to 30% year-on-year in the case of domestic assets and from 23% to 32% in the case of foreign assets. At the same time, the percentage of companies

with no targets decreased from 37% to 30% year-on-year in the case of domestic assets and from 27% to 19% in the case of foreign assets, suggesting great overall results. We will continue working to keep this trend going.

\*<sup>9</sup> SBT (Science Based Targets): GHG emission reduction target set by companies for the next 5 to 15 years, according to the standards specified by the Paris Agreement. The numbers must be consistent with the indicators required by the latest weather science. SBT is implemented as one of the WMB (We Mean Business) initiatives, and is established and operated by WMB organizations such as the World Resources Institute (WRI) and CDP. SBT accreditation: Having targets accredited by the organization mentioned above. Even after accreditation, the amount of emissions and the progress made on the measures must be disclosed every year, and the adequacy of the targets must be checked periodically. SBT commitment: committing to setting SBT targets within two years

#### **Collaborative survey with the Japan Research Institute**

During the seven-month period from September 2021 to March 2022, SMTAM conducted a collaborative survey with the Japan Research Institute in order to promote the formulation of strategies to contribute to the achievement of carbon neutrality in Japan, including "promoting engagement offering added value" and "finding investment opportunities". Japan Research Institute researchers with expert knowledge in the climate change field, SMTAM corporate analysts specialized in the industry, and ESG specialists combined their know-how to conduct the survey by following the steps below.

#### **(1) Confirming the current situation of the GHG emissions of the SMTAM 200 companies\*<sup>10</sup>**

- Confirming the gap between the Japanese government's GHG reduction targets (top-down scenario) and the reduction plans of the SMTAM 200 companies (bottom-up scenario)
- Confirming composition ratios by industry and Scope

#### **(2) Conducting scenario analysis aimed at reducing the GHG emissions of the SMTAM 200 companies**

#### **(3) Identifying priority areas (industries, technologies, etc.) aimed at the achievement of government targets by the SMTAM 200 companies**

#### **(4) Identifying the SMTAM carbon neutrality strategy (summary)**

SMTAM believes that—to help ensure reliable transition progress in the name of achieving carbon neutrality by 2050—it is important for investee companies to set ambitious targets and for them to disclose information about this. We also believe that it is necessary to set 2030 interim reduction targets as a way to cross the considerable bridge leading to carbon neutrality. However, we are also aware of the fact that there are many companies that have not formulated specific transition plans, business plans, or funding plans even if they have set interim reduction targets. It is necessary for each company to aim to achieve a decarbonized society and increase the accuracy with which they attempt this without compromising their economic performance. As an example, in anticipation of the GHG emission reduction targets for 2030 and 2050, it is necessary to adopt a longer-term perspective than ever before and formulate business and investment plans based on ten-year periods. SMTAM hopes to help realize initiatives and provide support through engagement based on an accurate understanding of the different situations and business environments faced by investee companies. We believe that it is the role of SMTAM to help achieve carbon neutrality by 2050 by providing support for corporate initiatives aimed at the realization of carbon neutrality through the provision of the transition funds necessary for investee companies to take steady action, and, by fulfilling our role, we will work with investee companies to help bring about the major transformation of social and industrial structures that carbon neutrality demands.

\*<sup>10</sup> 200 domestic-stock investee companies with high GHG emissions

## Nikko Asset Management's climate-related portfolio analysis

While TCFD recognizes the challenges and limitations of current carbon footprint indicators, it recommends using weighted average carbon intensity.

The table below shows the major active equity strategies and overall domestic equity funds, managed by Nikko Asset Management (Nikko AM) as of the end of December 2021, as well as the weighted average car-

bon intensity (WACI) of their benchmarks. Of these, overall domestic equity investment accounts for approximately 43% of Nikko AM's overall managed assets (approximately ¥31 trillion), and its weighted carbon intensity (80.5 t-CO<sub>2</sub>e/US\$ 100 million) is lower than the benchmark (90.3 t-CO<sub>2</sub>e/US\$ 100 million).

Representative Funds	Benchmark	Portfolio WACI (tCO <sub>2</sub> e/US\$M Sales)	Benchmark WACI (tCO <sub>2</sub> e/US\$M Sales)
Global Equity	MSCI ACWI	34.4	136.1
Asia Equity (ex Japan)	MSCI AC Asia ex Japan	292.1	277.8
China Equity	CSI 300	148.9	235.1
New Zealand Equity	S&P/NZX 50 Index Gross with Imputation	107.7	119.3
Japan Equity Growth	TOPIX Total Return Index	83.5	90.3
Japan Equity Fundamental Value	TOPIX Total Return Index	119.1	90.3
Japan Equity Core	TOPIX Total Return Index	83.4	90.3
Japan Equity Research Active	TOPIX Total Return Index	108.9	90.3
Japan Equity Enhanced Index	TOPIX Total Return Index	62.3	90.3
Overall domestic equity investment	TOPIX Total Return Index	80.5	90.3

We are aware that there are currently industry-wide issues related to analyzing managed assets, including the necessary data and suitable analysis methods. Nikko AM will therefore continue to pay close attention to the progress of information disclosure by companies as well as global trends in analysis methods.

In this field, there is rapid progress in terms of the development of analysis tools for handling various climate change risks, including transition and physical risks. Although the macro-level effects of climate change are

becoming clearer thanks to the research of experts on the front line, there is still a high degree of uncertainty at the regional and corporate levels, and issues remain regarding the quality of environmental data disclosed by companies as well. Nikko AM is well aware of this and has therefore finished verifying and introducing various scenario analysis tools while also promoting the increased sophistication of analysis and disclosure related to climate change.

## Awareness of Climate Change Opportunities

As social and industrial structures start to radically transform to achieve a decarbonized society, a huge amount of funds has become necessary for technological development and capital investment. According to trial calculations by the Japanese government, Japan alone will require ¥150 trillion in funds by 2030.

### Expected carbon neutrality investment in Japan by 2030

Major investment field	¥17 trillion per year
Power decarbonization/fuel switching	Approximately ¥5 trillion
Manufacturing process decarbonization, etc.	Approximately ¥2 trillion
End use	Approximately ¥4 trillion
Infrastructure development	Approximately ¥4 trillion
Research and development, etc.	Approximately ¥2 trillion

**Approximately ¥150 trillion in ten years**

(with ¥20 trillion expected to be covered by the issuance of GX transition bonds (government bonds) and the remaining ¥130 trillion expected to be covered by private investment)

(Source) Clean Energy Strategy, Ministry of Economy, Trade and Industry

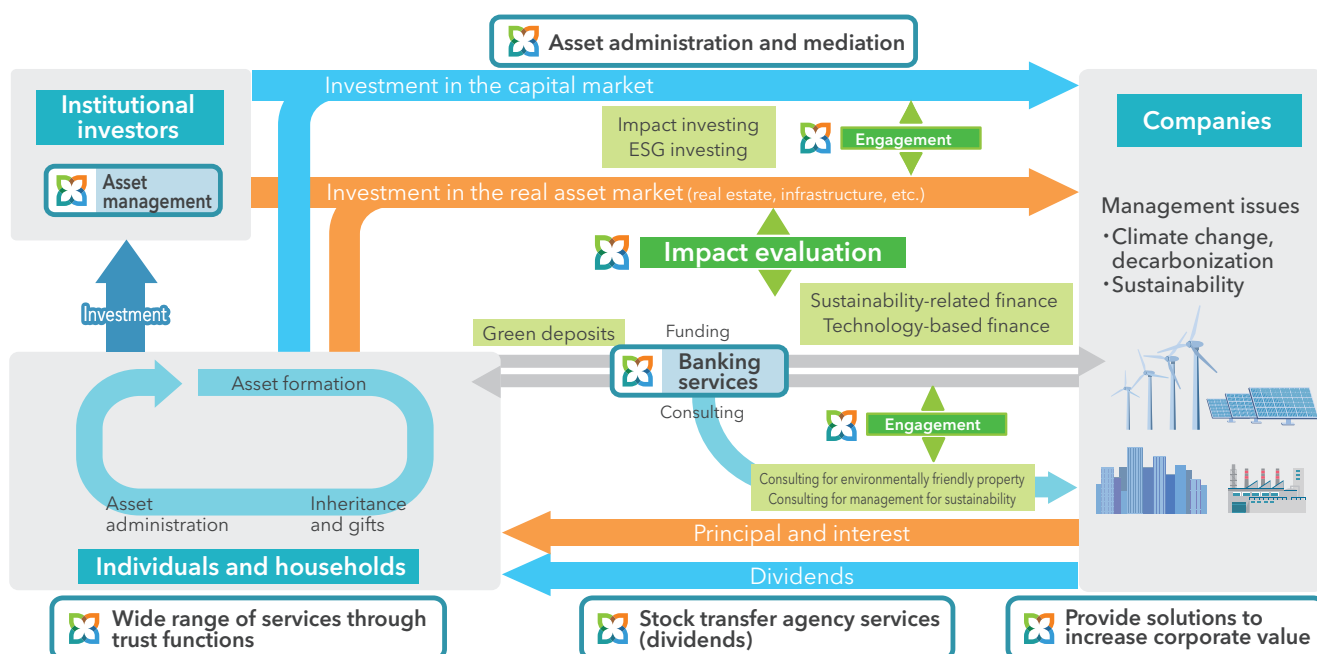
## Business initiatives related to climate change

### Importance of impact business

The demand for the huge amount of funds necessary to achieve a decarbonized society simultaneously leads to the provision of both products that are appealing to institutional investors in a low-interest-rate environment and investment opportunities in response to the asset formation needs of households and individuals in an age of 100-year life.

Our Group aims to help achieve a decarbonized society as we respond to the funding demand of such companies to facilitate improved corporate value and

then take advantage of the results to achieve the virtuous circulation of funds, assets, and capital for individuals/households and institutional investors. To achieve this virtuous circulation in a sound way, we believe it is important to actively provide impact evaluations in order to visualize the social impact creation process of carbon neutrality, etc. and not only to support the decision-making and impact management of companies engaged in capital investment but also remain accountable to the investors who supply the funds.



### The SuMi TRUST Group's Impact Business

The Group defines its purpose (reason for existence) as follows: *creating new value with the power of trusts and let prosperous future for our clients and society bloom.*

The Group defines the following as impact business: any business that aims to create environmental, social, and economic value in a balanced manner by developing new markets and new investment opportunities through the use of not only our investment and loan

functions but also the asset management and asset administration businesses unique to a trust banking group, all in the name of working towards the decarbonization of society. In addition, as described in "Various climate change business initiatives" (see page 22), we are involved in various types of impact business to create social value.

## Transition Plan to Achieve Carbon Neutrality

To help resolve GHG reduction and other social issues that are becoming increasingly urgent around the world, the Group declared its Carbon Neutral Commitment in October 2021 and joined the NZBA to promote steady progress toward achieving carbon neutrality. In addition, SMTAM and Nikko AM joined the NZAMI—a global initiative of asset management companies aimed at ensuring net-zero GHG emissions by investee companies by 2050—in July and November 2021, respectively, and they will strive to help achieve this by 2050. As institutional investors involved in global asset management, both companies are considering measures aimed at achieving net-zero GHG emissions of their investee companies.

Regarding the GHG emissions of our investment and loan portfolios, we have formulated and are gradually disclosing interim reduction targets in line with the NZBA framework. In October 2022, we disclosed the interim reduction targets for the electric power sector, the first sector we have disclosed. As our second disclosed sector, we plan to disclose targets for the oil and gas sector by March 2023. In addition, along with formulating interim reduction targets, we also built a risk management framework for monitoring the reduction situation, etc. On top of that, although our target of achieving a balance of zero for coal-fired power plant loans by FY2040 has only included project finance until now, we added corporate finance (new/expansion). By accelerating

these activities, we are aiming to achieve net-zero GHG emissions in our investment and loan portfolios.

We are promoting the steps necessary for our Group's target of achieving net-zero GHG emissions by 2030. First, to reduce emissions due to the use of power—which accounts for a lot of the Group's GHG emissions—we are promoting the switch to corporate PPAs.\*1 We are also promoting the reduction of GHG emissions not related to power use, such as by promoting the switch from internal-combustion to low-emission company cars. In terms of SuMi TRUST Bank's domestic offices, we also took the above steps and utilized non-fossil certificates\*2 to achieve a 100% renewable energy rate in August 2022.

To achieve net-zero GHG emissions of their asset management portfolios by 2050, both SMTAM and Nikko AM have formulated and disclosed 2030 interim reduction targets in line with the NZAMI framework. To achieve both net-zero emissions and their interim reduction targets, they are also conducting engagement activities in cooperation with international initiatives.

\*1 Corporate PPA: A long-term agreement by a consumer to purchase renewable-energy power from a power producer (a power purchase agreement). Offsite corporate PPAs use a model that involves the establishment of power generation facilities at a location distant from the demand location to supply power to the final consumer through a power retailer.

\*2 A certificate showing that environmental value has been achieved by generating electricity from sources that do not emit CO<sub>2</sub>. SuMi TRUST Bank obtains non-fossil certificates based on the tracking of power-source information for power generation facilities, which brings environmental value.

### Road Map toward Carbon Neutrality

	FY2020	FY2021	FY2022	...	FY2030	FY2040	FY2050
① Net zero GHG Emissions in inv. & loan portfolio (NZBA)							Net Zero
Electricity (g-CO <sub>2</sub> eq/kWh)	249			»	138~173		
Oil/Gas			Set by Mar. 31, 2023				
Other Highly Carbon Intensive Sectors*3				Successively set by Sep. 2024			
② Net zero GHG Emissions in investment portfolio (NZAMI)							Net Zero
SuMi Trust Asset Management				»	Halve emission intensity for 50% of managed assets*4 from 2019		
Nikko Asset Management				»	Halve emission intensity for 43% of managed assets*5 from 2019		
③ Total amount of cumulative sustainable financing*6	0.83trillion yen			»	Total 10 trillion yen		
④ Loan balance for coal-burning power plants							
Loan for projects		142.7 billion yen		»	Halve from Mar. 2020	Zero	
Corporate loans (new/expansion)		20.1 billion yen		»		Zero	
⑤ Net Zero GHG Emissions of SuMi TRUST Group			Completed shift to electricity from renewable sources in domestic branch offices of the trust bank	»	Net Zero		
⑥ Strengthen risk control set-up							
Scenario analysis							
Transition risk	Elect. utilities sector	Shipping sector	• Simple analysis per sector • Detailed analysis of each energy company		Successively expand targeted sectors for specific analyses		
Physical risk	Mortgage loans		• National real estate finance		Start analysis of national project finances and others successively		
GHG Emissions in loan & investment portfolios		Initial trial calculation	• Successively set and update measurement		Continuous review and enhancement		
Manage portfolio (Revision of Sector Policy)		Clarify trades banned/to note	• Prohibition of new or expansion lending for coal-burning power plants and credit transactions with coal-fired power generation companies that do not have existing credit transactions • Clarify transition supports		Continuous review and enhancement		

\*3 Highly carbon-intensive sectors are 9 sectors to which targets should be set with priority according to the NZBA guideline: agriculture, aluminum, cement, coal, commercial/residential real estate, steel, oil/gas, power generation, transportation.

\*4 Targeting 43 trillion yen, 50% of 85 trillion yen of total managing assets as of Jun.30, 2021. Excluded managing assets are sovereign bonds, etc., for which a method to calculate has not been established yet but will be successively added as target assets, when a method is established from now on.

\*5 Targeting 13 trillion yen, 43% of 31 trillion yen of total managing assets as of Dec.31, 2021.

\*6 Sustainable financing is a general term for financial services to businesses and clients which contribute to solving environmental/social issues based on international standards such as the Green Bond Principle and the Social Bond Principle. Initially SuMi TRUST Bank set the target to tackle to a total of 5 trillion yen, but has changed to a total of 10 trillion yen including 2.5 trillion yen by impact equities since FY2022, responding to expanding financial needs for accelerated environmental/climate change.

Initiative example details are provided below. In addition, for details on each indicator, see Chapter 4: Metrics and Targets.

## Initiatives to reduce the GHG emissions in investment and loan portfolios, etc.

The Group aims to achieve net-zero GHG emissions in our investment and loan portfolios by the year 2050. To strengthen that commitment, we have joined the UNEP FI-convened NZBA (Net-Zero Banking Alliance).

Regarding our 2030 sector-specific interim reduction targets—in line with the NZBA framework—we disclosed our electric power sector information in October 2022 and plan to also disclose our oil and gas sector information before the end of FY2022. In addition, we will disclose our information on the other seven NZBA-specified sectors by the end of September 2024. Similarly, we are planning to disclose our specific transition plans for our sector-specific interim reduction targets, including the electric power sector by October 2023 and the oil and gas sector before the end of FY2023. The Group's policy is to strive to dialogue (engage) with companies based on our interim reduction targets and specific transition plans in order to support the plans of clients to achieve carbon neutrality.

In addition, SuMi TRUST Bank has set long-term targets for sustainable finance\* and aims to handle a cumulative total amount of ¥10 trillion from FY2021 to FY2030.

In terms of sustainable finance initiatives, starting this fiscal year, we set impact equity investment targets by utilizing the capital surplus created by selling cross-shareholding shares. We will also enhance our equity investment in corporate fund projects and other projects that have a positive impact on society and the environment. Our policy is to expand our investment-target fields to include not only renewable energy (solar/wind power, etc.)—a field in which SuMi TRUST Bank already has a track record of strong investment performance—but also next-generation technologies expected to have a medium- to long-term impact (hydrogen, storage batteries, smart mobility, next-generation healthcare, fintech, etc.). By FY2030—in addition to our goal of achieving a cumulative total of ¥500 billion of our own funds in impact equity investment—as an opportunity to invest our own funds, we will call for investment by other institutional investors (expand our off-balance business) to supply a total of at least ¥2 trillion in equity funds with the aim of creating or expanding new markets.

