Nomura
Connecting Markets East & West

Nomura TCFD Report 2022

Implementation of TCFD recommendations

To fulfill our responsibilities as a corporate citizen, Nomura recognizes the importance of disclosing climate-related financial information. Nomura supports the Task Force on Climate-related Financial Disclosures (TCFD) and we are committed to consistent and effective disclosures aligned with the TCFD recommendations.

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CEO Message

Towards a Decarbonized Society

Nomura is committed to achieving net zero greenhouse gas (GHG) emissions for our own operations by 2030, and to transitioning attributable GHG emissions from our lending and investment portfolios to align with pathways achieving net zero by 2050.

Kentaro Okuda President and Group CEO

Nomura was founded in 1925 with a mission to help enrich society through our expertise in capital markets.

Climate change has had a profound impact on lives and ecosystems around the world. Urgent action is required to prevent widespread natural disasters and other devastating effects on the natural environment. Under the December 2015 Paris Agreement, countries agreed to strengthen the global response to climate change by limiting the global average temperature increase to well below 2°C, and aiming for 1.5°C above pre-industrial levels. To achieve this goal, countries including Japan have pledged to become carbon neutral by 2050, and reaffirmed their commitment to the 1.5°C target at the COP26 conference in November 2021.

At Nomura, we are committed to leveraging our core business to support clients in their sustainability efforts, and to achieving sustainable growth by reducing our own environmental impact and enhancing corporate governance. We have committed to achieve net zero greenhouse gas (GHG) emissions for our own operations by 2030, and to transition attributable GHG emissions from our lending and investment portfolios to align with pathways achieving net zero by 2050.

We recognize that large-scale investments are essential for the transition towards a carbon neutral economy. We target to deploy US$125 billion in sustainable financing by March 2026 to support clients with their decarbonization strategies. Companies will also need to undergo business model reforms, and we believe this is an opportunity to assist clients through our business and fulfil an important part of our mission as a financial services firm. We will continue to leverage our collective strengths, including Nomura Greentech, to support our clients' goals and contribute to a decarbonized economy.

Climate-related financial disclosure is an important part of our efforts. We will continue to support the Task Force on Climate-related Financial Disclosure (TCFD) and enhance disclosures based on the TCFD recommendations.

Nomura's management vision is to achieve sustainable growth by helping resolve social issues. Our business is built on the trust of our clients and all stakeholders. We believe the sustainable development of society as a whole will help enhance our corporate value. We will continue to serve our clients with pride and strive to achieve sustainable growth.

1. Views on Climate Change

1.1. Nomura's Basic Views on Climate Change

Nomura recognizes that climate change is an important global issue. In September 2021, we announced our commitment to align our commercial activities with the objectives agreed in the Paris Agreement, aiming to limit global temperature increases to well below 2°C, and striving for 1.5°C, above pre-industrial levels. To support the transition towards a decarbonized economy, we also announced our commitment to achieve net zero greenhouse gas (GHG) emissions for our own operations by 2030, and to transition attributable GHG emissions from our lending and investment portfolios to align with pathways achieving net zero by 2050.

1.2. Corporate Philosophy, Code of Conduct, Management Vision, Sustainability Statement, Environmental Statement and Environmental Policy

Our founder, Tokushichi Nomura II said: "Nomura's mission is to enrich the nation through the securities business. This is something we must absolutely see through." This principle underpins our longstanding commitment to contribute to a truly prosperous society through the capital markets and the unwavering values ingrained in our Corporate Philosophy that continue to define us today. Nomura Group Code of Conduct sets out guidelines to translate our corporate philosophy into actions and represents our commitment to our stakeholders to conduct our business activities in accordance with the Code. The Code states that we must always be aware of our responsibilities to society, including our responsibility to reduce our environmental impact and contribute to a sustainable society.

Code of Conduct 18

Contribution to a Sustainable Society

We respect different cultures and customs and conduct our business in harmony with the countries and regions where we operate. We are aware of our responsibility towards society and actively and continuously engage in a wide range of activities to contribute to society and protect the environment, such as reducing the environmental impact of our business activities.

Our management vision for 2025, which will mark our 100 year anniversary, is to achieve sustainable growth by helping resolve social issues. To achieve this vision, we promote sustainability, including measures to tackle climate change, as a key part of our management strategy. We established the Nomura Group Sustainability Statement outlining our approach to sustainability-related activities and our response to environmental and social risks.

The Wholesale Division: ESG Sectoral Appetite Statement summarizes our approach to Wholesale business activities with specific sectors. The Statement identifies areas where Nomura will not provide or restrict financing from an ESG perspective, and outlines the ESG screening and due diligence process to assess transactions. We review the Nomura Group Sustainability Statement and Wholesale ESG Sectoral Appetite Statement on a regular basis.

In 2009, we combined our Environmental Statement and Environmental Policy. The Environmental Activities Working Group (P.7) spearheads our efforts to reduce the environmental impact of Nomura.

Environmental Statement

- Nomura Group believes a healthy environment is the foundation of stable economic and social conditions for future generations.
- We are committed to acting in an environmentally responsible manner and should therefore approach environmental issues positively.

Environmental Policy

- We encourage investment and constructive engagement in environmentally friendly goods and services.
- We will assess environmental risks and continually strive to minimize pollution and improve the environment.
- We will comply with relevant environmental laws and regulations and engage with external stakeholders on environmental issues.
- We are committed to reducing waste and conserving energy and natural resources to minimize the impact of our footprint on the environment.
- We will communicate this policy to all employees to raise awareness of environmental issues and encourage environmentally friendly initiatives.
- We make this policy available for public review.

We have integrated sustainability into our management strategies to respond to the needs of our investors and clients and work towards the realization of a sustainable society.