For details on our current initiatives to reduce the GHG emissions in our investment and loan portfolios as well as future actions to reduce emissions, see “GHG Emissions in Investment and Loan Portfolios” in Chapter 4: Metrics and Targets.

\* Sustainable finance is a general term for financial work targeting businesses and clients that contribute to the resolution of environmental and social issues based on international standards that include the Green Bond Principles and Social Bond Principles (loans, syndicated loans, fixed income investment services, fund investments, financial advisory services, trustee services, impact equity investments, etc.).

## Engagement

Up until now, the Group has implemented various initiatives and engaged (dialogued) with clients to achieve an impact in environmental and social fields.

In terms of our clients, we promote engagement and carbon neutrality responses through sustainable finance and consulting activities, including renewable energy plant projects and impact equity investments.

In particular, regarding positive impact finance, when SuMi TRUST Bank conducts a Positive Impact Evaluation, it includes not only the client's initiatives in environmental and social fields but also ongoing engagement (dialogue) with the client for the duration of the contract period to ensure that our lending products encourage impact creation in environmental and social fields.

Ever since SuMi TRUST Bank implemented its first groundbreaking positive impact finance (unspecified use of funds) for FUJI OIL HOLDINGS INC. in March 2019, we have arranged a cumulative total of 35 such projects (as of the end of September 2022).

The table below shows how many times we proposed this product in FY2021 as well as how many times we monitored the situation with our clients after execution.

### Positive impact finance initiatives in FY2021

Product proposals	Monitoring*
224	15

\* Here, monitoring refers to confirming or evaluating the progress of initiatives which was evaluated with clients at the point of execution, at least once a year after execution.

To promote engagement (dialogues) with clients, SuMi TRUST Bank conducts Governance Surveys® and ESG Real Estate Surveys.

The Governance Survey® is one of Japan's largest fact-finding surveys for considering the situation of the corporate governance of domestic listed companies, and it has been conducted every year since 2017.

A total of 1,879 companies, or slightly less than 50% of all domestic listed companies, participated in Governance Survey® 2022. Some of the questions are also directed at institutional investors, so this survey clarifies both the situation of company initiatives and the expectations of domestic and overseas investors, which makes the gap between them recognizable.

The Corporate Governance Code stipulated by the Tokyo Stock Exchange requires the achievement of sustainable growth based on consideration of all aspects of ESG. For this survey, there are more and more questions concerning initiatives and disclosure aimed at achieving sustainability, including climate change and other relevant topics. Through this survey, we are promoting the increased sophistication of our governance in terms of



sustainability by making participating companies aware of our position and gaining an understanding of investor opinions to facilitate improvements.

The purpose of the ESG Real Estate Survey is to clarify the situation of ESG initiatives by real estate owners in the field of investment management, and it was first conducted in 2022. Through ESG initiatives are gradually being established in Japan, the ESG situation in the real estate investment management field differs from company to company, as the stance and priorities for their initiatives are different. For this survey, 161 companies participated and responded, and we are using the data to analyze real estate ESG trends as well as fields with room for future initiatives. We will continue conducting this survey and passing on the results to enable participating companies to understand the relative situation of our initiatives while also providing materials useful for considering how to address real estate ESG issues in order to help improve the corporate and asset value of our clients.

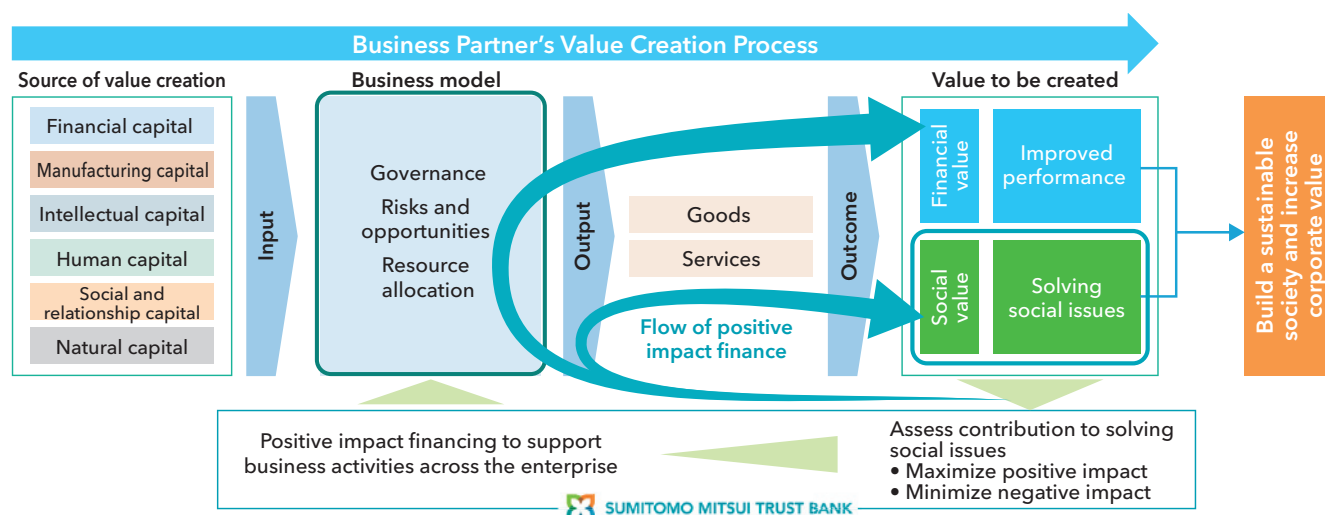
To address client issues that become clear as a result of each survey, the Group has set up a system that provides upstream support for initiatives aimed at resolving such issues through the provision of various types of consulting—including TCFD, the transition to carbon neutrality, and real estate ESG—and we also offer a diverse solution line-up—including various types of sustainable finance and our Non-Fossil Certificate Trustee Purchasing Service—for which we offer specific individualized implementation support.

Through our initiatives to engage (dialogue) with clients and positively impact environmental and social fields, our Group will continue contributing to the resolution of climate change and other environmental and social issues as we work with our clients to achieve a sustainable society.

## Various climate change business initiatives

### (1) Positive impact finance

In September 2019, SuMi TRUST Holdings became a signatory to the Principles for Responsible Banking (PRB), which call on banks to assess during the loan screening process whether a borrower company or project is maximizing the positive impacts and minimizing the negative ones in working towards the objectives of the Sustainable Development Goals (SDGs) and the Paris Agreement. In positive impact finance (PIF), we comprehensively analyze and assess the impacts (both positive and negative) of a client's corporate activities on the environment, society, and economy from the viewpoint of the industry sector, business area, and the supply chain, and then we work together with the client to set goals for reducing the negative impacts and increasing the positive ones. The client then commits to achieving those goals as a condition for financing. In March 2019, SuMi TRUST Bank concluded a groundbreaking PIF loan agreement with a business in which the use of loaned funds is unspecified. In recognition of its efforts to develop this product concept, SuMi TRUST Bank was awarded the first-place prize (Minister of the Environment Award) in the financing category of the Ministry of the Environment's inaugural ESG Finance Awards Japan in February 2020. In addition, to handle cases where estimated companies receive financing from other financial institutions, we introduced a Positive Impact Evaluation Framework, which utilizes SuMi TRUST Bank's Positive Impact Evaluation to enable the procurement of the corresponding financing as PIF, and this framework was selected as a model example in FY2022 for the Ministry of the Environment's Green Finance Model Creation Project. As of the end of September 2022, we had concluded 35 positive impact finance transactions since in March 2019, when the first one was conducted. By throwing our support behind corporate climate change initiatives, we aim to help enhance both social value and our clients' corporate value.



## (2) Support to evaluate the impact of investment funds for resolving social issues (IMM implementation support)

SuMi TRUST Bank supports impact evaluations of the respective impact investment funds formed by Anchor Ship Partners Co., Ltd. ("ASP") and Real Tech Holdings Co., Ltd. ("Real Tech"). Impact investing is an investment strategy that aims to balance social and economic value by adding a third axis, "social value (impact)," to the two traditional axes of investment decision-making, "risk" and "return," in order to understand the impact of the investee on the environment, society, and the economy. ASP will invest in ships based on the global trends toward decarbonization. The company will also measure the impact of the investments on the economy, society, and the environment and take appropriate management actions. By implementing impact evaluation and monitoring, SuMi TRUST Bank will continue to promote the fund's efforts to decarbonize the maritime transportation industry, generating positive impacts geared towards resolving social issues.

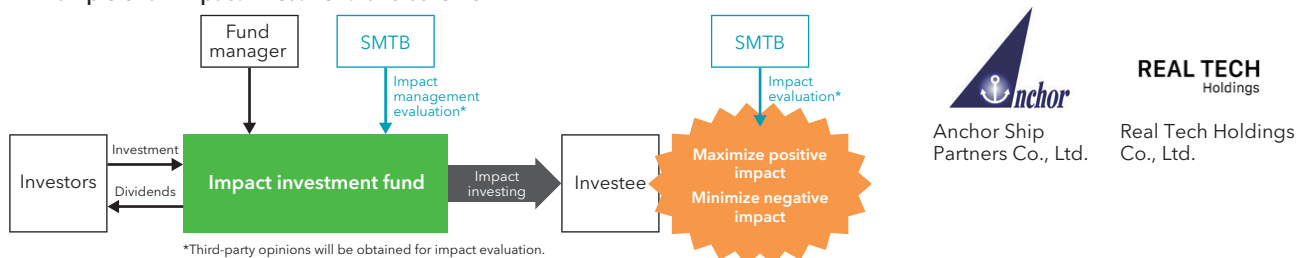
Meanwhile, Real Tech is investing in and nurturing startups with state-of-the-art science and technology and R&D-based technologies (deep tech) to solve the problems of the planet and humanity. SuMi TRUST Bank has entered into an advisory agreement with Real Tech on impact evaluation, a groundbreaking case of a Japanese investment fund for deep tech startups deciding to adopt impact evaluation.

Based on its performance and experience related to the above type of impact evaluation, SuMi TRUST Bank devised a menu of IMM<sup>\*1</sup> implementation support solutions in December 2021 and expanded its support coverage to include regional financial institutions, corporations, etc.

SuMi TRUST Bank will continue to support its clients' business activities in achieving their SDGs targets and contribute to improving their medium- to long-term corporate value.

<sup>\*1</sup> IMM stands for Impact Measurement & Management and refers to a management system aimed at impact creation.

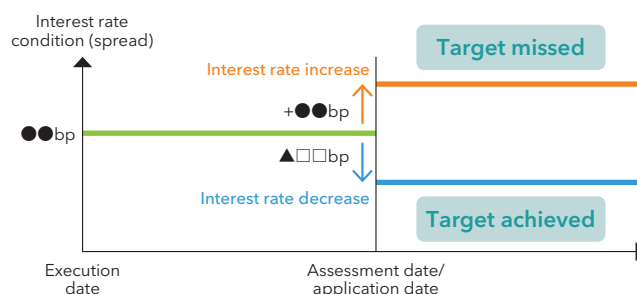
### Example of an impact investment fund scheme



## (3) Sustainability-linked loans (SLLs)

SuMi TRUST Bank is also working on sustainability-linked loans (SLLs), which are not based on comprehensive KPIs like positive impact finance (PIF), but rather on a mechanism that enables SuMi TRUST Bank to set key performance indicators (KPIs) and ambitious sustainability performance targets (SPTs) on specific themes with the borrower company, and to vary the interest rate depending on the achievement of the targets. The KPIs and SPTs are selected after thorough consultation with clients from the following and other items: energy efficiency (energy conservation and renewable energy), water consumption, sustainable procurement, circular economy (recycling rate), biodiversity, and global ESG

evaluation. Then, a third-party organization such as a rating agency evaluates the appropriateness of the established SPTs in light of the overall CSR strategies of the borrower company.



## (4) Renewable energy finance

Through project finance, SuMi TRUST Bank facilitates the roll-out of large-scale projects, such as wind and solar power generation, and has set up and manages renewable energy funds for the purpose of investing exclusively in renewable energy projects. In project finance, both offshore and onshore wind power generation projects

overseas are increasingly large-scale endeavors. In Japan, the number of mega-solar projects has further increased. As of the end of March 2022, the total potential power generation capacity of projects SuMi TRUST Bank has been involved in came to 20,538 MW, with annual power output of 60,591 GWh, reducing annual CO<sub>2</sub> emissions by 3.770 million t-CO<sub>2</sub>.

■ Reducing CO<sub>2</sub> emissions through project finance (the value of the end of March 2022 as benchmark)

	Number of projects	Potential capacity (MW)	Annual output (GWh/year)	CO <sub>2</sub> reduction (1,000t)
Solar	123	6,584	10,700	1,464
Wind	30	5,053	13,851	988
Offshore wind	13	7,430	27,940	548
Biomass	17	1,006	7,479	705
Power generation from waste	1	120	44	2
Hydroelectric	1	15	73	36
Geothermal	1	330	504	27
Total	186	20,538	60,591	3,770

Method for calculating the CO<sub>2</sub> reduction effect

Annual CO<sub>2</sub> reduction (t-CO<sub>2</sub> per year) =  
annual power output (kWh/year) x emission coefficient (t-CO<sub>2</sub>/kWh)

- As a general rule, we use planned values for annual power output.
- As a general rule for domestic projects, we use the most recently calculated emission coefficient of each electricity supplier in the electricity supply system of the region where each project is located (actual emission coefficient).
- As a general rule for overseas projects, we use the International Energy Agency (IEA) calculation tools provided on the GHG Protocol website to calculate reduction equivalents.
- The CO<sub>2</sub> reduction was calculated by multiplying the total CO<sub>2</sub> reduction for all projects by SuMi TRUST Bank's participation ratio.

## (5) Impact equity investment

To achieve Society 5.0—the vision being advocated by the Japanese government for the future society of 2030—as well as carbon neutrality by 2050, a massive amount of investment will be necessary. In April 2022, SuMi TRUST Bank started utilizing the knowledge it has cultivated in the field of positive impact finance to engage in full-scale impact equity investment that incorporates impact evaluations. In addition to investing a cumulative total of ¥0.5 trillion of its own money (up through FY2030) into businesses and projects aimed at resolving various environmental and social issues, SuMi TRUST Bank has also used this as a way to encourage other investors, calling for ¥2 trillion in investment, to conduct investment activities with a total scale of ¥2.5 trillion.

Regarding climate change, in addition to renewable energy, we are also investing in a wide range of other relevant fields, including hydrogen and other next-generation energy as well as plastic reduction technologies and the forestry business. In addition to providing funds, we will also continue to use the Group's network and the knowledge of its Technology-Based Finance Team, etc. to provide methods for resolving issues faced by the Group's clients and society alongside investee companies as we aim to help achieve both the transition to and the implementation of a decarbonized society.

## (6) Investment in Japan Renewable Energy Corporation

In February 2022, SuMi TRUST Bank acquired a 5.0% interest in Japan Renewable Energy Corporation ("JRE"), which conducts renewable energy business. This is a joint investment project with ENEOS Corporation (ENEOS). JRE's vision is to *take leadership in creating a prosperous and sustainable society through the development of renewable energy*, and the company possesses a high level of development ability in the renewable energy business. Through the synergy of ENEOS's knowledge as an energy provider, JRE's business development ability, and SuMi TRUST Bank's trust expertise and financial know-how in the renewable energy field, we will endeavor

or to achieve efficient business operations and further promote business development.

## (7) Participation in Breakthrough Energy Catalyst

SuMi TRUST Bank is the first ever Japanese financial institution to participate in Breakthrough Energy Catalyst ("Catalyst"), a funding program to accelerate the deployment of decarbonization technologies.

Catalyst is the first-of-its-kind funding program launched in 2021 by Breakthrough Energy, a climate organization founded by Microsoft founder Bill Gates. The purpose of the program is to invest in individual projects that use innovative carbon neutral technology (green tech) that has been researched and developed/demonstrated in order to accelerate the social implementation of such technology.

Catalyst is building a framework for accelerating the world's shift to carbon neutrality by using a combination of funds supplied by private companies, charitable organizations, and other organizations on the one hand with the support of green product consumers and government agencies on the other. The program will start by focusing on (1) clean hydrogen, (2) long duration energy storage, (3) sustainable aviation fuels, and (4) direct air capture, with plans to expand to cover other technologies that contribute to carbon neutrality in the future.

By participating in Catalyst, SuMi TRUST Bank's aim is to acquire advanced knowledge and trends in the green tech field to promote and support the creation of business matching and other opportunities that contribute to carbon neutrality in order to help enhance the corporate value of clients in the medium to long term.

## (8) Investment in forestry related funds

In July 2021, SuMi TRUST Bank concluded an agreement to invest in a timberland and farmland fund that invests in the USA, Australia, and elsewhere in the world (the Hancock Timberland and Farmland Fund), and, in March 2022, the Bank concluded a similar agreement with a fund that mainly invests in Southeast Asian forestry (New Forests Tropical Asia Forest Fund 2).

Both funds have obtained FSC<sup>\*1</sup> and other international certifications for their timberland/farmland assets, and they are also actively working to achieve their respective SDGs targets<sup>\*2</sup>. By investing in these funds—which differ in terms of their investment targets and strategies—SuMi TRUST Bank will aim to build a globally distributed portfolio while also acquiring different types of knowledge from each fund to provide solutions to corporate clients dealing with issues related to forestry assets themselves and forestry connected issues such as carbon emission credits, and the Bank will also aim to lay the groundwork for granting investor clients access to forestry business, and will endeavor to provide new businesses.

<sup>\*1</sup> FSC: The Forest Stewardship Council was established for the purpose of spreading responsible forest-management practices all over the world, and the council provides internationally recognized certification to forests and forest managers that satisfy the council's criteria.

<sup>\*2</sup> SDGs targets related to timberland investment:

- 8. Decent work and economic growth
- 13. Climate action
- 15. Life on land



SDGs target related to farmland investment:  
2. Zero hunger



## (9) Transition support

By providing solutions aimed at helping clients to achieve their transition strategies, the Group will continue to support various client business activities that contribute to the realization of carbon neutrality.

### 1. Syndicated transition loan for funding two LNG-fueled ferries

In September 2021, SuMi TRUST Bank arranged a syndicated transition loan<sup>\*3</sup> for Mitsui O.S.K. Lines, Ltd. (MOL).

The purpose of this loan was to introduce two LNG-fueled ferries—the first of their kind in Japan—to be operated by MOL and Ferry Sunflower Limited, one of its group companies, along the Osaka-Beppu route.

This is the first transition loan in Japan to be selected by the Ministry of Economy, Trade and Industry (METI) as a Climate Transition Finance Model Project.

<sup>\*3</sup> Transition loans are a financing framework intended to support companies working to reduce GHG emissions in accordance with a long-term transition strategy aimed at realizing a decarbonized society, which is the goal of the Paris Agreement.

### 2. Concluding a transition-linked loan agreement

In September 2021, SuMi TRUST Bank concluded a transition-linked loan (TLL) syndicated loan agreement with Kawasaki Kisen Kaisha, Ltd.

A TLL is a type of loan that is extended to companies pursuing initiatives aimed at reducing CO<sub>2</sub> in line with long-term strategies for transitioning to a low-carbon society in order to support those initiatives. Financial institutions set KPIs and SPTs consistent with the transition strategies of borrowers and then link the loan conditions with each borrower's performance with respect to those SPTs in order to motivate borrowers to achieve their SPTs, thereby providing an incentive for borrowers to achieve their transition strategies, with the overall aim of promoting the shift to a carbon-neutral or low-carbon society.

In "K" LINE Environmental Vision 2050, Kawasaki Kisen Kaisha, Ltd. advocates a climate transition strategy aimed at achieving carbon neutrality, and—to further promote this strategy—the "Transition-Linked Finance Framework" (this framework) has been formulated for this TLL.

This framework and TLL obtained a third-party evaluation from Japan Credit Rating Agency, Ltd. in compliance with the "Climate Transition Finance Handbook" stipulated by the International Capital Market Association (ICMA),<sup>\*4</sup> the "Basic Guidelines on Climate Transition Finance" stipulated by the Fiscal Services Agency, Ministry of Economy, Trade and Industry, and Ministry of the Environment, the "Sustainability Linked Loan Principles" stipulated by the Loan Market Association (LMA),<sup>\*5</sup> the "Sustainability Linked Bond Principles" stipulated by the ICMA, and the "Green Loan and Sustainability Linked Loan Guidelines" stipulated by the Ministry of the Environment. In addition, this TLL was selected as a model example for the Ministry of Economy, Trade and Industry's FY2021 Climate Transition Finance Model Project.

<sup>\*4</sup> International Capital Market Association (ICMA)

The ICMA is an international institution with its head office in Switzerland (established in Zurich in 1969), and it consists of more than 500 issuers, issue market/secondary market brokers, asset managers, investors, capital market infrastructure operators, and other members in 60 countries around the world.

<sup>\*5</sup> Loan Market Association (LMA)

The objective of the LMA is to improve the liquidity, efficiency, and transparency of the syndicated loan markets of Europe, the Middle East, and Africa, and the association's members include more than 700 organizations in over 60 countries.

### 3. Supporting the formulation of a transition strategy for a coal and biomass co-firing power plant

SuMi TRUST Bank provided support with the formulation of a transition roadmap and transition finance framework for a power plant owned by Shunan Power Corporation (including obtaining an evaluation of the framework by a third-party evaluation body).

Through its power generation business, Shunan Power contributes to providing a stable supply of energy—which facilitates the daily lives of Japan's citizens while also helping to develop sustainable economic activities—and, to help achieve a carbon-neutral society, the

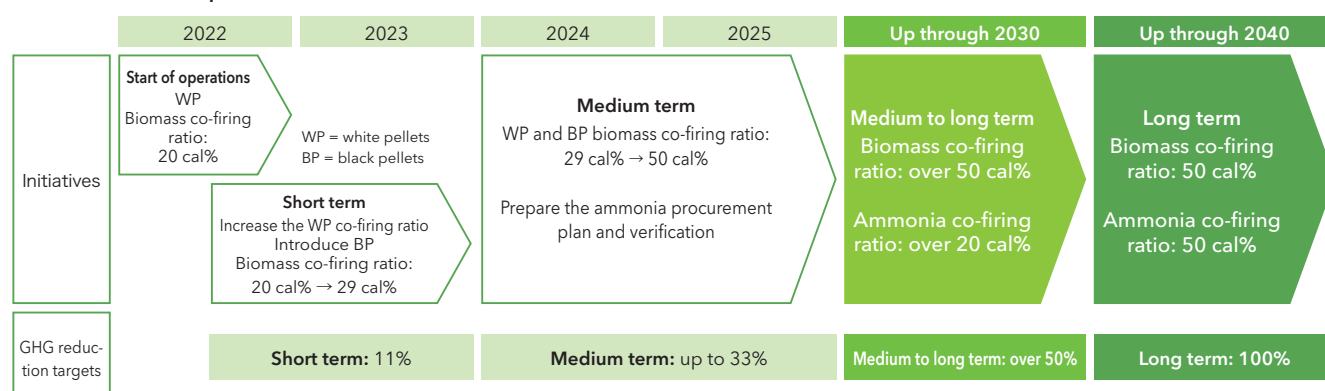
company has set targets of a 50% reduction in emissions by 2030 and net-zero emissions by 2040, both in line with current GHG emissions criteria. It is assumed that Shunan Power's thermal power plant will have a co-firing ratio of around 20 cal% (white pellets) upon starting up commercial operation, but—given that reducing GHG emissions is an urgent issue—the company plans to increase its white-pellet co-firing ratio and introduce biomass with high thermal efficiency (black pellets) as soon as possible, thereby increasing the co-firing ratio to around 29 cal%. In addition, assuming that the technical and economic conditions are satisfied, the company plans to use mainly black pellets to increase the co-firing ratio to 50 cal% by around 2025, which would mean an approximate reduction of GHG emissions by 33% compared to when the plant started operating. When Shunan Power formulated the above roadmap for achieving its target of net-zero GHG emissions, SuMi TRUST Bank

provided support by utilizing its knowledge to formulate strategies for GHG reduction targets, etc.

In addition, this framework has obtained a green loan evaluation (Green 1 (T) (F)) from Japan Credit Rating Agency, Ltd. for its contribution to the SDGs in compliance with the “Green Loan Principles” stipulated by the Loan Market Association (LMA), etc., the “Climate Transition Finance Handbook” advocated by the International Capital Market Association (ICMA), and the “Green Loan Guidelines” stipulated by the Ministry of the Environment.

By providing solutions aimed at helping clients achieve their transition strategies, SuMi TRUST Bank supports various client business activities to contribute to achieving carbon neutrality.

#### ■ Transition roadmap\*1



#### Overview of the power plant

This biomass co-firing power plant was built on the premises of Tokuyama Corporation's Tokuyama Factory and is a joint venture based on a shareholder agreement concluded in September 2017 by three companies: Tokyo Century Corporation, Tokuyama Corporation, and Marubeni Corporation. The power generation business itself is handled by Shunan Power, a consolidated subsidiary of Tokyo Century.

\*1 The transition roadmap assumes that the technical and economic conditions have been satisfied.

Location	Shunan, Yamaguchi Prefecture
Power generation method	Biomass co-firing
Completion date/start of commercial operation	August 2022/September 2022
Grid connection date	September 2021
Power output	300 MW
Power generation efficiency	43%
Power generation company	Shunan Power Corporation
Power generation facility amount related to biomass co-firing power generation business (planned)	¥102 billion



## (10) Support for real estate ESG initiatives

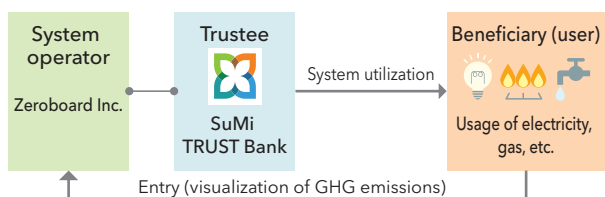
SuMi TRUST Bank utilizes its wide-ranging real estate functions to help clients resolve issues related to ESG Real Estate.



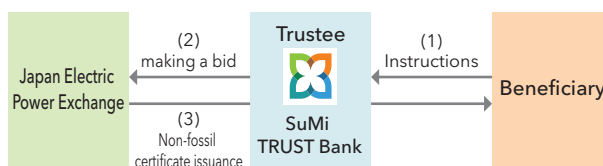
## Carbon-neutrality support services for real estate under management

Providing GHG-emission calculation support and a Non-Fossil Certificate Trustee Purchasing Service for entrusted properties

### Conceptual image of GHG-emission calculation support Visualizing GHG emissions of real estate owned by the beneficiary



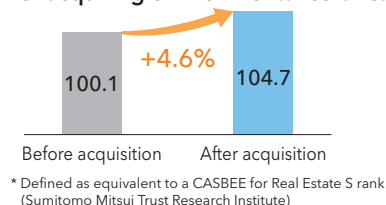
### Conceptual image of the Non-Fossil Certificate Trustee Purchasing Service Supporting the shift to renewable energy and purchases based on instructions from each beneficiary



## Survey of real-estate environmental-certificate acquisition and economic value

SuMi TRUST Bank and Sumitomo Mitsui Trust Research Institute have jointly announced their survey of the economic value of real estate environmental certification.

### Rent-increasing effect of acquiring environmental certification

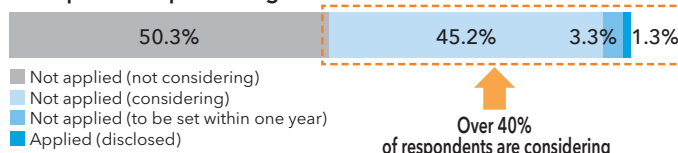


## ESG Real Estate Survey

SuMi TRUST Bank conducted a survey of the situation of ESG initiatives related to real estate investment management—to which 161 companies responded—and started releasing the results in October 2022.

By continuously conducting this survey and releasing the results, we provide materials to help participating companies consider how to address real estate ESG issues while also providing consulting and solutions related to client issues.

### Response to our ESG Real Estate Survey,\* which asked whether respondents place a high value on environmental real estate



\* The respondents of the ESG Real Estate Survey conducted by SuMi TRUST Bank include asset management companies, financial institutions, insurance companies (including leasing companies), real estate companies, construction companies and others

## Taking on challenges with our Technology-based Finance Team

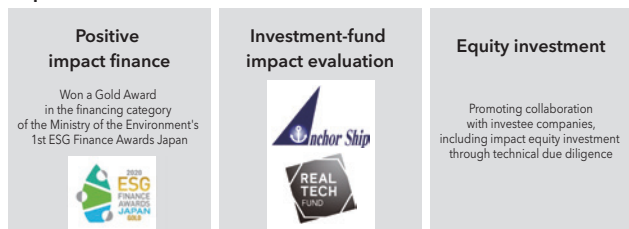
The keys to resolving issues related to SDGs and the Paris Agreement are a massive amount of funds and innovative technologies. In 2021—to better understand the latest technologies, deepen our dialogues with clients, and actively work on finance based on the scientific perspective—we established the Technology-based Finance Team at our Sustainability Management Department.

So far, this team has promoted impact finance initiatives and regional carbon neutrality, launched new businesses, and taken on other challenges.

We will continue to support the social implementation of innovative technologies and contribute to achieving a decarbonized society.

## ■ Projects in which team members are involved

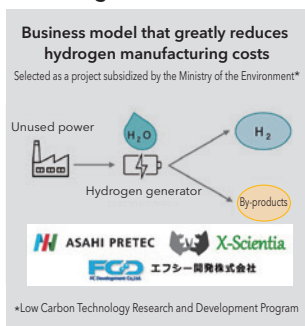
### Impact finance



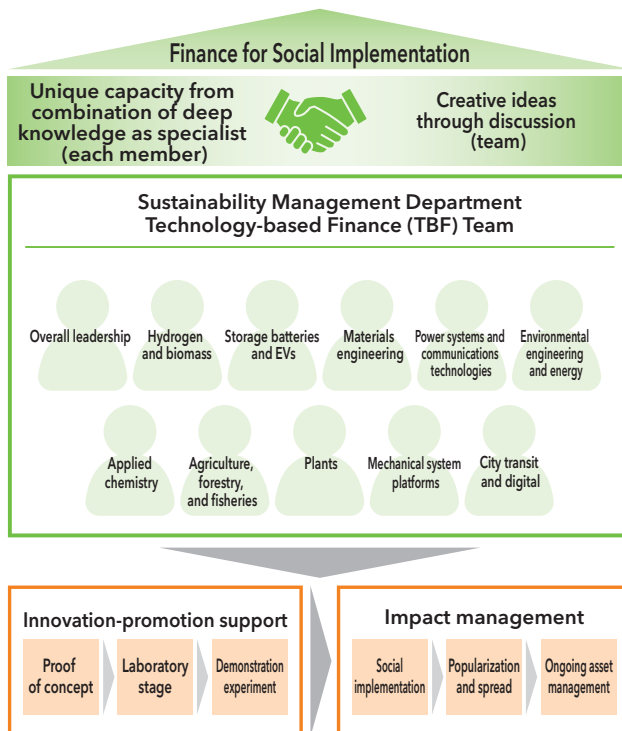
### Local ecosystems



### Launching new businesses



## ■ Technology-based Finance (TBF) initiatives



## Initiatives aimed at reducing the GHG emissions of asset management portfolios

### Sumitomo Mitsui Trust Asset Management initiatives

Sumitomo Mitsui Trust Asset Management (SMTAM) has identified climate change as an ESG materiality item and strives to engage with domestic and foreign companies, exercise voting rights for them, and develop and provide investment products, based on various risks and opportunities related to climate change.

In addition, SMTAM considers engagement and the exercise of voting rights to be a direct opportunity to require that investee companies, etc. make management decisions and build systems based on climate change risks, and—by actively implementing the above—SMTAM strives to maximize its assets under management and control asset management risks. In terms of engagement, SMTAM conducts activities both independently and through the PRI,<sup>\*1</sup> CA100+,<sup>\*2</sup> etc.

In terms of collaboration with stakeholders related to climate change, SMTAM engages with industry bodies and conducts policy recommendation activities through the Investor Agenda.<sup>\*3</sup>

SMTAM also provides investment opportunities considering climate change risks and opportunities through passively/active investment products with consideration of climate change issues.

### Participation in initiatives

– Appointed as the Asian representative member of the Net Zero Asset Managers initiative (NZAMI)<sup>\*4</sup> advisory group –

SMTAM was appointed as the Asian representative member of this advisory group, which consists of six signatories, and participates in overall NZAMI operations.

– Appointed as the joint chairman of the CA100+ Global Steering Committee –

In the past, SMTAM participated in the Global Steering Committee as the representative of Asia, but we were appointed as the joint chairman of the committee (with a term of office up through September 2022).

\*1 The Principles for Responsible Investment, which require that institutional investors consider ESG when making investment decisions.

\*2 A collaborative engagement organization group that requires companies with high GHG emissions based on TCFD to disclose information.

\*3 An institutional investor initiative that promotes low-carbon acts related to climate change.

\*4 An initiative of global asset management companies that aims to achieve net-zero GHG emissions for assets under management by 2050.

## Examples of Sumitomo Mitsui Trust Asset Management engagement

### CASE 1

#### Non-manufacturing company A

- Business strategy
- GHG reduction

##### Analyst's perspective

The company's business consists largely of mineral resources. In addition, there is a high likelihood of the risk of ending up with stranded assets due to climate change being incorporated into the share price, which has a PBR of less than 1x. Therefore, it seems necessary to come up with business portfolio strategies linked to addressing climate change issues.

##### SMTAM's opinion

Although your company conducts scenario analyses by business segment and discloses the resulting information based on the TCFD Recommendations, your business portfolio strategies are not linked strongly enough to addressing climate change issues. We therefore believe it is necessary for your company to include such strategies in your next medium-term plan to show that you are striving to sustainably enhance your corporate value while securing income opportunities and controlling risks.

We believe that the Scope of responsibility for addressing climate change includes the entire supply chain. Therefore, it seems necessary to set medium- to long-term targets that include not only Scope 1 and 2 but also equity method investment as detailed in category 15 of Scope 3.<sup>\*1</sup> In addition, regarding trading as detailed in category 11,<sup>\*2</sup> it seems necessary to take steps that include both contributing to GHG reduction by providing business opportunities aimed at achieving carbon neutrality to clients and verifying/disclosing the risk of owned assets becoming stranded.

##### Company's response

When formulating our medium-term management plan, we categorized each business segment according to its environmental impact and considered how to make business portfolio changes so as to achieve the transition. In addition, we are considering applying internal carbon pricing to each investment project.

We were able to organize our Scope 3 approach. We would also like to consider disclosure pertaining to categories 11 and 15. At the same time, in terms of the SBTi,<sup>\*3</sup> only carbon removal is recognized as a valid carbon neutrality approach, but we would like to consider responding with offsets, including credit. We are also developing tools to use to visualize the risk of ending up with stranded assets and are promoting risk management specific to each business department. In addition, we are considering reviewing our business portfolios based on consideration of the profitability assuming that internal carbon pricing is applied.

##### Company's actions

In the new medium-term management plan disclosed by the company with their 2022 financial results, they clearly stated a management strategy consistent with their environmental vision and targets. The company has also disclosed information that includes cross-division initiatives to promote energy-transition investment and the transition itself, a governance system for monitoring the progress of sustainability initiatives, and their composition ratio plans for their green-asset balance sheet. In addition, the company will introduce a mechanism for achieving both the carbon neutrality and resilience of its portfolios.