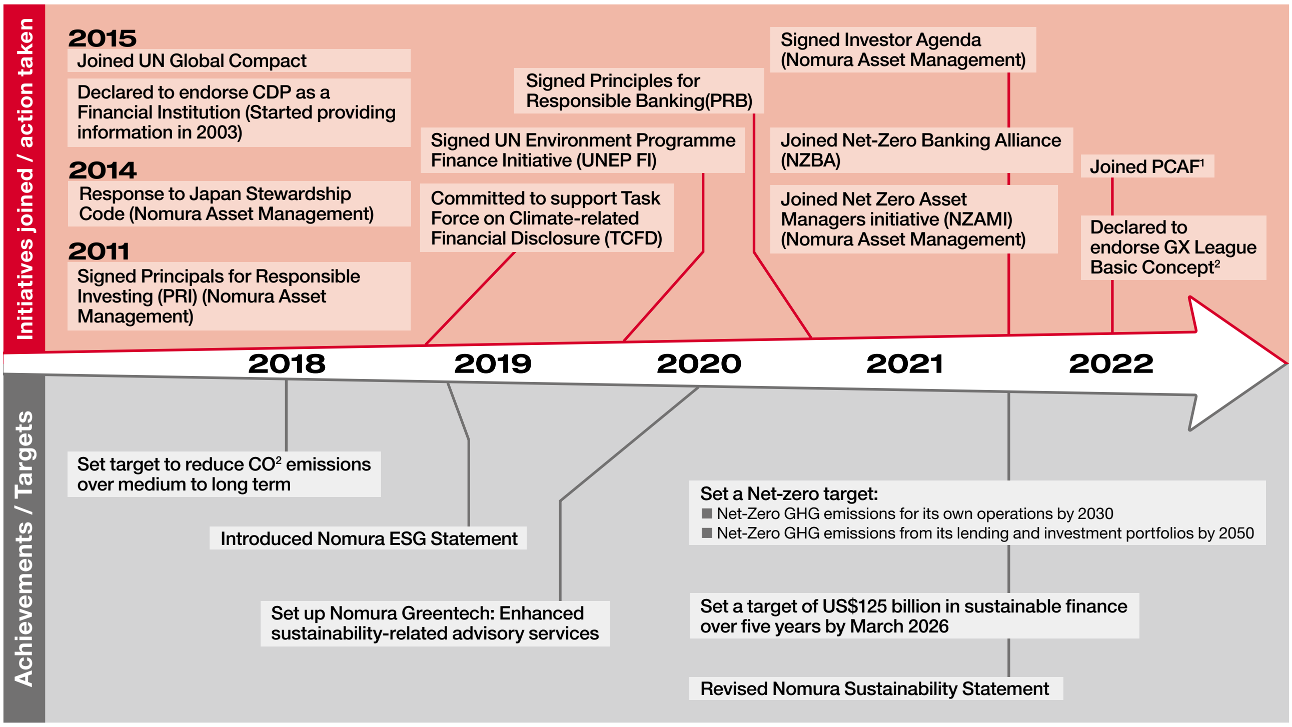
1.3. Our Approach to Sustainability Promotion

Our sustainability initiatives have the two main goals of supporting our clients' sustainability efforts through our business, and achieving sustainable growth by reducing the environmental impacts of our own operations and enhancing corporate governance.

We deliver a wide range of solutions, including M&A advisory services, consulting, and financial products, to promote fund flows and help clients transition towards decarbonization. We have set a target to achieve net-zero emissions from our lending and investment portfolios by 2050. Nomura is a member of the Net-Zero Banking Alliance (NZBA), convened by the United Nations Environment Programme Finance Initiative (UNEP FI), which provides an international framework for the implementation of decarbonization strategies. We support the decarbonization efforts of companies, industries, and governments, taking into account science-based methods and social impacts.

We are committed to achieving net-zero greenhouse gas emissions from our own operations by 2030 to reduce our own environmental impact, and will gradually expand the use of renewable energy and replace electricity with 100% renewable energy by 2030.

Reference: History of Nomura Group's Sustainability Promotion



*1 Partnership for Carbon Accounting Financials
*2 Ministry of Economy, Trade and Industry, "GX League Basic Concept" https://www.meti.go.jp/english/press/2022/0201_001.html

Reference: Updates after 2021 TCFD Report

Items	Updates
Governance	• Establishment of Sustainability Council as an advisory body to the Sustainability Committee
Strategy	• Setting of Net-Zero Target • Clearly outlining two goals: Supporting clients' decarbonization efforts and reducing the firm's environmental impact.
Risk Management	• Embedding additional elements, including results of scenario analysis and climate risk measures, into the climate risk management framework to align with TCFD recommendations
Metrics and Targets	• Establishment of additional metrics

Reference: Major Initiatives Nomura Group Participates

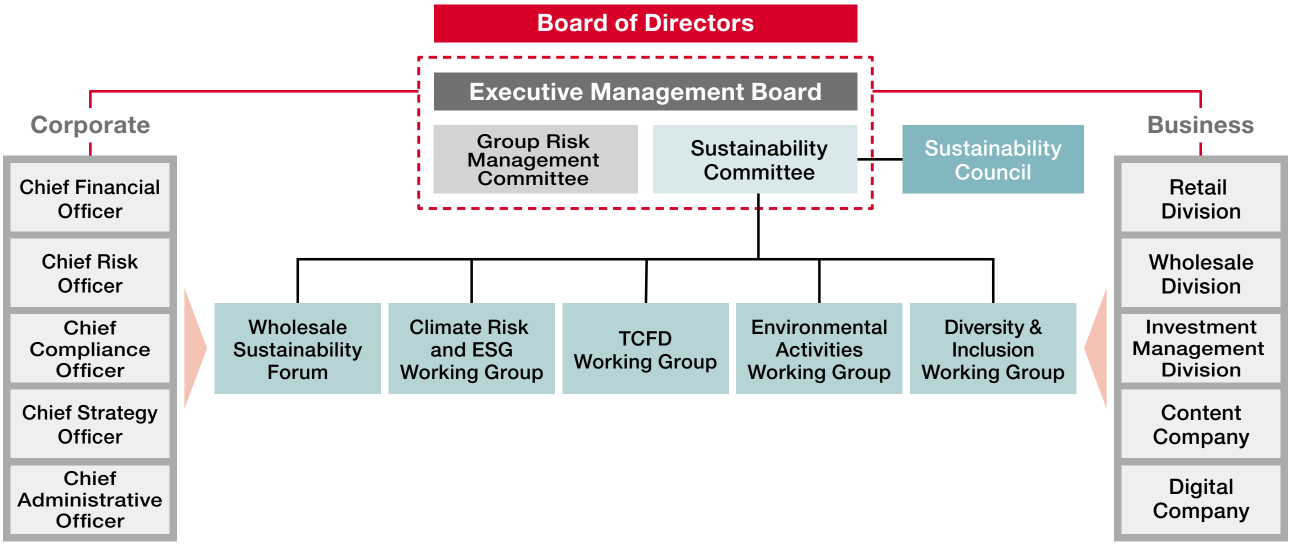
Net-Zero Banking Alliance

Nomura has been a signatory to the UN Global Compact since 2015, supporting its 10 principles in the areas of human rights, labor, the environment and anti-corruption.

2. Governance

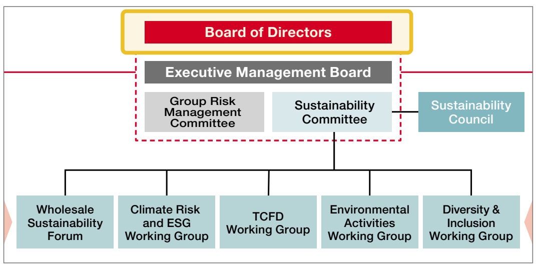
Nomura's Board of Directors oversee three Executive committees, which ensures a separation of management oversight and business execution to strengthen corporate governance. The oversight function and the executive side play respective roles in recognizing climate change risks and opportunities, promoting various measures, and managing risks.

Governance Structure



In the following sections, we explain how the Board of Directors, which provides oversight, and the Sustainability Committee, which is responsible for execution, are tackling climate change, and the role of the Group Sustainability Officer.

2.1. Board of Directors



The Board of Directors offers advice on sustainability reports prepared by executive officers, based on our basic sustainability policy which states: "Nomura will contribute to the creation of a truly enriched society through our business activities based on the principles embodied in the Nomura Group Corporate Philosophy, and actively pursue initiatives to resolve social issues and create a sustainable world." Of the 12 Board directors, six have business experience related to sustainability. In fiscal 2021, outside directors gave a lecture on the importance of sustainability initiatives at a Sustainability Training Program for Group executive officers.

The Board Risk Committee was established in October 2021 to assist with the overall supervision of risk management and enhance our risk management framework. The Committee discussed sustainability risks at a meeting held in December 2021. Five of the six members of the Committee are outside directors, ensuring a high degree of independence from the executive side and strengthening the supervisory function of the Committee.

Board of Directors' Skill Matrix

Name	Skill							
	Corporate management	**International business**	**Financial industry**	**Accounting/ Financial**	**Legal systems/ Regulations**	**Internal control** (including Risk management)	**Digital** (IT)	**Sustainability**
Koji Nagai	○	○	○					○
Kentaro Okuda	○	○	○					○
Tomoyuki Teraguchi	○	○	○		○	○		
Shoji Ogawa		○	○			○		
Kazuhiko Ishimura	○	○						○
Takahisa Takahara	○	○						○
Noriaki Shimazaki	○	○		○		○		○
Mari Sono				○	○	○		
Laura Simone Unger		○	○		○	○		
Victor Chu	○	○	○		○	○		○
J. Christopher Giancarlo		○	○		○	○	○	
Patricia Mosser		○	○		○	○		

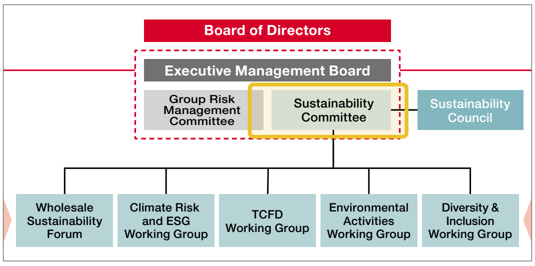
From April 2021 to March 2022, the Board of Directors discussed sustainability, including climate change, as follows.

Timing	Theme	Overview
Q1	Health and Productivity Management	• Importance of Health and Productivity Management and related initiatives • Nomura's Approach to Health and Productivity Management • Challenges and Future Direction
Q2	Sustainability, Health and Productivity Management	**Climate-change-related** • Supporting Client's Decarbonization Efforts • Reducing Nomura's Environmental Impact • Support for Paris Agreement and setting net-zero target **Health and Productivity Management** • Anti-smoking Measures • Digital transformation, Health and Productivity Management
Q3	Revision of the ESG Statement	• Revision of the ESG Statement

2.2. Sustainability Committee

■ Sustainability Committee and Working Groups

The Sustainability Committee is an executive committee responsible for approving strategies related to sustainability. In April 2021, a Group Sustainability Officer was appointed to consolidate the company's sustainability knowledge and accelerate the formulation and promotion of strategies.