In October 2021, the company announced that—in terms of its GHG emissions, including affiliated company Scope 1 + 2 emissions (ownership ratio)—it plans to reduce emissions by half by FY2030 (compared to FY2020) and to achieve net-zero emissions by 2050. The company also formulated a roadmap for energy-transition investment on a multi-trillion yen scale up through FY2030.

##### SMTAM's evaluation and future policy

The dialogue targets with specified issues have been achieved, but SMTAM will continue monitoring the effectiveness of business portfolio strategies linked to actions to address climate change issues in the company's medium-term management plan. In addition, regarding GHG reduction as well, we will continue engaging in dialogues concerning more comprehensive information disclosure based on the TCFD Recommendations, including the breakdown of action and reduction plans aimed at expanding the Scope 3 reduction-target scope (category 11, etc.) and achieving 2030 targets as well as increasing the scenario-analysis sophistication.

### CASE 2

#### Non-manufacturing company B

- GHG reduction
- Corporate governance

##### Analyst's perspective

Due to the increasing interest in climate change issues and the strict view of companies with high GHG emissions, a quick response is required. In addition, given that the Board of Directors has no female directors and an external-director ratio of less than 1/3, efforts to enhance corporate governance seem necessary.

##### SMTAM's opinion

Even if shareholder proposals have been obtained from other shareholders in relation to climate change—an ESG materiality issue identified by SMTAM—voting decisions must be made based on whether a clear GHG reduction plan has been presented as well as the consideration of past performance. Your company's reduction plan is based on assumptions that include the achievement of GHG capture and storage, but—based on technical considerations and social conditions—there seem to be risks related to the effectiveness of your approach. It therefore seems necessary to consider and disclose alternative scenarios.

Your independent external director ratio of less than 1/3 does not satisfy the criteria stipulated in SMTAM's guidelines for the exercise of voting rights. It therefore seems necessary to increase the sophistication of your corporate governance, including improving this ratio. In addition, what is your view/analysis of the fact that, at your Ordinary General Meeting of Shareholders, your resolutions regarding the approval of a chairman and president had low approval ratings? It seems necessary to apply this result to the enhancement of your corporate governance as well.

##### Company's response

Under our GHG reduction plan up through 2030, we are planning to renovate or stop the operations of aging plants, but we have not disclosed our individual plans. Given that the CO<sub>2</sub> reducing effects of new plants will be determined in part by which plants are stopped instead of them, we do not have any clear details on this.

We are currently reviewing and discussing how to get our ratio of independent external directors to 1/3 or more, including institutional design, and we hope to accomplish this before the end of the year. Based on our analysis, reasons for the low approval rate that you pointed out include our low ratio of independent external directors as well as our total lack of female directors. We were not fast enough to make changes this time, but we are promoting initiatives to attract suitable human resources.

##### Company's actions

In addition to transitioning to become a company with an Audit and Supervisory Committee, the company increased its ratio of independent external directors to at least 1/3 and appointed female directors.

##### SMTAM's evaluation and future policy

At the Ordinary General Meeting of Shareholders, a shareholder proposal requesting that climate change issues be addressed was submitted, and—given that there were no problems in terms of SMTAM's guidelines for the exercise of voting rights from the perspective of urging the company to pursue initiatives—the proposal was approved. In the future, we will request that the company disclose information on specific, effective measures for achieving its 2030 and 2050 targets. Although we have seen some progress from the perspective of corporate governance, we will engage in dialogues aimed at getting the company to continue pursuing initiatives to enhance its corporate governance, including the selection of successors in the case of independent external directors whose independence might be called into question given the length of their tenure.

<sup>\*1</sup> One of 15 categories of Scope 3 emissions (other indirect emissions), specifically GHG emissions by investees. Scope 3 is separate from Scope 1 (direct emissions) and Scope 2 (indirect emissions from electricity use, etc.).

<sup>\*2</sup> A Scope 3 category that covers emissions due to the use of sold products.

<sup>\*3</sup> An initiative that promotes the setting of corporate reduction targets consistent with scientific knowledge in order to achieve the goal of keeping the rise in the average global temperature due to climate change to 1.5 degrees or less compared to before the industrial revolution.

### CASE 3

#### Nextera Energy Inc.

(USA/power)

- Climate change issues
- Promotion of information disclosure (environment)

##### Engagement manager's perspective

In spite of having high GHG emissions, the company has not disclosed any specific long-term measures. Related improvements therefore seem necessary.

##### SMTAM's opinion

Although it is admirable that your company leads the industry in terms of investment in renewable energy and has disclosed GHG reduction results and set specific short-term targets, you are not committed to achieving net-zero emissions in the long term. The consistency of your approach with scenarios in which the temperature rises by 1.5 degrees is unclear as well. It therefore seems necessary for you to express your commitment to achieving net-zero emissions in the long term and to present a roadmap for doing so.

##### Company's response

- Although the long-term transition is important for achieving net-zero GHG emissions, we are also considering the need to maintain a stable supply of power and to set acceptable prices as we proceed.
- Our business base in Florida has a power mix that consists of 60% gas power and 20% nuclear power, with the rest consisting of solar/power storage. Given that solar power output is affected by sunlight and nuclear power requires us to maintain a certain level of operation—and therefore lacks the flexibility to deal with demand fluctuations—gas power is extremely important as a cushion.
- It will also become possible to switch to hydrogen in the future.

##### Company's actions

- In June 2022, the company announced its long-term (2045) target of achieving net-zero emissions.
- The company also set comprehensive targets—including expected economic effects, such as the creation of jobs to achieve a Just Transition—related to the accelerated introduction of renewable energy and the promotion of power storage/hydrogen technologies to help achieve carbon neutrality.

##### SMTAM's evaluation and future policy

- Business-related dialogues based on an awareness of the management environment, including technology, regulations, and politics, have been held to achieve a deeper mutual understanding with the company side.
- At the same time, effective engagement has been achieved, including the submission of letters to the chairman (written opinions) that used CA100+ and other collaborative initiative tools as a reference.
- We will continue with efforts to implement long-term action plans, investment plans, and plans that consider the social impact and other details of transitioning to carbon neutrality as well as PD-CA-based monitoring.

### CASE 4

#### TotalEnergies

(France/energy)

- Climate change issues

##### Engagement manager's perspective

Although the company has been promoting active, advanced climate change initiatives since 2021, further enhancement and acceleration seem necessary given the company's position as an industry leader.

##### SMTAM's opinion

Given that your energy company is a major representative of Europe and a key CA100+ brand, investors pay close attention to you. It therefore seems necessary for you to further enhance various initiatives aimed at achieving net-zero GHG emissions. More specifically, you are expected to disclose information on your progress in terms of renewable-energy investment projects and to promote an industry-leading strategy in terms of implementing more comprehensive Scope 3 initiatives, etc.

##### Company's response

Following the announcement of our commitment to achieving net-zero emissions by 2020, we disclosed specific details of our renewable energy investment projects, and we have announced our specific Scope 3 initiative policies on an ongoing basis. We also promote thorough dialogues with various stakeholders, and we will continue to do so as we confirm the trends of our competitors as well.

##### Company's actions

In July 2022, the company engaged in direct dialogues with local stakeholders, describing individual initiative policies for achieving net-zero emissions and expressing its strong commitment to its vision of achieving top-tier performance as an energy-industry leader.

##### SMTAM's evaluation and future policy

- The company is already promoting advanced GHG reduction initiatives, but SMTAM was able to explain to and gain understanding from them that further refinement of individual measures and steady progress are necessary.
- Through engagement, we will explain SMTAM's approach—such as by sending the company letters—to achieve more detailed discussions and relationship building.
- In the future, we will monitor the company's progress in terms of promoting specific initiatives aimed at achieving net-zero emissions.

## SMTAM's investment strategies that consider climate change issues

Active/ passive	Asset class	Index/investment strategy name	Details
Passive	Japan Equity	S&P/JPX Carbon Efficient Index	<ul style="list-style-type: none"> <li>• S&amp;P Dow Jones Indices, the world's largest independent index provider, builds this index based on carbon emissions data from Trucost, a pioneer in environmental evaluation.</li> <li>• The index puts heavier investment weight on companies that have high carbon efficiency (low GHG emissions/sales) and companies that disclose information on GHG emissions in the same industry. We provide products linked to the index.</li> </ul>
Passive	Global Equity (including Japan Equity)	SMT MIRAI Index Eco Index	<ul style="list-style-type: none"> <li>• We use our knowledge of quantitative active management to formulate the methodology for the FactSet Global Environmental Opportunities Index, which is an environment-related theme index, and FactSet performs calculations.</li> <li>• Investment targets are companies that obtain more than half of their sales from environment-related business, including "alternative/renewable energy," "energy conservation," "efficient use of resources," "waste disposal," and "water resource conservation," and we provide products linked to the index.</li> </ul>
Passive	Global Fixed Income	Bloomberg MSCI Global Aggregate Sustainability A+ Index Linked Strategy	<ul style="list-style-type: none"> <li>• The Bloomberg MSCI Global Aggregate Sustainability A+ Index is derived from the overall Bloomberg Global Aggregate Index, it functions as an ESG bond index for the investment universe with an MSCI ESG rating of A or better, and it consists of government bonds, government agency bonds, and corporate bonds. The aim is to both improve returns by including corporate bonds and resilience to bond-price drawdowns related to ESG screening.</li> </ul>
Active	Japan Equity Global Equity	Japanese Equity Impact Investment Strategy Global Equity Impact Investment Strategy	<ul style="list-style-type: none"> <li>• This is an absolute return-type active investment strategy that aims to achieve social returns as well as economic returns by means of concentrated investment in companies that work on SDGs and other activities to resolve social issues.</li> <li>• The objective is to engage with companies and increase the probability of earning social and economic returns on the basis of impact KPIs set for each brand.</li> </ul>
Active	Japan Equity	Japan Equity Responsible Investment Management Strategy	<ul style="list-style-type: none"> <li>• This is an active investment strategy for achieving excess returns against TOPIX by investing in companies that have a strong commitment to ESG.</li> <li>• We select investment brands on the basis of credit risk judgment, ESG evaluation, and share price evaluation from SRI universe candidates selected by analysts and ESG specialists.</li> </ul>
Active	Japan Equity	High-Dividend Low Beta Strategy (Japan Equity, ESG consideration type)	<ul style="list-style-type: none"> <li>• We invest in high-dividend-yield companies that can stably achieve increased income and dividends in the medium to long term without being affected by economic fluctuations. In addition to using high-dividend yields as a judgment criterion, we also add the following criteria: low beta, which is focused on resilience to economic fluctuation risks, and high ESG, which is focused on medium- to long-term sustainability.</li> </ul>
Active	Japan and Global Equity	Decarbonization-related Global Equity Strategic Fund (asset growth type) / (expected dividend offer type)	<ul style="list-style-type: none"> <li>• This is an active management fund where investment brands are selected from among companies related to decarbonization after verifying the growth potential and degree of undervalue on stocks by means of fundamental analysis.</li> </ul>
Active	Japan and Global Fixed Income	Future Focus Corporate Bond Investment Strategy	<ul style="list-style-type: none"> <li>• This is an active management strategy that involves investing in bonds issued by companies (including issuers other than companies, such as governments, government-affiliated organizations, local governments, and international organizations) that have a track record of issuing bonds, etc., where the use of funds is related to resolving environmental and social issues, bonds that incorporate the resolution of such issues in the issuance conditions, etc.</li> </ul>

## Nikko Asset Management's initiatives

By actively engaging in dialogues on ESG materiality, including climate change, with investee companies, Nikko AM helps to facilitate sustainable value creation by those companies. Through these dialogues, Nikko AM deepens its understanding of details that include the management quality and future course of each company, which enables Nikko AM to appropriately apply such information to corporate value evaluations and adjust its investment decisions accordingly. In addition, through engagement, the company gains a more accurate understanding of the situation of each investee company,

gets on the same page regarding issues they face, and takes steps to encourage improved corporate value in the medium to long term. As part of those efforts, Nikko AM also emphasizes dialogues covering corporate management systems and initiatives related to climate change risks and opportunities. In March 2022, Nikko AM disclosed the Nikko Asset Management Group Engagement and Stewardship Strategy. This strategy presents an overview of Nikko AM's engagement objectives and processes as well as its approach to monitoring, escalation, etc.



### (1) Participation in the NZAMI and medium-term targets

The NZAMI is an investor-led initiative aimed at ensuring net-zero GHG emissions for all assets under management by 2050, and Nikko AM started participating in the initiative in November 2021. In addition, in November 2022, the company announced the following goal as an interim reduction target to be achieved by 2030: a 50% reduction in the carbon footprint (compared to the end of December 2019) of 43% of the Group's assets under management (based on the assets under management as of the end of December 2021).

### (2) Examples of engagement related to climate change

#### Japan Equity team engagement example

##### – Example of a company in the domestic finance sector –

To achieve net-zero GHG emissions from its borrower and investee portfolios by 2050, this finance company is enhancing various initiatives, including increasing its sustainable finance targets, and the company boasts both a high level of climate change action and a forward-looking attitude that includes making ongoing improvements.

During dialogues with the company, Nikko AM expressed the following opinions:

(1) Interim reduction targets: These targets are ambitious, and the company is expected to set objectively sound KPIs while also emphasizing the perspective of both reducing the environmental impact and achieving business growth.

(2) Climate-related information disclosure (TCFD disclosure): The company is expected to disclose additional information on engagement initiatives—drivers in terms of achieving portfolio carbon neutrality—portfolio climate risk evaluations, etc.

In the sustainability report disclosed by the company several months after the above dialogues, Nikko AM confirmed that the company had disclosed more comprehensive information, including examples of engagement aimed at supporting the transitions of borrowers and investees as well as additional scenario-analysis

target sectors. In addition, in the 2030 interim reduction targets disclosed after that, the company set a 1.5°C target for high-priority sectors in compliance with international initiative guidelines. Nikko AM is therefore optimistic about the company's progress related to both how it addresses climate-related issues and its information disclosure.

#### New Zealand Bond team engagement example

##### – Example of a commercial vehicle leasing company –

Nikko AM has engaged (dialogued) with a New Zealand-based (the country) commercial vehicle leasing company's (the company) management team to buy corporate bonds issued by the company in the country's bond market.

The company's corporate philosophy is to be the world's best truck and trailer leasing and rental company and make a positive difference in peoples' lives, and the company supplies and manages approximately 6,700 large trucks and trailers, which is equivalent to around 10% of such vehicles in the country.

Nikko AM has bought the company's first and second rounds of issued bonds, but this was primarily due to Nikko AM's positive evaluation of the company's credit rating and competitive yield as well as its clear ESG strategy and market-leading environmentally friendly truck initiatives, including electric vehicles and hydrogen vehicles.

During discussions with the company's management team, Nikko AM confirmed the company's values, its actions in line with those values, and the alternative fuel initiatives the company focuses on. If the company's initiatives lead to the widespread use of alternative fuel for transport vehicles in New Zealand, it will greatly reduce the country's CO<sub>2</sub> emissions. Through this engagement, Nikko AM confirmed and resonated with the company's ownership, leadership, sincerity, teamwork, work ethic, and culture, which is based on making ongoing improvements.

## Our Group's initiatives to reduce emissions

In light of recent trends emphasizing a rapid shift to carbon neutrality, in the SuMi TRUST Group Carbon Neutral Commitment disclosed in October 2021, we declared a goal of reducing the SuMi TRUST Group's GHG emissions (Scope 1 and 2) to net zero by 2030. In addition, regarding our declared initiatives, we disclosed Progress of Our Approach to Carbon Neutrality in October 2022.

We will continue striving to reduce our energy consumption as we more quickly shift to renewable energy, especially in terms of power. We will also ensure the penetration of our initiatives to reduce GHG emissions

throughout the Group in order to achieve net-zero GHG emissions from our Group as a whole, including major overseas offices and affiliates.

#### Expanding the introduction of renewable energy

To reduce our Group's GHG emissions due to power used by our office buildings and branches, we will aim for net-zero CO<sub>2</sub> emissions due to power use by combining the procurement of renewable energy power via corporate PPAs, etc. with the procurement of power by using non-fossil certificates and the like (offsets).

Through these initiatives, SuMi TRUST Bank—the core

of the Group—finished shifting to 100% renewable energy use at its domestic offices by the end of August 2022. In particular, for the Shiba Building and Fuchu Building in Tokyo as well as the two branches (the Kyoto Branch and Himeji Branch) in the Kansai area, the Bank utilized the offsite corporate PPA system to start procuring solar power in FY2021.

We will continue actively promoting the switch to corporate PPAs, etc. to procure stable renewable energy over the long term as we contribute to increasing Japan's renewable energy supply.

#### **Reducing company cars and shifting to low-emission cars**

In recent years—due to the rapid penetration of web meetings and other online business activities—there have been changes in the usage situations and frequency of company cars, which were conventionally used to travel from one place to another.

Given the above structural changes, SuMi TRUST Bank has started optimizing the number of company cars and is aiming to reduce it by approximately 20% by the end of FY2022.

Regarding company cars that will continue to be used as well, the Bank is considering the lease contract periods of existing cars as well as trends in social infrastructure development, including charging equipment, to gradually shift to low-emission cars, thereby promoting the achievement of net-zero GHG emissions through reduced gasoline usage.

#### **Initiatives of major overseas offices and affiliates**

SuMi TRUST Bank's London office (Europe, Middle East and Africa Division) as well as Nikko AM's UK subsidiary (NAM Europe) achieved a shift to 100% renewable energy use by their buildings by December 2022. We will continue to focus on offices with relatively high GHG emissions in particular as we promote initiatives in line with the specific situations of each country and company, including switching to renewable energy power and certificate procurement.