Discussions by the Sustainability Committee

In fiscal 2021, the Sustainability Committee held the following discussions on sustainability, including climate change.

Meeting	Contents
1st	TCFD report
2nd	Nomura Group Materiality
3rd	Support for Paris Agreement and setting net-zero target Joining Net-Zero Banking Alliance etc.
4th	Disclosure of PRB Report[1]
6th	Revision of Sustainability Statement (formerly ESG Statement)
7th	Revision of ESG Sectoral Appetite Statement Formulation of policies for social contribution activities

The Sustainability Committee has five working groups (WGs) that serve as sub-committees. Matters discussed by each working group are reported to the Sustainability Committee.

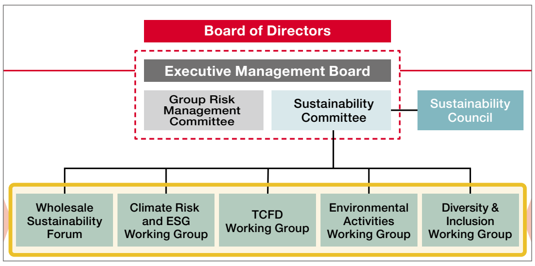
Overview of each Working Group

Name	Function and Members
Wholesale Sustainability Forum	Global team comprising members mainly from the Wholesale Division. Focused on Wholesale's sustainability-related business opportunities and strategies, including climate change, and business frameworks and related policies
Climate Risk and ESG Working Group	Comprises members in charge of risk in each region. Focused on sustainability-related risks, including climate change, and portfolio and scenario analyses
TCFD Working Group	Comprises members from business divisions, corporate functions, etc. Responsible for enhanced information disclosures based on TCFD recommendations
Environmental Activities Working Group	Members responsible for property and purchasing management in corporate function. Focused on efforts to reduce environmental impact
Diversity and Inclusion Working Group	Comprises executive officers from business divisions and corporate functions. Responsible for promoting D&I initiatives

1 In May 2020, Nomura Group signed the Principles for Responsible Banking (hereinafter PRB) of the United Nations Environment Programme, and in November 2021, published the Nomura Group PRB Report 2021, which underscored our commitment to mitigating climate change and contributing to an inclusive and healthy economy. https://www.nomuraholdings.com/investor/library/ar/index.html#prb

■ Sustainability Council

In August 2021, we established the Sustainability Council as an advisory body to the Sustainability Committee. The Council conducts in-depth discussions across departments and regions, and shares this information with the Sustainability Committee.



Discussions at the Sustainability Council

Meeting	Contents
1st	Joining the Net-Zero Banking Alliance
2nd	Joining the Net-Zero Banking Alliance Setting sustainable finance targets PRB Report disclosure Revising the Sustainability Statement (formerly ESG Statement)
3rd	Nomura Sustainability Day (P.13) PRB Report disclosure

2.3. Group Sustainability Officer

In April 2021, Nomura appointed a Group Sustainability Officer in order to strengthen initiatives and external communications related to sustainability.

The Group Sustainability Officer is responsible for implementing sustainability related strategies including gathering information on sustainability locally and globally, managing the progress of sustainability-related measures, and developing sustainability-related policies and frameworks.

3. Strategy

3.1. Recognition of Risks and Opportunities Associated with Climate Change

3.1.1. Recognition of the Risks Associated with Climate Change

Nomura recognizes risks arising from changes in the environment due to climate change and identifies the potential impact on our business. There are two types of risks associated with climate change: the risk of loss or damage due to extreme weather events such as large typhoons, droughts, and intense heat (**physical risk**), and the risks associated with decarbonization, such as the inability to respond to changes in government policies, and rapid technological innovations (**transition risk**). Nomura recognizes the following physical and transition risks associated with climate change.

■ **Risk that clients will not adequately respond to climate change, resulting in financial damage, decline in creditworthiness, and inability to fulfil their contractual obligations**

Examples of Specific Risks	Physical Risk/ Transition risk	Term horizons	Primary Risk Category
Risk that business will decline and Nomura will incur losses due to clients or counterparties suffering loss or damage arising from extreme weather events resulting in bankruptcy	Physical risk	Short term	Credit risk
Risk of incurring losses due to coal mines, oil fields or natural gas extraction facilities owned by clients or counterparties becoming stranded assets, resulting in a decline in performance and creditworthiness	Transition risk	Medium to long term	

■ **Risk that climate change causes market fluctuations and losses are incurred due to fluctuations in the market price of Nomura's financial assets**

Examples of Specific Risks	Physical Risk/ Transition risk	Term horizons	Primary Risk Category
Risk of incurring losses due to price fluctuations in Nomura's trading assets, positions, etc., as a result of policy changes or rapid technological innovations aimed at achieving a decarbonized society	Transition risk	Medium to long term	Market risk
Risk that large-scale climate-related impacts such as flooding and rising sea levels will cause real estate prices to fall and the collateral value of the lending business to be damaged	Physical risk	Short, medium and long term	

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■Risk of reputational damage if Nomura and counterparties fail to respond to climate change

Examples of Specific Risks	Physical Risk/ Transition risk	Term horizons	Primary Risk Category
Risk that participation in transactions with substantial GHG emissions worsens Nomura's reputation	Transition risk	Short term	Reputational risk
Risk of reputation deteriorating due to inadequate response to regulatory and policy changes		Medium to long term	

■Risk of suffering financial losses or reputational damage due to inadequate or failed internal processes and employee response to climate change

Examples of Specific Risks	Physical Risk/ Transition risk	Term horizons	Primary Risk Category
Compliance and legal risks related to regulatory changes including new disclosure requirements and potential mis-selling of climate and ESG related products	Transition risk	Short term – Medium Term	Operational risk
Business resilience and third party risks arising from severe climate events impacting buildings, employee safety and availability of systems and critical third-parties	Physical risk	Short term – Medium Term	

■Risk of inadequate strategies or failed execution of strategies as compared with competitors, and risk of gap between strategies and resources

Examples of Specific Risks	Physical Risk/ Transition risk	Term horizons	Primary Risk Category
Risk that changes in the regulatory and policy environment will reduce existing businesses, increase response costs, and increase capital burdens	Transition risk	Medium to long term	Strategic risk
Risks that existing products become obsolete due to changes in client needs in line with decarbonization and reduced profit opportunities due to decline in competitive advantage in development of new products			

At Nomura, we conduct scenario analysis based on the scenarios published by the Network for Greening the Financial System (NGFS) and the Intergovernmental Panel on Climate Change (IPCC) in order to analyze the impact of climate change on the creditworthiness of counterparties. In fiscal 2021, we conducted a new analysis to estimate the short term impact of climate change on our capital and risk assets for both market risk and credit risks, using the "Disorderly scenario" published by NGFS (Details in section 4: Risk Management)

As a result of our analysis, we believe that the impact of climate change on our company's finances will be limited.

3.1.2. Recognition of Climate Change-Related Opportunities

In its 2050 Carbon Neutral Declaration, announced in October 2020, the Japanese government set a goal of achieving a decarbonized society and net-zero greenhouse gas emissions by 2050. In recent years, countries around the world have been accelerating efforts to achieve carbon neutrality, and there is a need for changes in industry structure and social and economic reforms based on policy measures.

As a financial services firm, we are committed to helping our clients decarbonize. Over the next 30 years until 2050, a total of US$122 trillion (approximately 16,000 trillion yen) is said to be required for the transition to a decarbonized society. We recognize that the role of finance in the supply and circulation of risk money will grow. In particular, we believe the growing demand for funds, M&A advisory services, consulting, new financial products and solutions, and ESG-related funds will present increased opportunities for business.

We recognize that inadequate planning or execution of strategy, and gaps between risk and strategy and resources could prevent the firm from being able to take advantage of business opportunities associated with climate change. We will seek to expand opportunities by appropriately understanding changes in the environment and regulatory trends, and by appropriately controlling strategic risks.

Growth Opportunities Associated with the Transition to a Decarbonized Society

Business category	Strategy	Examples of Potential Growth Opportunities
Finance	Expansion of sustainable finance	Increasing underwriting opportunities in line with higher capital investment needs related to decarbonization (transition finance) Origination of green projects for renewable energy such as solar and wind power
Consulting	Providing total solutions in the sustainability field	Increasing information-providing opportunities for formulation of decarbonization strategy and vision Increasing consulting opportunities for sustainability strategy and ESG management
Advisory	Provision of M&A Advisory services in the sustainability field	Increasing M&A advisory opportunities by supporting clients' decarbonisation through business portfolio reorganization
Investment opportunities	Expansion of ESG and SDGs investment opportunities	Developing ESG and SDG management products Index development Assessing the performance of financial instruments against ESG standards Strengthening information provision to individual investors

3.2. Strategies for Climate Change

3.2.1. Expansion of Sustainable Finance Initiatives

We have been arranging sustainability themed bonds since 2010. In 2017, we established a dedicated sustainable finance team in the Debt Capital Markets Department, one of Nomura's underwriting-related departments, to take part in a wide variety of sustainable finance projects. To further strengthen and promote this initiative, in 2021 we set a target to deploy US$125 billion in sustainable financing by March 2026. In addition to achieving these targets, we are taking the following steps to further enhance sustainable finance.

■ Transition Finance

As part of sustainable finance, we are strengthening our efforts in transition finance to respond to expected growth in demand by clients seeking to procure funds for capital investment and R&D in a low-carbon society.

■ Energy-related Infrastructure Finance

We established a dedicated energy-related Infrastructure Finance team in New York in 2017. We have been strengthening our Infrastructure & Power Finance (IPF) business, one of our core businesses overseeing sustainable finance globally.

■ Strengthening Global Cooperation

Employees in Global Markets and Investment Banking, which provide sustainable finance, participate in the Wholesale Sustainability Forum (P.7). Under the leadership of our Head of Wholesale, the group is plays an important role in strengthening sustainable finance initiatives by collaborating globally to pursue business opportunities and identify necessary partnerships and initiatives in the field of sustainable finance.

■ Proposals, Participation in Rulemaking process

Nomura participates in the International Capital Markets Association (ICMA) Climate Transition Finance Working Group and the Social Bond Sustainability Link Bond Working Group. As a member of the Sustainable Bond Market Advisory Group of the London Stock Exchange, Government, and associations related to sustainable finance such as Japan Securities Dealers Association, we are also actively involved in rulemaking in the area of sustainable finance and the revitalization of the sustainable finance sector as a whole. As a member of the Net-Zero Banking Alliance and the PCAF, we are also working to achieve net-zero greenhouse gas emissions from our lending and investment portfolios.

Reference: Major achievements in recent years

The company supports the transition to a low-carbon society globally by providing cross-border financing solutions. In 2021, a total of 120 publicly offered ESG bonds amounting to 679 billion yen were underwritten by domestic issuers, making it the second largest in the industry in terms of value. In addition, 189 global ESG bonds were underwritten for a total value of US $17.6 billion. The firm's efforts have been highly evaluated, with nominations for awards and rankings in Japan and overseas.