In addition, we will promote the Group-wide sharing of knowledge and know-how accumulated by affiliates that are ahead of SuMi TRUST Bank in terms of energy conservation and shifting to the use of renewable energy in order to more effectively realize measures aimed at achieving net-zero emissions.

#### **Engagement**

SuMi TRUST Bank promotes various initiatives for employees through the sustainability activities ("With You" activities) of branch offices and departments throughout the country based on the concept of learning, communicating, and taking action in relation to climate change issues.

During the first half of FY2022, based on the concept of learning, we provided climate-change e-learning to

all employees and held an online workshop on how to deal with plastic for our branch offices and departments (which were attended by a total of 708 participants from 85 branches and departments). In terms of communicating, in addition to issuing our SuMi TRUST "With You" booklet, which we always release every quarter, we posted climate-change awareness raising posters in the lobbies of our branch offices this June. We also communicate information on climate change issues to employees and clients who visit our offices. Finally, in terms of taking action, we held the With You Eco Festival, an activity aimed at enhancing environmental awareness through employee participation (July to August 2022, 65 participating branches and departments). By organizing and conducting activities focused on reducing plastic, various donations (books and food), power saving, and similar topics at our branches and departments, we help employees understand that climate change and other social issues are in fact their problem, and we will continue to promote independently minded activities.

In this way, through With You activities and similar initiatives, we raise employee awareness of climate change issues and urge them to take action as we help each employee get involved in activities aimed at achieving carbon neutrality.

Note that the Group also formulated the SuMi TRUST Group Zero Plastic Waste Declaration in April 2019 to help reduce the usage of plastic, which can adversely affect climate change and the ecosystem. In terms of specific initiatives following our declaration, SuMi TRUST Bank has switched to windowed envelopes that use Graphan (pulp material) for the window part and has switched its plastic bag material to LIMEX. In addition, in November 2021, SuMi TRUST Bank started providing tea to clients that visit the office building by using environmentally friendly paper bottles.

The Group will continue to address climate change issues by promoting the procurement of goods that use less plastic.

# Chapter 3

# Risk Management

## Climate Change Risks Related to Enterprise Risk Management

### 1. Position of climate change risks

In terms of enterprise risk management, SuMi TRUST Holdings regularly identifies the risks faced by its subsidiaries, other Group companies, etc. and then manages them based on their scale and characteristics. Of these, especially important risks are identified as significant risks, and we classify them according to their risk drivers and categories and then keep track of them as a significant risk inventory. When managing significant risks, we evaluate the importance of each risk in our significant risk inventory to the management, and we judge whether each corresponds to a top risk—risks that require management attention due to their potential to have a significant impact within one year—or an emerging risk—risks that are not likely to have a significant impact within one year but that could have such an impact in the medium to long term (more than one year).

In 2021, we changed the classification of climate change risks from emerging risks to top risks. In addition, we set risk appetite indicators for the GHG emissions (Scope 1 and 2) of SuMi TRUST Bank's domestic offices. We will also consider integrating our Group-wide risk appetite framework to, for example, expand our indicators to encompass Scope 3 as well.

### 2. Climate Change Risk Management Policy

The SuMi TRUST Holdings Board of Directors has formulated the Action Guidelines for Mitigating Climate Change as the Group's basic policy related to climate change. In addition, in May 2022, in terms of climate change-related risk management, the Climate Change Risk Management Policy was added to the Risk Management Rules stipulated by our Board of Directors, and this policy spells out our basic approach to climate change risks, the roles and responsibilities of our Board of Directors, Executive Committee, and directors and officers, our Three Lines of Defense system, our basic policy on risk management with climate change considerations specific to each risk category, and other policies.

#### (1) Identifying and evaluating climate change risks

##### Climate change-related risks

We define climate change risks as high-priority (material) issues in the environmental field that are caused by medium- to long-term climate change and abnormal weather and could negatively impact the Group, its clients, markets, the financial infrastructure, and society, caused by physical damages to social infrastructure, nature, etc. (physical risks), and the world's rapid transition to a low-carbon society due to changes in climate change policies, changes in financial market preferences and social norms, technological innovation, etc. (transition risks).

#### (2) Managing climate change as a risk driver as well as the effects on each risk category

We have formulated a climate change-specific risk management policy for each category based on the assumption that climate change is a risk driver that cross-sectionally affects each risk category.

		Climate change-specific risk management policy	Risk horizon*
Credit risk		Borrower monitoring related to climate change (monitoring the GHG emissions, stranded assets, storm and flood damage risks, and similar characteristics of borrowers)	Short, Medium, and Long term
Market risk		Monitoring the risk of declining prices of securities issued by investors due to their failure to address climate change	Short/Medium term
Operational risk	Administrative work (outsourcing)	Continuity of outsourced work due to storm and flood damage at the contractor	Short/Medium term
	Event risk (storm and flood damages)	Addressing the negative impact of increased storm and flood damages caused by climate change on real estates owned by the Group	Short, Medium, and Long term
	Compliance risk	Compliance with climate change-related regulations	Short/Medium term
	Conduct risk	Addressing the negative impact of the Group's climate change initiatives not responding to the expectations and trust of its stakeholders on clients, markets, the financial infrastructure, society, etc.	Short/Medium term
Enterprise risk management		Addressing the negative impact of the failure to execute (achieve) the SuMi TRUST Group Carbon Neutral Commitment on the Group and its stakeholders	Short, Medium, and Long term

\* Short term: one year or less, Medium term: more than one year but less than ten years, Long term: ten years or more

### 3. Three Lines of Defense system to manage climate change risks

#### Establishment of the Risk Management Department Climate Change Risk Management Team (October 2022)

In October 2022—following the establishment of our Climate Change Risk Management Policy—SuMi TRUST Bank established the Climate Change Risk Management Team in the Risk Management Department on the second line of defense in order to enhance, supervise, and facilitate the risk management process on the first line of defense to address each risk category for which climate change is assumed to be a risk driver.

#### ■ Three Lines of Defense system to manage climate change risks

Third line of defense	Internal audit-related departments	<ul style="list-style-type: none"> <li>· Evaluating the effectiveness of our risk management framework</li> </ul>
Second line of defense	Enterprise Risk Management Department	<ul style="list-style-type: none"> <li>· Monitoring the external and internal environments related to our net-zero strategy</li> <li>· Evaluating our capital adequacy levels by conducting a scenario analysis that considers the medium- to long-term effects of climate change</li> </ul>
	Climate change risk management-related departments	<ul style="list-style-type: none"> <li>· Devising risk management plans related to climate change</li> <li>· Monitoring our Group-wide climate change situation and reporting it to the management</li> <li>· Providing risk management support for each risk category from the perspective of climate change</li> </ul>
	Control departments related to each risk category	<ul style="list-style-type: none"> <li>· Checking and balancing the first line of defense, providing support, and formulating management policies related to each climate change-specific risk category</li> </ul>
First line of defense	Carbon Neutrality Planning and Management Department	<ul style="list-style-type: none"> <li>· Devising the Group's net-zero strategy</li> <li>· Overseeing activities of the first line of defense related to climate change</li> </ul>
	Divisions, branches, and departments	<ul style="list-style-type: none"> <li>· Identifying, evaluating, and controlling climate change risks</li> <li>· Promoting engagement with clients addressing climate change</li> </ul>

## Climate Change Risk Management

### (1) Managing environmental and social (ES) risks related to SuMi TRUST Bank's loan business

Given that it is necessary to prohibit, control, or engage in careful efforts related to loans that have a major negative impact on society, SuMi TRUST Bank has stipulated “policies for specific sectors,” which are regularly reviewed by the Executive Committee, etc. These policies are carefully followed during the investment-and-loan initiative judgment process.

#### Policies for specific sectors (excerpt of particularly noteworthy climate change items)

##### Cross-sector

Because the businesses below involve significant environmental and social risks or negative impacts, we will not finance them.

- Businesses that negatively impact wetlands designated under the Ramsar Convention
- Businesses that negatively impact UNESCO World Heritage Sites
- Businesses that contravene the Washington Convention
- Businesses that use child labor or forced labor

Similarly, because the businesses below are highly likely to involve environmental and social risks or negative impacts, we will carefully consider financing them, including confirming whether environmental and social considerations have been accounted for.

- Businesses that negatively impact indigenous communities
- Businesses that negatively impact high conservation value areas
- Businesses involved in the expropriation of land leading to the forced removal of residents

## Individual sectors

### 1. Coal-fired power generation

#### Risk awareness

Coal-fired power generation causes higher greenhouse gas emissions than other power generation methods, which means it has a high environmental burden and involves a risk of negatively impacting climate change and air pollution.

#### Policy

We will not finance the establishment or expansion of coal-fired power plants. However, we will support initiatives aimed at transitioning to a decarbonized society.

We will not provide financing to companies whose main business is coal-fired power generation if they do not already have existing loan transactions with SuMi TRUST Bank.

### 2. Coal mining

#### Risk awareness

Unless coal mining is suitably managed, there is a risk of negative impacts on the environment and society, such as the impact of toxic waste discharged from coal mines on the ecosystem, casualties from coal mines caving in, and violations of human rights. These projects might also cause an increase in GHG emissions that affect climate change.

#### Policy

We will not finance the start or expansion of coal mining projects (thermal coal) or the start or expansion of coal mining projects using the mountaintop removal mining (MTR) method.

We will not provide financing to companies whose main business is thermal coal mining if they do not already have existing loan transactions with SuMi TRUST Bank.

### 3. Oil and gas

#### Risk awareness

Oil and gas mining operations pose the risk of a negative impact on ecosystems, biodiversity, the living and natural environments of local residents, etc.

Pipeline operations also pose a risk of negatively impacting both nature and the social environment of indigenous people due to oil leaks, deforestation, and other problems that can occur both during construction and after the pipelines are complete.

In the Arctic Circle (the region 66°33' north of the equator), it is necessary to consider both the protection of rare species and the lifestyles of indigenous people, and—due to the major environmental impact of oil sand, shale oil, and gas development—there is a risk of such operations negatively impacting both nature and the social environment of indigenous people.

#### Policy

We will carefully judge initiatives by giving due consideration to the impact on the environment and any problems that may exist with the original inhabitants and local communities.

In particular, we will carefully consider the following initiatives, including confirming whether environmental and social considerations have been accounted for: oil sand mining, shale oil and gas projects, mining in the Arctic Circle, and pipeline construction.

### 4. Hydroelectric power generation

#### Risk awareness

Large-scale hydroelectric power projects pose the risk of a negative impact on ecosystems, biodiversity, the living and natural environments of local residents, etc.

#### Policy

We will carefully judge initiatives by giving due consideration to the impact on the environment and any problems that may exist with the original inhabitants and local communities.

In particular, we will carefully consider the following initiatives, including confirming whether environmental and social considerations have been accounted for: large-scale hydroelectric power generation initiatives (output of 25 MW or more) that involve the construction of dams.

### 5. Forestry

#### Risk awareness

The rapid spread of deforestation poses the risk of various problems, such as a reduction in biodiversity, decline in the stability of ecosystems, lower watershed protection, and lower fixation of carbon dioxide.

#### Policy

Before engaging with timber manufacturers and manufacturers using timber as raw materials, we will carefully judge initiatives by giving due consideration to the manufacturers' international forest certification status as well as any problems that may exist with the original inhabitants and local communities.

In particular, we will take careful measures when it comes to logging business in countries other than high-income OECD member countries, such as requiring the acquisition of internationally recognized certification—including the FSC (Forest Stewardship Council) and PEFC (Programme for the Endorsement of Forest Certification Schemes)—and giving due consideration to any problems that may exist with the original inhabitants and local communities. In cases where certification has not been acquired, we will require the submission of plans to do so.

In addition, we will require the formulation of a policy that establishes respect for the Free, Prior and Informed Consent (FPIC) of local residents, etc. We will also require enhanced supply chain management and improved traceability so that similar initiatives are implemented throughout the business counterparty's supply chain.



## **6. Palm oil**

### **Risk awareness**

The demand for palm oil is rapidly increasing due to both its convenience and the increasing awareness of its health food benefits, but overdevelopment also poses the risk of reducing tropical rainforests and biodiversity.

### **Policy**

Before engaging with palm oil manufacturers and manufacturers using palm oil as raw materials, we will carefully judge initiatives by giving due consideration to the manufacturers' international/local sustainable palm oil certification status as well as any problems that may exist with the original inhabitants and local communities. In particular, we will take careful measures when it comes to palm oil plantation development business, such as requiring the acquisition of local RSPO (Roundtable on Sustainable Palm Oil) sustainable palm oil certification and giving due consideration to any problems that may exist with the original inhabitants and local communities. In cases where certification has not been acquired, we will require the submission of plans to do so.

In addition, we will require the formulation of a policy that establishes respect for the Free, Prior and Informed Consent (FPIC) of local residents, etc. as well as following NDPE (no deforestation, no peat, no exploitation) policies. We will also require enhanced supply chain management and improved traceability so that similar initiatives are implemented throughout the business counterparty's supply chain.

## **7. Large-scale plantations**

### **Risk awareness**

The development of large-scale plantations poses the risk of deforestation and the violation of human rights as well as a negative impact on ecosystems, biodiversity, the living and natural environments of local residents, etc.

### **Policy**

We will carefully judge initiatives by giving due consideration to the impact on the environment and any problems that may exist with the original inhabitants and local communities.

In particular, we will carefully consider forest and peatland development initiatives, such as requiring the formulation of a policy that establishes respect for the Free, Prior and Informed Consent (FPIC) of local residents, etc. as well as following NDPE (no deforestation, no peat, no exploitation) policies. We will also require enhanced supply chain management and improved traceability so that similar initiatives are implemented throughout the business counterparty's supply chain.

## **8. Weapons**

### **Risk awareness**

Based on major humanitarian concerns related to cluster munitions, Japan has strictly prohibited their manufacturing and largely prohibited their retention as stipulated by the Act on Prohibition of Manufacturing of Cluster Munitions and Restriction on Retention of Cluster Munitions.

In addition—from a humanitarian perspective—there is a strong demand to avoid supplying funds used to manufacture inhumane weapons, including nuclear weapons, chemical weapons, biological weapons, and other weapons of mass destruction as well as anti-personnel land mines.

### **Policy**

Given SuMi TRUST Bank's public mission and social responsibilities as a banking institution, we will not provide financing to companies that manufacture cluster munitions, regardless of whether they are in Japan or abroad.

Similarly, we will not provide finance that will be used to manufacture inhumane weapons, including nuclear weapons, chemical weapons, biological weapons, and other weapons of mass destruction as well as anti-personnel land mines.

## **(2) Managing borrower and investee climate change transition risks**

In addition to establishing a Climate Change Risk Management Team in its Risk Management Department, SuMi TRUST Bank has designed an investment-and-loan-portfolio transition risk management framework for the purpose of controlling the GHG emissions of investment and loan portfolios in each high-carbon sector to keep them in line with the Paris Agreement.

This framework includes the departments related to the first and second lines of defense of our Three Lines of Defense system (see page 35), team roles and responsibilities, how our policies for specific sectors should be, business processes for managing borrower transition risks as

part of our first line of defense (evaluation of borrower and investee transition risk categories based on consideration of our climate change transition risk sector heat map, discussion aimed at risk reduction through engagement, monitoring, etc.), and how the checks and balances in the second line of defense should work. These risk management processes are implemented via an integrated approach along with managing our progress related to our GHG emission reduction targets in each sector and managing our reputational risk.

### **1. Policy for addressing climate change transition risks**

Efforts to reduce GHG emissions are picking up speed around the world, and—in our Group's SuMi TRUST Group

Carbon Neutral Commitment, which we announced in October 2021—we declared our intention to reduce the GHG emissions of our investment and loan portfolios to net zero by 2050. We will continue to collaborate with our clients as we emphasize engagement focused on the effects of their medium- to long-term climate change transition risks as well as the measures taken in response.

## 2. Approach to managing climate change transition risks

To work towards achieving net-zero GHG emissions in our investment and loan portfolios, we will use our climate change transition risk sector heat map to identify sectors that are important in terms of our strategy for setting GHG emission reduction targets. Regarding each identified sector, we will set GHG emission reduction targets, and

monitor and manage the progress, while also setting various criteria as well as policies for specific sectors.

## 3. Climate change transition risk management process

In sectors for which GHG emission reduction targets have been set, we judge investment and loan initiatives after conducting due diligence related to transition risks for both new and existing borrowers.

In particular, if the loan balance exceeds a certain amount, we take the risk importance into consideration, and categorize climate change transition risks. We also regularly review these climate change transition risk categories and consider adding risk reduction measures in line with each category as necessary.

### Sector-specific climate change transition risk heat map

We formulated our climate change transition risk sector heat map for the purpose of identifying sectors that are important in terms of managing climate change transition risks.

For this heat map, we considered GHG emissions, the GHG emission intensity, and other relevant details to categorize each sector based on its transition risk level by using four grades, starting with the most significant: Very High, High, Middle, and Low. We similarly categorized each sector based on its exposure by using three grades: Large, Medium, and Small.

The target sectors are based on the carbon-related asset definitions in the supplemental guidance for the TCFD Recommendations (18 sectors total), and

we also considered high-carbon intensity sectors for which the NZBA feels targets should be set\*<sup>1</sup> to come up with a total of 21 target sectors.\*<sup>2</sup>

We consider this heat map and other details to identify the sectors that are important in terms of setting our GHG emission reduction targets, and then we set up GHG emission reduction targets, GHG emission reduction target management, policies for specific sectors, etc. for each sector.

The next step is to expand the scope of our evaluation to include physical risks and opportunities related to climate change. In terms of the evaluation of transition risks as well, we will continue to review our sector evaluation approach in line with climate change policies and technologies, market and other environmental changes, and advancements related to quantification methods.