- US: The IPF team was involved in financing deals worth US$3 billion between April 2021 and January 2022. As of February 22, 2022, IPF ranked first in renewable energy in Japan, third in North American Data Centers, and ninth in North America Power in the IJGlobal league table and was nominated as MLA of the Year for three consecutive years.
- Nomura acted as joint lead arranger for a US$1bn financing mandate for the development of an LNG facility in Louisiana and $490m refinancing for the Potomac Energy Center, a 802MW CCGT (Combined Cycle Gas Turbine) in Virginia. The transactions won IJGlobal Deal of the Year awards and LNG Oil & Gas Deal of the Year 2021 and Refinancing Deal of the Year 2021, respectively.
- In 2021, we acted as Book Runner and green bond structuring agent for the issuance of the world's largest yen-denominated green bonds with a total value of 300 billion yen and euro-denominated green bonds with a value of 200 billion yen by NTT Finance, and contributed to the smooth execution of the projects.
- In October 2021, the European Union (EU) issued green bonds totalling €12 billion under its "NextGenerationEU (NGEU)1 " recovery program, and Nomura acted as co-lead manager. This was the first green bond in the EU and the largest green bond in history, setting a capital market record.
- In January 2022, Nomura was the sole lead arranger for global developer Amp Energy's US$350 million financing to fund the construction of 628 MW of solar photovoltaic and battery storage facilities in the U.S., Japan and Australia.
- In February 2022, we underwrote Hungary's green Samurai bond and marketed them to Japanese investors. This was the second such bond after the first issue in September 2020, and the largest issuance by the country in the Samurai bond market.

3.2.2. Providing Total Solutions in the Field of Sustainability

Leveraging the Group's comprehensive capabilities in providing a wide range of consulting and digital services as well as knowledge and know-how gained through its global network, the company offers a wide range of solutions, not only at the funding stage but also upstream, such as strategy formulation and business restructuring. We will strive to solve clients' sustainability issues by providing multilayered solutions.

■ Providing Research Service

The Nomura Research Center of Sustainability and the Equity Research Department ESG Team conduct research on sustainability within the Contents Company, which was established in July 2020. The Nomura Research Center of Sustainability conducts sustainability research from the perspective of financial and capital markets. For example, we analyze trends related to the transition to a decarbonized economy including trends in global financial regulations and systems, financial instruments, financial markets, investors and company information disclosure trends and provide the results of our analysis in papers and quarterly journals to clients. The ESG Team conducts research and analysis on international policy and regulatory trends as well as Japanese and other company response to enhancing engagement with institutional investors. For example, when we hold meetings with investors on decarbonization, we provide information on corporate responses based on macroeconomic policy trends and technical knowledge in a broad format that takes into account risks and business opportunities. The Quantitative Research Center provides consulting services to corporate clients based on quantitative analysis, and helps them resolve sustainability issues, develop strategies, and improve their ratings and ESG ratings.

■ Strengthening Cooperation within the Group towards providing solutions

Within Nomura Group, Nomura Institute of Estate Planning is a think tank specializing in business and asset succession, Nomura Healthcare specializes in consulting in the healthcare and nursing care fields, while Nomura Agri Planning & Advisory specializes in research and consulting in the food, agriculture, forestry and fishery industries. Leveraging the information, talent and networks of these organizations, we deliver a wide range of solutions to social issues, including climate change, and to promote the realization of a sustainable society.

Reference: Sustainability derivatives

We served as a swap counterparty for AEON REIT's sustainability derivatives. Sustainability derivatives are derivative contracts that accompany sustainability loans. This is the first contract in the world to be linked to a sustainability loan based on a sustainability finance framework evaluated by a third party. Furthermore, the Loan and sustainability derivatives received SU1, the highest rating from Japan Credit Rating Agency (JCR), as a third-party assessment.

Reference: Nomura Sustainability Day

At Nomura Sustainability Day held in October 2021, we introduced Nomura Group's sustainability initiatives to a wide range of stakeholders. In addition to providing an overview of Nomura Group's sustainability initiatives, a wide range of presentations and panel discussions were held on the themes of "Sustainability and Asset Management" and "Corporate Management and Sustainability", from macroeconomics to new industries.

Reference: Research on Determination of SDG Bonds by Natural Language Processing Technology

Nomura Securities announced the launch of research on determining SDG bonds using natural language processing (NLP) technology with the support of Sony Computer Science Laboratories, Inc. (Sony CSL). The research will quantitatively evaluate the relevance of how funds are used to achieve SDG goals by using NLP to analyze issuers' prospectuses and sustainability reports. By evaluating corporate bonds not classified as SDG bonds to determine the extent to which they possess characteristics of green, social or sustainability bonds, the research also aims to expand the investment target universe while quantifying and refining SDG bond determination.

Details regarding the technology used and results of the research will be announced later through seminars.

3.2.3. Providing M&A Advisory Services in the Field of Sustainability

We will help clients resolve sustainability issues by providing strategic advisory services, such as M&A advisory, in the sustainability field, and by leveraging the comprehensive capabilities, knowledge and expertise gained through our global network.

■ Providing M&A Advisory Services by Nomura Greentech

In April 2020, Nomura acquired Greentech Capital Advisors, a U.S. M&A boutique with strengths in sustainability, including renewable energy. Nomura Greentech is now a fully integrated investment banking team within the Wholesale Division and provides M&A and strategic advisory services and fundraising in the areas of sustainable technology and infrastructure.

Reference: Nomura Greentech Activities

Nomura Greentech supports clients in transforming their core infrastructure, from energy, transportation, food and water to waste management systems. With unrivalled expertise in sustainable technology and infrastructure, Greentech advises established players as well as innovative companies on low carbon, digital and efficiency initiatives.