### Climate change transition risk sector heat map

		Exposure rank		
		Small	Medium	Large
Sector heat map risk rank	Very High	Coal	Steel	Power Oil and gas
	High	Cement	Chemicals Automobile components Passenger aviation	Marine transportation
	Middle	Metal and mining (except steel and aluminum) Aluminum		Capital goods
	Low	Air cargo Agriculture Building materials (except cement)	Paper and forest products Packaged food and meat Drinks Truck services	Railways Real estate

\*1 High-carbon intensity sectors are the following nine sectors in the NZBA guidelines for which setting targets is considered a priority: agriculture, aluminum, cement, coal, commercial and residential real estate, steel, oil and gas, power generation, and transportation.

\*2 Specifically, we added three sectors by extracting "steel" and "aluminum" from "metals and mining" (a sector in the supplemental guidance for the TCFD Recommendations) and by extracting "cement" from "construction materials" (same).

### (3) Project finance initiatives

SuMi TRUST Bank recognizes the fact that financing large-scale development projects may indirectly have a negative impact on the natural environment and local communities. Based on this awareness, we deemed it necessary to introduce a risk management framework that monitors whether a project's impact on the environment and society has been duly considered in the decision-making process for project finance and, in February 2016, we signed the Equator Principles, a set of inter-

national private sector guidelines for assessing environmental and social risks in mainly project finance.

The fourth revision (EP4) of the Equator Principles was adopted in November 2019. SuMi TRUST Bank currently applies EP4 to projects for which it acquired a client mandate after October 1, 2020. Starting with EP4, SuMi TRUST Bank will continue to contribute to achieving a sustainable environment and society by making sure that projects take environmental and social considerations into account based on the Equator Principles.

#### Equator Principles

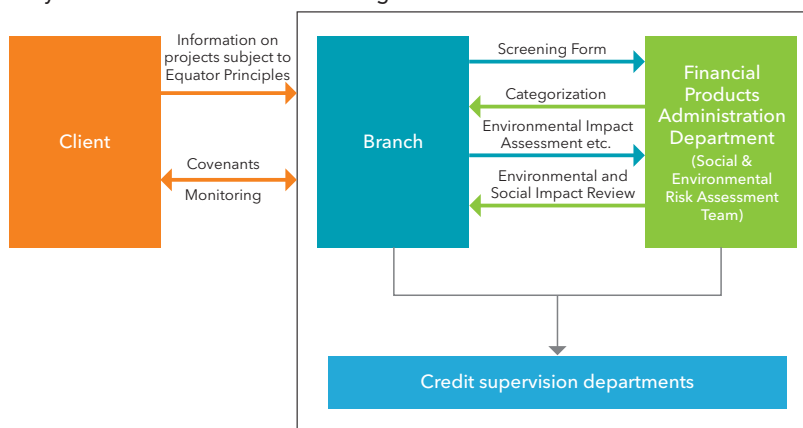
The Group has defined "ESG/sustainable management," including considering the environmental and social impacts of companies to which we extend investments and loans, as an issue of materiality. SuMi TRUST Bank incorporates risk management procedures based on the Equator Principles into its project finance decision-making process in order to confirm that the effects of target projects on the natural environment and local community are fully considered. In FY2021 (April 1, 2021, to March 31, 2022) we applied the Equator Principles to 19 projects.

In EP4, topics on due diligence have been added to strengthen efforts to address climate change risks, including greater consideration of indigenous

peoples in developed countries, expansion of some transactions applicable for refinancing, the requirement to conduct a transition risk analysis under TCFD in addition to considering alternatives for projects with annual GHG emissions of more than 100,000 t-CO<sub>2</sub>, and the requirement to conduct a physical risk analysis when substantial impact is expected.

SuMi TRUST Bank drew up policies for protecting the environment and society based on the Equator Principles framework and procedures for evaluating social and environmental impacts. Financial Products Administration Department (Social & Environmental Risk Assessment Team) carries out assessments of environmental and social impacts relating to individual projects.

#### Systems and Processes for Evaluating Environmental and Social Considerations



**Application processes:** Following internal policies based on procedures for evaluating social and environmental considerations, the Equator Principles overseeing department carries out assessments of environmental and social impacts relating to individual projects.

**Implementing environmental and social impact reviews:** Reviews of the environmental and social impacts of a project proposed by developers take into account its industry, the country where it is situated, and whether it meets the standards called for by the Equator Principles, from which, a comprehensive risk is judged.

**Monitoring compliance:** Compliance with important items concerning environmental and social impacts have been reflected into loan agreements, and compliance with these is regularly confirmed through reports on project compliance status.

**Company training programs:** Regular training sessions are provided for employees in departments and sections relating to sales, assessment, and screening to foster a thorough understanding of internal operations and raise their awareness about environmental and social considerations.

#### Application of the Equator Principles Project Finance Cases

	FY2021			
	A	B	C	Total
	2	14	3	19
Sector	A	B	C	Total
Mining	0	0	0	0
Infrastructure	0	2	2	4
Oil & gas	0	0	0	0
Electric power	2	12	1	15
Other	0	0	0	0

A: Projects for which there is at least one item that is considered to have a significant impact

B: Projects for which there are no items that are considered to have a significant impact and at least one item that is considered to have a limited impact

C: Projects for which the impact of all items is minor/none

#### (4) Ship finance initiatives

##### The Poseidon Principles

For more than 50 years, SuMi TRUST Bank has given top priority to steadily providing ship finance to meet the varied needs of clients in the marine transportation industry. The marine transportation market is heavily influenced by mainly global economic fundamentals and the supply and demand for ships, but decarbonization initiatives in the marine transportation industry are not only urgent issues but also movements that decide the direction in which the marine transportation sector should proceed, and have a significant impact on market trends. In March 2020, SuMi TRUST Bank became the first financial institution in Asian countries to sign on to the Poseidon Principles, an initiative launched by financial institutions to address climate change risks in the marine transportation industry. As a financial institution that is a signatory to the Poseidon Principles, we conducted a quantitative assessment of the contribution of our ship financing portfolio to the reduction of GHG emissions from international shipping based on the GHG emission reduction target set out by the International Maritime Organization (IMO),<sup>\*1</sup> and

we decided to publish the results as Portfolio Climate Alignment once a year.

##### SuMi TRUST Bank's Portfolio Climate Alignment (calculation data: as of December 31, 2021): -0.4%

In addition to following the Poseidon Principles, SuMi TRUST Bank became a signatory to the Call to Action for Shipping Decarbonization, which was disclosed in October 2021 by the Getting to Zero Coalition—a company coalition that promotes the decarbonization of marine transportation—to promote the decarbonization of the marine transportation industry. This initiative is a call to action, with other signatory companies, for the government of each country to formulate policies to achieve commercialization of zero-emission ships by 2030, etc., through commitment to helping to achieve net-zero GHG emissions from international marine transportation by 2050.

<sup>\*1</sup> International Maritime Organization (IMO): The IMO is a United Nations' specialized agency responsible for shipping safety, preventing marine pollution by ships, and promoting international cooperation on marine affairs.

##### Overview of the Poseidon Principles

As an initiative spearheaded by private financial institutions to align with the GHG reduction targets adopted by the IMO for global shipping, as well as the IMO's comprehensive GHG reduction strategy<sup>\*2</sup> to achieve those targets, the Poseidon Principles were established in June 2019 by 11 major global banks that provide ship finance. There are four principles -

Principle 1: Assessment of climate alignment; Principle 2: Accountability; Principle 3: Enforcement; and Principle 4: Transparency.

<sup>\*2</sup> GHG reduction strategy: This strategy was adopted by the IMO in April 2018 with a vision to reduce GHG emissions from international shipping to zero as soon as possible in this century. Specifically, the strategy aims to reduce total annual GHG emissions by at least 50% by 2050 compared to 2008.



##### Regarding Portfolio Climate Alignment

The Poseidon Principles specify a Trajectory Value for annual CO<sub>2</sub> emission efficiency (CO<sub>2</sub> emissions per unit of transport) for each type and size of ship, based on a minimum 50% reduction in total GHG emissions from international shipping in 2050 (compared to 2008 levels), which is the IMO's GHG emission reduction target (adopted in April 2018). The actual volume of annual CO<sub>2</sub> emissions of each ship for which SuMi TRUST Bank extends a loan is compared with the Trajectory Value, and we calculate the difference as Vessel Climate Alignment. Portfolio Climate

Alignment as defined by the Poseidon Principles is then calculated as the sum of the weighted average of the Vessel Climate Alignment for each ship in SuMi TRUST Bank's ship lending portfolio based on the outstanding loan balance. Portfolio Climate Alignment shows the contribution of SuMi TRUST Bank's ship lending portfolio to CO<sub>2</sub> emission reduction targets. If the value is below the Trajectory Value specified by the Poseidon Principles, it is displayed as a negative value (success) and if it is above the Trajectory Value, it is displayed as a positive value (failure).

# Chapter 4

## Metrics and Targets

### Main Metrics and Targets Related to Climate Change

The SuMi TRUST Group sets specific metrics and targets to manage according to our strategies related to climate change and the basic policy on risk management in order to monitor the Group's actions to tackle climate change.

The tables below show our key metrics and primary goals for this fiscal year. We regularly check the metrics and, if there have been any changes in the external environment and/or our strategies have been updated, we review the metrics accordingly.

#### ■ Metrics and goals related to climate change in the Group

##### Category

Business opportunities arising from climate change

##### Metric

Total amount of cumulative sustainable financing

##### Targets

Cumulative amount from FY2021 to FY2030:  
¥10 trillion

##### Category

Risk management

##### Metric

GHG emissions in the Group

##### Targets

Net zero by 2030

##### Category

Risk management

##### Metric

GHG emissions in investment and loan portfolios

##### Targets

Net zero by 2050

##### Category

Risk management

##### Metric

GHG emissions in investment and loan portfolios (electric power sector)

##### Targets

Reduction to 138 to 173 g-CO<sub>2</sub>eq/kWh by FY2030

##### Category

Risk management

##### Metric

GHG emissions in asset management portfolio (SMTAM)

##### Targets

Net zero by 2050. For 50% of assets under management\*<sup>1</sup>, halves the emission intensity\*<sup>2</sup> in 2030 compared to 2019

##### Category

Risk management

##### Metric

GHG emissions in asset management portfolio (Nikko AM)

##### Targets

Net zero by 2050. Halves the emission intensity in 2030 compared to 2019 for 43% of assets under management\*<sup>3</sup>

\*1 50% of the total of ¥85 trillion in assets under management as of the end of June 2021, for a total of approximately ¥43 trillion

\*2 GHG emissions per unit

\*3 43% of the total of ¥31 trillion in assets under management as of the end of December 2021, for a total of approximately ¥13 trillion

##### Category

Risk management

##### Metric

Loan balance for coal-fired power generation

##### Targets

Halves the project loan balance in FY2030 compared to the end of March 2020

Zero project loan balance and corporate loan balance (new/expansion) by 2040

##### Category

Risk management

##### Metric

Exposure to carbon-related assets

##### Targets

—



## Total amount of cumulative sustainable financing

Sustainability is central to the Group's management, it is now emphasized in terms of various aspects of business, and we strive to incorporate sustainability into our growth strategy from the perspectives of ESG and the SDGs in each business area. As a financial institution, we set long-term goals to help create a sustainable society with our clients. We are also committed to achieving medium- to long-term goals to cut CO<sub>2</sub> emissions attributable to our business operations.

We will tackle the issue of climate change head-on to create a carbon neutral society while making full use of our significant expertise on banking, asset management, asset administration, real estate, and technologies as a trust bank group, thereby contributing to the creation of a sustainable society.

In FY2021, SuMi TRUST Bank set a long-term sustain-

able finance target of ¥5 trillion worth of cumulative amount (including ¥3 trillion in the environmental field) during the ten-year period from FY2021 to FY2030. Due to the expanding need for funds related to the sustainable finance and environment/climate change, we expanded our cumulative amount target to ¥10 trillion (including ¥2.5 trillion in impact equity investment) this fiscal year. As a result of active efforts related to project finance for renewable energy, Positive Impact Finance, etc., our result for the end of March 2022 was ¥0.83 trillion. By actively supplying funds for the environmental and social fields, we will continue helping to resolve climate change and other environmental and social issues as we work with our clients to contribute to the achievement of a sustainable society.

	FY2030 target*1	Results (FY2021)	
		Amount	Number of loans
Sustainable finance	¥10 trillion	¥0.83 trillion	–
Project finance for renewable energy*2		¥0.30 trillion	35
Positive Impact Finance		¥0.04 trillion	12
Sustainability-linked loans		¥0.09 trillion	27
Transition finance		¥0.05 trillion	3
Other		¥0.34 trillion	–

\*1 Cumulative amount of sustainable finance SuMi TRUST Bank will be involved in from FY2021 to FY2030

\*2 Project finance for power plants, power lines, storage batteries, etc. related to renewable energy

The targets of sustainable finance are financing for businesses and clients that contribute to resolving environmental and social issues based on such international standards as the Green Bond Principles and the Social Bond Principles. This includes loans, syndicated loans, fixed income investment services, fund investments, financial advisory services, trustee services, impact equity investments, etc.

Category	Type	Examples of sustainable finance
Sustainable finance	Green finance	✓ Businesses that adapt to, or mitigate, climate change. For example, renewable energy, energy efficiency improvement, and green buildings
	Social finance	✓ Employment creation, poverty reduction, nurturing of startup firms, regional revitalization, basic infrastructure like public transport and water supply, and essential services such as hospitals and schools
	Finance based on assessments of ESG/SDGs	✓ Positive impact finance ✓ Sustainability-linked loans
	Transition finance	✓ Businesses that help society transition to net-zero carbon emissions ✓ Businesses that help society adapt to a rapidly aging population
	Impact equity investment	✓ Businesses that help solve environmental problems and social issues
	Other	✓ Other businesses that help solve environmental problems and social issues

## Group GHG Emissions

### SuMi TRUST Group Carbon Neutral Commitment (reduction in the Group's GHG emissions)

**Achieve net-zero greenhouse gas (GHG) emissions in the SuMi TRUST Group by 2030.**

#### Changes in the Group's emissions

We are striving to reduce the environmental impact of both the power, gas, and other energy we use for our business activities and the GHG emissions caused by our business activities. To achieve net-zero emissions, it is important to comprehensively and accurately understand and analyze our input/output situation as much as possible and to conduct ongoing reviews.

For the recent TCFD disclosure, we measured and

totalled the Group's CO<sub>2</sub> emissions (Scope 1 and 2), including not only SuMi TRUST Bank's domestic offices but also all the offices of SuMi TRUST Holdings and our consolidated subsidiaries. We will continue striving to improve our analysis precision through the use of better qualitative and quantitative data as well as improved measurement methods while also taking steps to further refine disclosure items.

#### ■ Changes in the Group's CO<sub>2</sub> emissions

Measurement items	Unit	FY2017	FY2018	FY2019	FY2020	FY2021
CO <sub>2</sub> emissions	t-CO <sub>2</sub>	38,963	35,703	33,675	32,191	23,763
Scope 1 (direct emissions)	t-CO <sub>2</sub>	4,588	4,376	4,432	4,307	4,225
Scope 2 (indirect emissions)	t-CO <sub>2</sub>	34,376	31,328	29,243	27,884	19,538

Calculation period: generally April 2017 to March 2022

Calculation scope: domestic and foreign offices of Sumitomo Mitsui Trust Holdings, Inc. and the Group's consolidated subsidiaries (excluding equity method affiliates)

Calculation method: The calculations for SuMi TRUST Bank's domestic offices were done in compliance with the Act on Rationalizing Energy Use. Regarding power, in Scope 2, the adjusted emission factor of each domestic and foreign business operator was generally used to calculate the emissions, and we considered the CO<sub>2</sub> reducing effects of the corporate PPAs (long-term agreements to purchase renewable energy power) introduced at SuMi TRUST Bank's domestic offices as well as non-fossil certificate procurement.

#### SuMi TRUST Bank's emissions profile (domestic offices)

Regarding SuMi TRUST Bank—which accounts for approximately 90% of the Group's overall Scope 1 and 2 emissions—due to the application of the Act on Rationalizing Energy Use ("the energy conservation law") in Japan, we used a common system to add up the energy use and CO<sub>2</sub> emissions of all the domestic offices.

The Bank's annual emissions (based on the adjusted emission factor) in FY2021—including factors such as the procurement of renewable energy power—amounted to 21,151 t-CO<sub>2</sub>, a 28% reduction compared to 29,495 t-CO<sub>2</sub>, its emissions for the previous fiscal year. The in-

troduction of corporate PPAs and non-fossil certificate offsets in the second half of FY2021 contributed significantly to this. In addition, the power used by all of its domestic offices was 100% renewable energy based by August 2022, and we assume further reduction of our annual emissions.

Note that, for large-scale offices in Tokyo, SuMi TRUST Bank has a responsibility to reduce CO<sub>2</sub> emissions under the Tokyo Metropolitan Environmental Security Ordinance, and—during our second plan period in FY2021—we achieved a reduction that greatly exceeded our reduction obligation amount.