Major achievements in recent years

- Executed 36 projects in FY2021.
- We acted as sole financial advisor to Mitsui&Co. on its investment in Mainstream Renewable Power Limited, a renewable energy project owned by clean energy investment company Aker Horizons ASA through its holding company. Mitsui&Co. acquired 27.5% of the shares for a total of 575 million euros (approximately 77 billion yen).
- We acted as sole financial advisor to Hy2gen on its part in the €200 million capital raise by Germany-based Hy2gen. This is the world's largest private investment in a company specializing in green hydrogen.

3.2.4. Expansion of ESG/SDGs investment products

To help resolve ESG issues, we will promote a virtuous investment cycle by developing investment products that contribute to the resolution of ESG issues and promoting ESG and SDG related investment products to individual investors.

■ Developing and Providing ESG/SDGs Investment Products

In July 2020, Nomura developed a series of funds focused on sustainable growth and medium to long term investment growth for our clients. The funds are part of our ESG lineup and are mainly marketed to individual investors. As of March 31, 2022, our ESG product lineup had a net asset balance of over ¥740 billion. We also offer sustainable bonds for individual investors and investment trusts, and we are working to expand ESG investment opportunities in Japan.

■ Strengthening information provision to Individual Investors

Nomura has the largest client base among Japanese securities companies. We hold ESG seminars for individual investors and share videos of ESG study sessions on our social media platforms. We introduce on the Nomura website investment trusts from our ESG product lineup which contribute to the SDGs under the categories of decarbonization, the environment, healthcare, water and SDGs. We also provide information to individual investors on how investing in these areas can help resolve social issues. By promoting ESG investment to individual investors, we aim to create a virtuous investment cycle.

■ Assessing the Performance of Financial Instruments against ESG Standards

We established an ESG Quantitative Team in the U.S. to evaluate the performance of financial instruments against ESG standards. Using proprietary NLP ESG signals and commercial ESG scores, the Team conducted a quantitative evaluation of the impact of ESG signals on fund performance, and developed and disclosed an investment strategy based on its assessment. The results of the analysis are described in "How Green is your ESG Fund?" and published in three reports. Investment strategies benefit both passive and active investors and attract interest from institutional investors in Europe and the U.S. Nomura is working with sales and structuring teams to incorporate these strategies in financial products, such as funds, ETFs, securities and derivatives.

Column: Capability building through Sustainability Training

Nomura is working to raise awareness of sustainability among its executive officers and employees by providing learning opportunities through trainings, study sessions, and online programs to develop talent that meet the diverse needs of clients.

In Japan, sustainability training is held once a year for all executive officers and employees. In fiscal 2021, more than 15,000 employees participated in sustainability training, focusing on the environment, diversity and inclusion. We also conducted a Sustainability Training for executive officers. The training included streaming of 12 videos and a workshop to discuss sustainability management based on case studies. Videos and materials used in the Sustainability Training for Executive officers are available to all employees. In addition, the Sustainability Development Department holds regular in-house workshops, with voluntary participation from executive officers and employees globally. A total of 3 study sessions were held in fiscal 2021. A wide range of topics, including latest ESG trends and issues related to ESG information disclosure, were discussed by experts from both inside and outside the company, and approximately 840 people participated. We also provide opportunities for new employees to learn about sustainability through training and training for new managers.

The Wholesale Division provides training on sustainable finance for executive officers and employees on a global basis. Topics covered include Nomura's approach to sustainability and business initiatives to achieve the SDGs; sustainable financing trends; political, economic and regulatory trends in sustainability; and climate change and ESG risks. More than 1,700 employees have participated in the training since December 2020.

Since November 2020, the Nomura Research Center of Sustainability has held in-house workshops with specialists and academic experts. In fiscal 2021, nine meetings were held, with active discussions on more multifaceted and specialized sustainability-related topics.

(Reference) Content of Sustainability Training for executive officers

Part 1. Sustainability management theory
Part 2. Sustainability Risk Environment for Operating Companies (1) Decarbonization
Part 3. Sustainability risk environment for operating companies (2) Resource depletion and the circular economy
Part 4. Sustainability management for operating companies
Part 5. Sustainability Management in the Financial Sector
Part 6. Sustainability Management in the Financial Industry (1)
Part 7. Sustainability Management in the Financial Industry (2)
Part 8. The next wave of sustainability
Part 9. Social Issues for Operating Companies and the "Responsible Company" Brand
Part 10. Summary of Sustainability Issues
Part 11. Financial Initiatives for the Next Generation
Part 12. What is Nomura's North Star?

Initiatives to reduce environmental impacts and achieve sustainable growth

At Nomura, we have established an environmental management system to promote environmental impact reduction by implementing a PDCA cycle. In Japan, we set environmental targets and review them at least once a year. We also conduct an environmental action check to assess the efforts of each department. We promote green purchasing, which prioritizes the purchase of products with low environmental impact and paperless processes. Environmental initiatives and status of achievement of environmental targets are regularly reported to the director in charge of sustainability promotion and are also disclosed on the company's website.

Nomura London has maintained ISO 14001 certification since 2007 under the supervision of a local certification organization. In 2018, we received ISO 14001 certification, which had been revised in 2015. In 2015, we acquired ISO 50001 certification for our energy management system. For the past 10 years, we have been raising honeybees on the roof of our London office to raise employee awareness of the ecosystem and environment.

4. Risk Management

Risks that could have a material impact on the firm's management strategy or finance are managed under the "Top Risk" framework. Climate risk is recognized as one of the "Emerging Risks", which includes those risks that are understood to affect the firm over the medium to long term. Climate risk is not recognized as an independent risk, but is understood to be a risk factor affecting various risk areas. Nomura has built an integrated risk management framework that manages the risks caused by climate change by adding new responses to the ones into the existing risk management frameworks.

4.1. Risk Categories

Some of the key risks Nomura recognizes are outlined below.