#### ■ Changes in the amount of energy used by SuMi TRUST Bank (domestic offices)

Energy use			FY2017	FY2018	FY2019	FY2020	FY2021
Total floor space		1,000 m <sup>2</sup>	396	370	365	366	363
Scope 1 (direct emissions)	(Ex.) Utility gas	1,000 m <sup>3</sup>	1,996	1,869	1,893	1,890	1,954
Scope 2 (indirect emissions)	(Ex.) Electric power	1,000 kWh	60,444	56,003	54,753	53,940	52,370
Total energy use		MWh	204,448	191,375	188,100	186,174	181,678

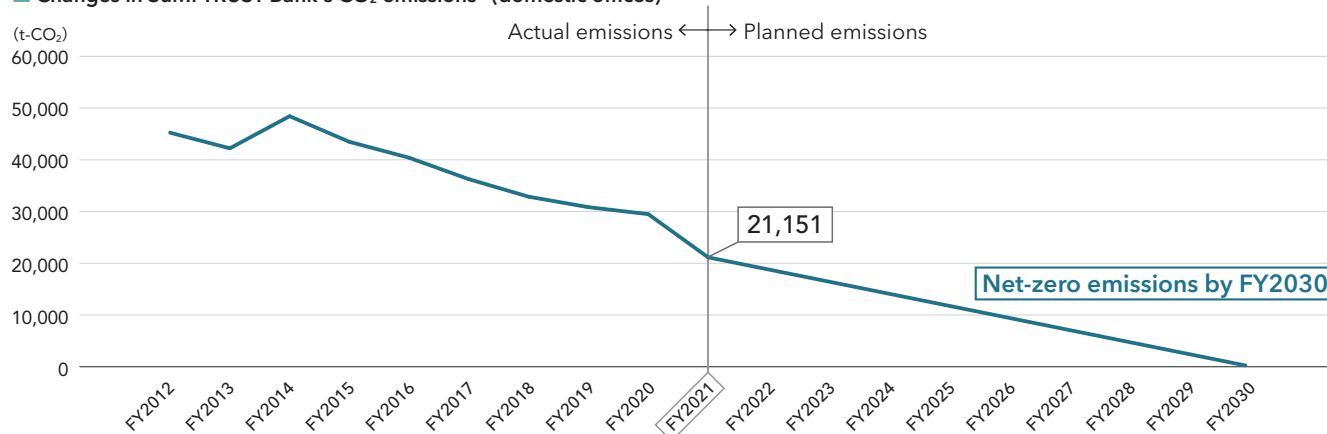
#### Changes in SuMi TRUST Bank's CO<sub>2</sub> emissions (domestic offices)

CO <sub>2</sub> emissions			FY2017	FY2018	FY2019	FY2020	FY2021
Scope 1 (direct emissions)		t-CO <sub>2</sub>	4,575	4,362	4,421	4,297	4,211
Scope 2 (indirect emissions)	Basic emission factor	t-CO <sub>2</sub>	32,493	29,142	26,906	25,732	24,138
	Adjusted emission factor	t-CO <sub>2</sub>	31,665	28,502	26,419	25,198	16,940
CO <sub>2</sub> emissions (Scope 1 + 2 total)	Basic emission factor	t-CO <sub>2</sub>	37,068	33,504	31,327	30,029	28,349
	Adjusted emission factor	t-CO <sub>2</sub>	36,240	32,864	30,840	29,495	21,151
Emission intensity (CO <sub>2</sub> emissions per floor space)	Basic emission factor	t-CO <sub>2</sub> /1,000 m <sup>2</sup>	94	91	86	82	78
	Adjusted emission factor	t-CO <sub>2</sub> /1,000 m <sup>2</sup>	92	89	84	81	58

Calculation scope: Domestic SuMi TRUST Bank facilities covered by the energy conservation law (Act on Rationalizing Energy Use). Some facilities are also occupied by Group companies that include Sumitomo Mitsui Trust Asset Management.

Calculation method: Calculations done in compliance with the energy conservation law calculation method

#### Changes in SuMi TRUST Bank's CO<sub>2</sub> emissions\* (domestic offices)



\* Annual emissions based on the adjusted emission factor, which considers the CO<sub>2</sub> reducing effects of using power derived from renewable energy

#### CO<sub>2</sub> emissions and the achievement of reduction responsibilities\* of SuMi TRUST Bank's offices covered by the Tokyo Metropolitan Environmental Security Ordinance

Plan period: FY2020 to FY2024		Unit	Fuchu Building		Head Office Building	
			FY2020	FY2021	FY2020	FY2021
Targets	(1) Reference emissions	t-CO <sub>2</sub>	25,704	25,704	13,287	13,287
	(2) Maximum emissions	t-CO <sub>2</sub>	18,764	18,764	11,294	11,294
	(3) Reduction obligations	t-CO <sub>2</sub>	6,940	6,940	1,993	1,993
Results	(4) CO <sub>2</sub> emissions	t-CO <sub>2</sub>	10,670	9,845	9,053	9,112
	(5) Emission reductions	t-CO <sub>2</sub>	15,034	15,859	4,234	4,175
	(6) Excess reductions ((5) - (3))	t-CO <sub>2</sub>	8,094	8,919	2,241	2,182

\* The reduction situation of the Fuchu Building and Head Office Building, which have a responsibility to reduce emissions under the Tokyo Cap-and-Trade Program of the Tokyo Metropolitan Environmental Security Ordinance.

Regarding the Head Office Building, which is jointly owned, the obligation rate of each unit owner has not been stipulated. The reduction obligation rates of the Fuchu Building and Head Office Building are 27% and 15%, respectively, and the maximum emissions and reduction obligations were calculated on a single-year basis.

Emissions values were verified by a third-party verification agency.

## GHG Emissions in Investment and Loan Portfolios

### SuMi TRUST Group Carbon Neutral Commitment

**Achieve net-zero GHG emissions in investment and loan portfolios by 2050.**

**2030 interim reduction targets in line with the NZBA framework**

**Electric power sector: 138 to 173 g-CO<sub>2</sub>eq/kWh**

### Sector-specific interim reduction targets

#### (1) Setting 2030 interim reduction targets

To pursue the policy of achieving net-zero GHG emissions of its investment and loan portfolios by 2050, the SuMi TRUST Group will set specific reduction targets and work out detailed action plans first for major sectors, and then for other sectors, in order to achieve net-zero emissions by 2050 based on the framework of the NZBA.

The NZBA requests its members to set GHG emission reduction targets by sector using science-based scenarios, including the Financial Sector SBT Guidance provided by the Science Based Targets initiative. We plan to set targets following such scenarios.

Based on the above policy, in October 2022, we set 2030 interim reduction targets for the electric power sector.

#### (2) Our approach to setting interim reduction targets in the electric power sector

**STEP 1:** Regarding the GHG emissions of our investment and loan portfolios,\*<sup>1</sup> to gain an understanding of our overall GHG emissions and use the results to conduct a survey of our sector-specific GHG emissions and assign an order of priority to sectors for which targets should be set, we performed initial calculations in December 2021.\*<sup>2</sup>

**STEP 2:** We chose to set 2030 interim reduction targets for the electric power sector in particular because:

- Based on the results of the initial calculations in STEP 1, the GHG emissions of the electric power sector are relatively high.
- The electric power sector is assumed to be a key industry to promoting decarbonization given that (a) the electric power is expected to account for approximately 49% of Japan's final energy consumption in 2050 and to be Japan's largest energy source\*<sup>3</sup> and (b) the

electric power is expected to account for approximately 32% of Japan's energy-derived CO<sub>2</sub> emissions in 2030.\*<sup>4</sup>

- Financial institutions are expected to play a major role in the electric power sector, where—during the process leading up to decarbonization—it will be necessary to introduce next-generation power generation technologies, including renewable energy sources, hydrogen thermal power, and ammonia thermal power, which means that it will be necessary to pay research and development costs as well as capital investment costs.

**STEP 3:** We set the emission intensity level as a range based on the consideration of characteristics of the electric power sector and the effectiveness of the targets.

- In the electric power sector, although society demands decarbonization through the rapid introduction of next-generation technologies, it is also necessary to continue to provide a stable supply of energy given that energy is the foundation of both daily and economic life.
- Based on the above sector characteristics, it is necessary to provide support related to the decarbonization needs of clients in the electric power sector and the demand for power, which is expected to increase, by setting and achieving emission intensity (GHG emissions per unit of generated power) targets.
- The range must be capable of covering the level well below the 2°C ("the 2°C target") in line with the Paris Agreement as well as the 1.5°C target.

#### (3) Our plan to set interim reduction targets

We plan to set 2030 interim reduction targets for the oil and gas sector by March 2023.

We also plan to set targets for seven of the nine NZBA-specified sectors\*<sup>5</sup> (the sectors other than power and oil and gas) by September 2024.

	October 2021	October 2022	By March 2023	By October 2023	By March 2024	By September 2024	By September 2025	After October 2025
Reduction targets/ plan formulation	Joined the NZBA	Set reduction targets for the electric power sector	Set reduction targets for the oil and gas sector	Make a reduction plan for the electric power sector	Set reduction targets for the oil and gas sector	Set reduction targets for the 9 NZBA-specified sectors	Make reduction plans for the 9 NZBA-specified sectors	Review the reduction plans for the sectors

\*1: GHG emissions by clients multiplied by the percentage the Group is accountable for through investments and loans

\*2: For our calculations, we limited the calculation scope to major segments and applied a simple method in some cases where it was not possible to apply the measurement method stipulated by the Partnership for Carbon Accounting Financials (PCAF)

\*3: IEA SDS scenario

\*4: Sixth Strategic Energy Plan, Ministry of Economy, Trade and Industry

\*5: Nine NZBA-specified sectors: the following high-carbon intensity sectors in the NZBA guidelines for which setting targets is considered a priority: agriculture, aluminum, cement, coal, commercial and residential real estate, steel, oil and gas, power generation, and transportation

## Measuring the GHG emissions in investment and loan portfolios

### (1) Measurement policy overview

To measure the GHG emissions of our investment and loan portfolios, we use the methodology stipulated by the PCAF Standard,<sup>\*1\*2</sup> which is also recommended by the TCFD Recommendations.

In FY2021—to grasp an overview of the GHG emissions of our investment and loan portfolios in connection with putting our Carbon Neutral Commitment into practice—we performed measurement as calculations that covered our investments in and loans to domestic corporations as well as some of our home loans, and we became aware that further refining our measurement of GHG emissions based on the PCAF Standard is an issue.

In FY2022—to more precisely understand the situation of our emissions in carbon-related sectors—applying our understanding of the refinement issue we became aware of as a result of our trial calculations during the previous fiscal year, expanding our measurement scope based on the PCAF Standard, and improving the quality, we remeasured our emissions. More specifically, in addition to investments in and loans to domestic corporations as well as home loans, we expanded our measurement scope to also include investments in and loans

to overseas corporations, project finance, ship finance, and real estate non-recourse loans, and we also applied sector classifications based on the carbon-related sectors in the TCFD Recommendations to measure our total emissions. In addition, we utilized external vendors to improve the quality, including expanding the scope of collected disclosure data. For details, see the Appendix.

<sup>\*1</sup> PCAF: Partnership for Carbon Accounting Financials. An international initiative established in 2015 that consists mainly of European financial institutions. The PCAF develops methods for measuring GHG emissions related to all asset classes in investments and loans, etc. while also providing support to help organize such data.

<sup>\*2</sup> PCAF Standard: The Global GHG Accounting and Reporting Standard for the Financial Industry. This standard was disclosed by the PCAF in 2020 and covers the measurement of emissions in the 15 Scope 3 categories by asset class.

### (2) Measurement results

The total GHG emissions of the investment and loan portfolios covered by this measurement amounted to 83.1 million t-CO<sub>2</sub>e, and the amount coverage rate<sup>\*3</sup> was 93.6%. For details, see the “Investment and loan portfolios: GHG emissions by sector (as of the end of March 2022)” table below.

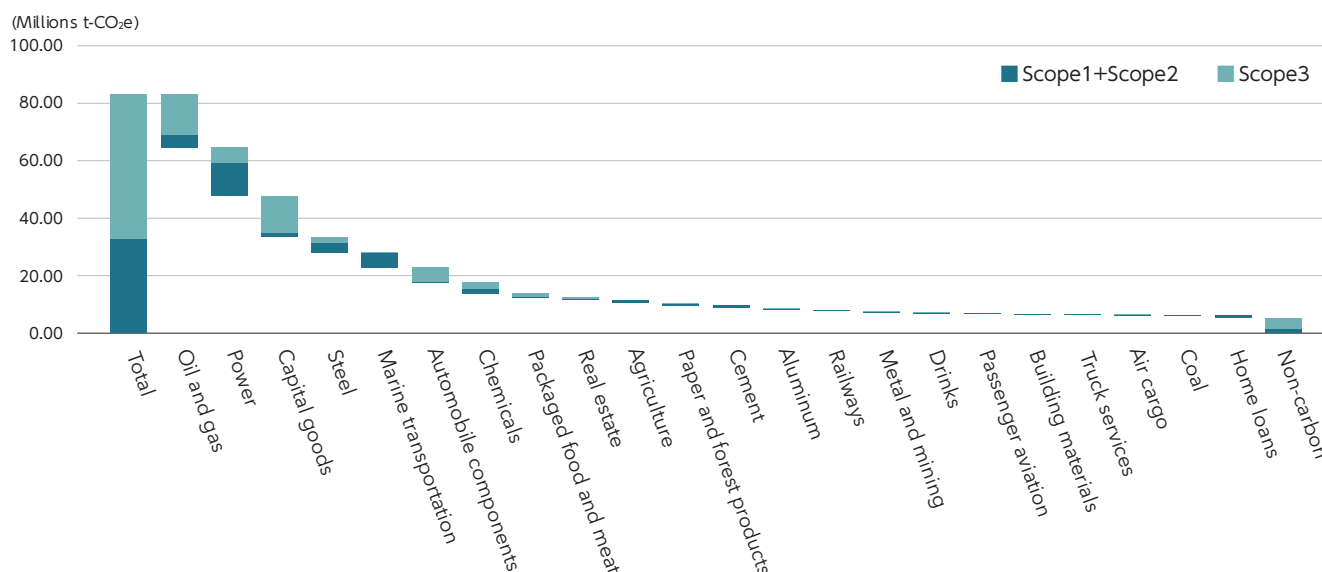
#### Investment and loan portfolios: GHG emissions by sector (as of the end of March 2022)

Sector	Financed emissions <sup>*4</sup> Scope 1, 2 (million t-CO <sub>2</sub> e)	Financed emissions Scope 3 (million t-CO <sub>2</sub> e)	Financed emissions Measurement balance (trillions of yen)	PCAF data quality score <sup>*4</sup> Scope 1, 2	PCAF data quality score Scope 3
Power	11.5	5.4	1.9	2.6	2.3
Oil and gas	4.3	14.2	0.8	2.3	2.7
Coal	0.1	0.1	0.1	4.0	4.0
Air cargo	0.1	0.1	0.1	2.8	3.5
Passenger aviation	0.2	0.1	0.1	2.0	2.0
Marine transportation	4.9	0.4	1.3	2.4	3.3
Railways	0.2	0.3	0.9	2.2	3.1
Truck services	0.1	0.1	0.2	4.0	4.0
Automobile components	0.3	4.9	0.5	2.8	2.9
Metal and mining (except aluminum and steel)	0.2	0.3	0.1	2.9	3.5
Steel	3.3	2.1	0.3	2.3	2.4
Aluminum	0.1	0.4	0.1	1.6	3.3
Chemicals	1.5	2.3	0.5	2.4	2.6
Building materials (except cement)	0.1	0.1	0.1	3.2	4.0
Cement	0.8	0.1	0.1	2.5	2.5
Capital goods	1.3	13.0	2.4	2.5	3.2
Real estate	0.3	0.8	3.7	3.0	2.8
Drinks	0.1	0.2	0.1	2.9	2.9
Agriculture	0.8	0.2	0.1	4.0	4.0
Packaged food and meat	0.2	1.1	0.2	3.4	3.7
Paper and forest products	0.5	0.4	0.1	2.1	2.8
Home loans	1.0	—	10.3	4.0	—
Non-carbon related	1.3	4.0	6.7	3.8	3.8
Total	32.6	50.5	30.1	—	—

<sup>\*3</sup> Coverage rate: calculated by using the total investments and loans related to all covered assets as the denominator and the total investments and loans related to all measured financed emissions with a PCAF data quality score of 4 or higher as the numerator

<sup>\*4</sup> For details on how financed emissions were measured as well as PCAF data quality scores, see the Appendix.





### Measurement-related assumptions and supplemental information

- We are aware that the current disclosure situation of our borrowers and investees are various. In some cases, disclosure information cannot be obtained, in some cases disclosure areas are limited, and in some cases the measurement method is in the process of being upgraded. Therefore, as disclosure becomes more advanced, emissions values can change considerably.
- In cases where we cannot obtain the information disclosed by borrowers and investees for the purpose of our measurement, we estimate the emissions based on the carbon intensity data provided by the PCAF, IEA, etc. in line with the PCAF Standard. If this carbon intensity data is updated, it could cause a significant change in the emissions values. In addition, the used carbon intensity values might be changed to achieve measurement using the most suitable method according to the business characteristics. In such cases, we will clearly state the changes and publish our measurement results.

### (3) Future policy

For our most recent measurement, although we excluded some investment and loan assets, we achieved an amount coverage rate of 93.6% and therefore covered most of SuMi TRUST Bank's financed emissions, including carbon-related sectors. However, there are still a number of measurement-related issues, including further improvement of the data quality, and we realize that it is necessary to increase the sophistication of our approach. Specific examples of these issues are provided below.

#### 1. Improving data quality

For our most recent measurement, we collect disclosed data on GHG emissions by borrowers as much as possi-

ble (equivalent to score 1 and 2), and—in the case where borrowers do not disclose such data—we estimate the GHG emissions (equivalent to Score 4) by using the sector-specific carbon intensity per unit of sales provided by the PCAF, etc. Including estimated GHG emissions in our measurement made it possible to cover borrowers who do not disclose data on GHG emissions, which offers the advantage of better comprehensiveness, but—in order to more accurately understand the actual situation of GHG emissions and manage reduction targets—it is necessary to measure GHG emissions by using data with higher quality. We will therefore aim to improve the data quality by engaging with borrowers and investees and by considering how to utilize external vendors, etc.

#### 2. Expanding assets for measurement

As calculation methods have not yet been established, aircraft finance, fund investment, and other areas were excluded from our most recent measurement, but we will continue to consider suitable measurement methods and expand our coverage based on the consideration of the importance of the extent of our exposure, etc.

#### 3. Establishing a measurement process

In FY2022, the specific process necessary to continuously measure GHG emissions became clear by utilizing our experience of trial calculations in FY2021 and awareness of our issues and greatly expanding our measurement coverage scope based on the PCAF Standard along with taking steps to address everything related to measurement, from data collection to itself. We will consider and develop in-house structures, including the formulation of databases and systems, to more efficiently and accurately measure GHG emissions.

## GHG Emissions in Asset Management Portfolios

Sumitomo Mitsui Trust Asset Management and Nikko Asset Management participate in the NZAMI, an international initiative of asset management companies aimed at the achievement of net-zero GHG emissions by investee companies by 2050.

To achieve this 2050 target, both of these companies set 2030 interim reduction targets this fiscal year. We will continue to conduct engagement activities while striving to increase the sophistication of our operations to help achieve a decarbonized society.

	Sumitomo Mitsui Trust Asset Management	Nikko Asset Management
2030	Halves the emission intensity of 50% of all assets under management (approximately ¥85 trillion) compared to 2019	Halves the emission intensity of 43% of all assets under management (approximately ¥31 trillion) compared to 2019
2050	Net-zero GHG emissions by investee companies	

## Loan Balance for Coal-Fired Power Generation

In March 2018, SuMi TRUST Bank adopted a general policy of no longer providing project loans for new coal-fired power generation projects while also announcing the intention to reduce the project loan balance to 50% compared to the fiscal year ended in March 2021 by FY2030 and to reduce the balance to zero by FY2040.

Later, in October 2022, SuMi TRUST Bank also adopted a general policy of no longer providing cor-

porate loans for coal-fired power generation if the funds are used for new equipment installation or expansion, and set a target to reduce the balance to zero for both project and corporate loans (if the funds are used for new equipment installation or expansion) by FY2040.

At the same time, we will continue to support the funding needs of borrowers related to their transition to decarbonization, toward a decarbonized society.

### Coal-fired power generation loan balance targets (total loan basis)

Loan balance for coal-fired power generation	FY2019	FY2021	FY2030	FY2040
Project finance	¥133.8 billion	¥142.7 billion	Half compared to FY2019	Zero
Corporate finance (new/expansion)	—	¥20.1 billion	—	Zero

↑  
New target

## Exposure to Carbon-Related Assets

Our Group monitors “exposure to carbon-related assets”<sup>\*1</sup> as a metric for understanding climate change risk based on the TCFD Recommendations.

Responding to expanded definition of carbon-related assets, based on revisions to the TCFD Recommendations in October 2021, we have expanded disclosed sectors.<sup>\*2</sup> Our exposure to carbon-related assets as of the end of March 2022 amounted to ¥14.6 trillion, which was 39.1% of our credit exposure in all sectors. In October 2022, SuMi TRUST Holdings disclosed 2030 GHG-emission interim reduction targets for the electric power sector in line with the NZBA framework and also plans to formulate a specific transition plan by October 2023. In addition, we plan to disclose interim reduction targets for the oil and gas sector by the end of FY2022 and formulate a specific transition plan by the end of FY2023. In addition to handling the above interim reduction targets and specific transition plans, SuMi TRUST Holdings will consider our recently established sector-specific climate change transition risk heat map (see Chapter 2), etc. to promote actions aimed at achieving net-zero GHG emissions from our investment and loan portfolios while also continuing to monitor our exposure and appropriately manage our exposure concentration risk.

<sup>\*1</sup> Exposure to carbon-related assets: We define exposure to carbon-related assets as our credit exposure to sectors classified as carbon-related assets (although this excludes independent power producers of renewable-energy). The calculation scope includes the loan amounts, acceptances and guarantees, commitment lines, etc. of SuMi TRUST Bank and Sumitomo Mitsui Trust Bank (Thai) Public Company Limited.

<sup>\*2</sup> Sectors are classified based on the GICS (Global Industry Classification Standard). Note that—of the sectors for which disclosure is recommended based on the TCFD Recommendations—“metal and mining” and “building materials” are categorized based on the NZBA sector classifications as follows, similarly to the “sector-specific transition risk heat map” in Chapter 2 :

Metal and mining → steel, aluminum, metal and mining (except steel and aluminum)

Building materials → cement, building materials (except cement)

### Carbon-related asset exposure as of the end of March 2022

Sector	Exposure (trillions of yen)	Concentration ratio
Power	2.3	6.0%
- Renewable energy	0.9	2.5%
Oil and gas	1.1	2.9%
Coal	0.1	0.1%
<b>Energy subtotal</b>	<b>3.3</b>	<b>8.9%</b>

Air cargo	0.1	0.1%
Passenger aviation	0.4	1.2%
Marine transportation	1.4	3.8%
Railways	1.0	2.5%
Truck services	0.2	0.5%
Automobile components	0.6	1.7%
<b>Transportation subtotal</b>	<b>3.7</b>	<b>9.9%</b>

Metal and mining (except aluminum and steel)	0.1	0.3%
Steel	0.3	0.8%
Aluminum	0.1	0.2%
Chemicals	0.5	1.4%
Building materials (except cement)	0.1	0.1%
Cement	0.1	0.1%
Capital goods	2.8	7.4%
Real estate	4.3	11.4%
<b>Materials and buildings subtotal</b>	<b>8.1</b>	<b>21.6%</b>

Drinks	0.1	0.3%
Agriculture	0.1	0.1%
Packaged food and meat	0.2	0.5%
Paper and forest products	0.1	0.3%
<b>Agriculture, food, and forest products subtotal</b>	<b>0.4</b>	<b>1.1%</b>

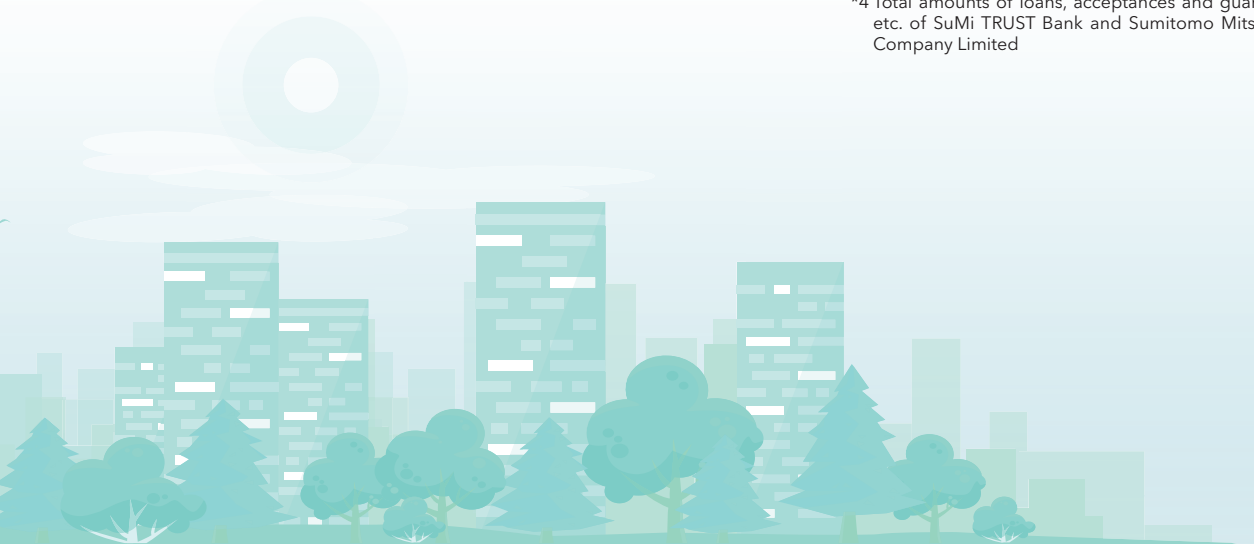
<b>Total for the above sectors</b>	<b>15.5</b>	<b>41.6%</b>
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<b>Carbon-related asset exposure<sup>*3</sup></b>	<b>14.6</b>	<b>39.1%</b>
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<b>Total for all sectors<sup>*4</sup></b>	<b>37.4</b>	<b>100.0%</b>
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<sup>\*3</sup> Total for the above sectors excluding amounts related to renewable energy

<sup>\*4</sup> Total amounts of loans, acceptances and guarantees, commitment lines, etc. of SuMi TRUST Bank and Sumitomo Mitsui Trust Bank (Thai) Public Company Limited



## ..... Postscript .....

Recently, in addition to the ongoing COVID-19 pandemic, the world has been facing an increasingly serious energy crisis due to problems in Ukraine, but, at COP27, which was held in November 2022, an agreement was reached to establish a “Loss and Damage Fund,” and the importance of achieving the 1.5°C target of the Paris Agreement was reaffirmed.

Our Group also continues to view climate change as an important issue that must be prioritized, and—to achieve our Carbon Neutral Commitment—we promoted various initiatives this year as well, the details of which are introduced in this report.

SuMi TRUST Bank has set 2030 interim reduction targets for the GHG emissions of its investment and loan portfolios in line with the NZBA framework, and both Sumitomo Mitsui Trust Asset Management and Nikko Asset Management have set 2030 interim reduction targets for the GHG emissions of their asset management portfolios in line with the NZAMI. As our approach to carbon neutrality, we recognized and shared again the importance of emphasizing “dialogues with all of our stakeholders to gain an understanding of relevant issues and needs (Engagement)” and making a commitment to “developing and providing products and services for achieving the transition (Solution).”

To maintain our “unique to a trust bank” approach regarding the decarbonization of entrusted assets under management, entrusted real estate, and other off-balance-sheet assets as well, we have also started providing investment opportunities considering climate change issues, offering support to facilitate the calculation of GHG emissions of clients, and providing a non-fossil certificate purchasing service. We will continue to fully utilize the Group's functions to help achieve a decarbonized society.

Regarding the disclosure of information in line with the TCFD Recommendations, the level of best practices seems to be increasing every year. By listening to the opinions of all of our stakeholders and engaging in communication that is more meaningful and effective for addressing climate change, we will contribute to the sustainable development of society as we realize the growth of the Group itself. We will also endeavor to achieve our purpose (reason for existence): *creating new value with the power of trusts and let prosperous future for our clients and society bloom.*

We look forward to your ongoing support.

**Sumitomo Mitsui Trust Holdings, Inc.**  
**Carbon Neutrality Planning and Management Department**  
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## Appendix.

### (1) Basic policy for measuring GHG emissions

We will continue to measure the GHG emissions of our investment and loan portfolios and regularly disclose the results through this report, etc. We will measure these emissions in line with internationally adopted standards for measuring GHG emissions, including the PCAF Standard, which was disclosed by the PCAF in 2020.

The PCAF Standard defines quality scores, and it is necessary to use measurement methods with high quality scores to gain an accurate understanding of the GHG emissions of borrower and investee activities. As it requires collecting the both disclosed information related to the GHG emissions of borrowers and investees, and the data related to their various business activities, we

will strive to improve our data collection approach and conduct measurement with high quality scores.

### (2) Approach to measuring portfolio GHG emissions

#### 1. Considering basic measurement conditions

We consider our approach to measuring GHG emissions by referring to the Ministry of the Environment's Research Report on Utilizing and Increasing the Sophistication of Portfolio Carbon Analysis, which uses the PCAF Standard method as the basis for measuring total emissions. Our basic policy for measuring target assets, target sectors, etc. is described below.

#### ■ Overview of our approach to measuring portfolio GHG emissions

Condition item	Conditions details
Exposure	Loans, acceptances and guarantees, and listed stocks
Assets	Investments in and loans to domestic corporations, investments in and loans to overseas corporations, project finance, ship finance, real estate non-recourse loans, and home loans
Sectors	Classified into 21 carbon-related asset sectors based on sectors for which the NZBA requires disclosure of emissions as well as items for which disclosure is recommended in the TCFD Recommendations, non-carbon-related assets, and home loans*1
Basic equation	Financed emissions = attribution factor × company emissions
Reference dates	Investment and loan balance: end of March 2022 Financial indicators, including borrower and investee sales revenue: the latest financial result period of each borrower and investor in SuMi TRUST Bank's portfolios when measurement was conducted in November 2022
Emission data sources	We obtain the GHG emission data of borrowers and investees via external vendor information, information disclosed on the websites of each company, and disclosed GHG emission data directly obtained by SuMi TRUST Bank. In cases where the data above cannot be obtained, we multiply the "power output," "oil and gas production volume," "real estate and residential floor space," or "sales revenue (in other cases)" by the corresponding carbon intensity per unit in line with the PCAF Standard.

#### ■ Sector classifications

Target sectors						
Power	Railways	Marine transportation	Metal and mining (except steel and aluminum)	Real estate	Chemicals	Agriculture
Coal	Automobile components	Air cargo	Steel	Building materials (except cement)	Capital goods	Packaged food and meat
Oil and gas	Truck services	Passenger aviation	Aluminum	Cement	Drinks	Paper and forest products

\*1 We classify sectors based on the GICS codes (Global Industry Classification Standard). Borrowers and investees whose GICS codes cannot be identified by external vendors are instead identified in-house by SuMi TRUST Bank by referring to the Japan Standard Industrial Classification.



## 2. Method for measuring financed emissions based on the PCAF Standard

### A. Data quality scores of borrower and investee GHG emissions

The PCAF Standard defines data quality scores, and—when measuring the GHG emissions of investment and loan portfolios—it is recommended to use data with as high a score as possible. For our most recent measurement, we prioritized measurement using GHG emission data based on disclosed borrower and investee information in line with the above data quality score approach. In cases where it was not possible to obtain GHG emission data based on disclosed borrower and investee information, we followed the PCAF Standard and estimated the

emissions by using the sector-specific carbon intensity data provided by the PCAF, etc.\* Note that all the measurements of assets selected this time had a data quality score of 4 or higher. In addition, to calculate the data quality score of each sector, we used the weighted average values by investment and loan amount for each sector based on the PCAF Standard methodology.

\* Estimation methods used by SuMi TRUST Bank and scores  
 Estimation based on the power output (carbon intensity source: IEA), equivalent to score 3  
 Estimation based on the oil and gas production volume (carbon intensity source: IEA), equivalent to score 3  
 Estimation based on the real estate floor space (carbon intensity source: CRREM), equivalent to score 4  
 Estimation based on the sales revenue (carbon intensity source: PCAF), equivalent to score 4

■ PCAF data quality score table (source: PCAF Standard)

<div>High</div> <div>↑</div> <div>Data quality</div> <div>↓</div> <div>Low</div>	Data quality	Method to estimate emissions		Overview
	Score 1	Reported emissions by companies	1a	Verified emissions data of the company is available.
	Score 2		1b	Unverified emissions data of the company is available.
		Business activity-based emissions	2a	Emissions are estimated using primary business activity data of the company's energy consumption and carbon intensities specific to that data. Relevant process emissions are added.
			Score 3	2b
	Score 4	Economic activity-based emissions	3a	Emissions are estimated using the company's revenue and carbon intensity per revenue of the sector.
	Score 5		3b	Emissions are estimated using the company's investment and loan balance as well as the carbon intensity per asset of the sector.
			3c	Emissions are estimated using the company's investment and loan balance, carbon intensity per revenue of the sector, and asset turnover ratio of the sector.

### B. Equations

To measure financed emissions, we use a methodology based on the PCAF Standard as indicated in the sector-specific guidance in the TCFD Recommendations. The methodology based on the PCAF Standard is approved in line with the GHG Protocol, international standards for measuring GHG emissions.

The specific procedure to calculate emissions in investment and loan portfolios by the PCAF Standard is as follows: financed emissions are measured by multiplying the attribution factor—financial interests, which are equal to the share of the investment and loan amounts to the total financing amounts of borrowers and investees—by the GHG emissions of borrowers and investees.

$$\text{Financed emissions} = \sum_c \text{Attribution factor}_c \times \text{Emissions}_i$$

$$\text{Attribution factor}_c = \frac{\text{Outstanding amount}_c}{\text{Total equity} + \text{debt}_c}$$

Financed emission equations (source: PCAF Standard)

\* For our ship finance estimates, we conducted measurement by referring to the project finance measurement methods in the PCAF Standard, etc.

\* Because the sector-specific carbon intensities provided by the PCAF only include upstream Scope 3 carbon intensities (not downstream) at present. We only estimated upstream Scope 3 emissions, when the estimation was conducted using the sector-specific carbon intensities provided by the PCAF. In the future, if we also include downstream Scope 3 emissions in our estimates, this could change our values considerably.

### 3. Collecting measurement-related data

We collect the data below to conduct measurement based on the PCAF Standard. Because the measurement of GHG emissions is a new initiative for us, there is still a lot of data that cannot currently be obtained from our in-house database, so we have started developing new collection processes to obtain it.

#### A. Collecting disclosed data of GHG emissions

We collect disclosed data of GHG emissions from sources that include the information of external vendors and ESG-related data disclosed by companies. In cases where we can confirm that a third-party certificate, score 1 is assigned to such data, and otherwise, score 2 is assigned.

#### B. Collecting data for estimating GHG emissions

In cases where data cannot be obtained using the methods described above, we collect data of power output, production volume, sales revenue, etc. from financial reports and other various disclosed information obtained by SuMi TRUST Bank, and then we use the sector-specific carbon intensity data provided by the PCAF, the carbon intensity data provided by the IEA, and other information to estimate the emissions.

#### C. Collecting financial data

Regarding the financing amount necessary to calculate attribution factor, we collect the necessary data from in-house financial data or financial reports. Note that the reference date for such financial data is the end of March 2022.





- Companies are asked to use their own judgment on whether or not to adopt any of the proposals presented by Sumitomo Mitsui Trust Bank based on this document.
- Companies that do not adopt the proposals made by Sumitomo Mitsui Trust Bank based on this document will not be subject to disadvantageous treatment with regard to other transactions with Sumitomo Mitsui Trust Bank, nor will the adoption of proposals constitute the requirement for engaging in other transactions with Sumitomo Mitsui Trust Bank.