■ Market Risk

Market risk is the risk of loss in values of financial assets and liabilities due to fluctuations in market risk factors. Risk limits are set on market risk metrics and closely monitored and controlled, reflecting the market environment and the degree of Nomura's risk acceptance. Market risk management primarily covers positions held for short-term trading purposes, but in some instances it also covers less liquid, longer-term positions for trading and/or financing purpose.

Nomura has reviewed its Market Risk Management framework to assess applicability of ESG and Climate Risk on short-terms tradeable positions that typically turn relatively quickly by reviewing climate risk scenario assumptions. We have been also working with consulting firms to better understand how our peers are incorporating climate risk into market risk management. As a result, we will focus on periodic reviews and stress analysis of a smaller subset of less liquid trading positions for the time being, given climate change risks are expected to impact over the medium to long term. We will continue to assess and develop framework, while also monitoring industry best practices for the initiative.

■ Credit Risk

Credit risk is the risk of loss arising from an obligor's default, insolvency or administrative proceedings which results in the obligor's failure to meet its contractual obligations in accordance with the agreed terms.

We control credit risk by assigning an internal credit rating to counterparties. We evaluate counterparties' creditworthiness by conducting a thorough due diligence and analysis of the business environment in which they operate, their competitive position, management and financial strength, and flexibility. Following the credit analysis, the probability of default is estimated for a given counterparty or obligor through an alphanumeric rating scale.

As part of the credit risk management process, we are introducing a process to analyze physical and transition risks based on sector and country characteristics. Using heatmaps (see section 4.2.1) we are developing a process to identify obligors with high physical and transition risks, and a framework to assess the impact of a wider range of ESG factors, including physical and transition risks, on credit ratings, such as increased direct and indirect costs and the potential for additional investment burdens.

By using credit ratings to determine credit risk appetite and capital requirements for a counterparty, we ensure that climate and ESG related risks are also implicitly incorporated in these assessments.

■ Operational Risk

Operational risk is the risk of financial loss or non-financial impact such as breach of regulations or damage to Nomura Group's reputation, arising from inadequate or failed internal processes, people, systems or external events such as climate change related physical risks. Operational risks include in its definition compliance, legal, IT and cybersecurity, fraud, business resilience, third-party and other non-financial risks.

The firm has established an operational risk management framework that enables the identification, assessment, management, monitoring and reporting of operational risk. Nomura has reviewed its Operational Risk Management framework to assess the relevance and coverage of ESG and climate risk in terms of its risk taxonomy, scenario analysis and monitoring metrics. Through a top-down approach, Nomura has identified Legal, Compliance, Business Resilience and Third-Party Risks as the most relevant risk types. We will continue to monitor, assess and develop our risk management framework to incorporate ESG and climate risks.

Business Resilience and Third-Party Risks

Nomura Group has established a framework to manage business resilience and third-party risks to assess and minimize the impact of business or third-party outages. Nomura Group has also established a Group Crisis Management Committee to prepare for and respond to crisis events such as natural disasters, system failures, pandemics and information security incidents. Physical risk caused by climate change is one of the material crisis scenarios identified. We have built a global crisis response and business continuity framework for disasters, and are implementing various measures to prepare for a potential crisis, including raising awareness.

Legal and Compliance Risks

Nomura Group is exposed to legal and compliance risks arising from regulatory change, new disclosure requirements and potential mis-selling of ESG and climate related products. Nomura has established a governance structure to oversee and respond to regulatory change and disclosure requirements. Nomura has a control framework in place to ensure new and existing products and transactions are appropriately disclosed and meet the criteria for labelling as ESG products.

■ Reputational Risk

Reputational risk is the risk of damage to the reputation of Nomura Group as a result of actions that, in the eyes of Nomura stakeholders, are deemed inappropriate, unethical, or inconsistent with Nomura's values and corporate philosophy, and the associated impact on the company's profits, capital, and liquidity.

Nomura requires all executives and employees to recognize how their actions or inactions can damage the reputation of the Group and to conduct themselves in accordance with the high standards set forth in the Nomura Group Code of Conduct. In addition, Nomura requires all executives and employees to report to the management of their respective divisions or appropriate committees, such as the Executive Management Board, any issues that may lead to significant reputational risk. Nomura strives to minimize reputational risk by establishing a strong and appropriate internal control framework.

In order to mitigate ESG related reputational risk, we are integrating ESG considerations into our governance and business operations as described in other sections of this document. Identified risks will be subject to additional governance requirements.

4.2. Our Approach

Nomura continuously enhances the risk management framework to identify, assess and manage risks arising from climate change. Below are our key approaches to holistically addressing risks which could impact our portfolio and business activities.

4.2.1. Assessment of Climate Risk

A set of sectoral and country heatmaps have been developed as tools for the initial stage of risk identification for ESG risks (including physical and transition climate risks). These risk identification tools are used within risk management processes as a top down approach to identify the vulnerabilities to ESG factors at country and sector levels, as described in a number of processes below. They can be used for identifying ESG risks for on-balance sheet and off-balance sheet exposures, credit and market, and for scenario analysis.

Sector heatmaps have been developed using data primarily sourced from the United Nations Environment Programme - Finance Initiative (UNEP-FI) heatmaps for climate risks, and from other heatmaps sourced from external providers. This external data is aligned to Nomura's internal sector classification, and evaluated.

Country heatmaps have been developed for each of the ESG drivers, including physical & transition climate risks, using country level indicators for each ESG driver. The indicator is used to rank the country, and the relative ranking of the country is used to determine the country's risk rating.

4.2.2. Portfolio-Wide Approach: Credit Exposure Analysis

Nomura has developed metrics to provide transparency on credit exposures for the most sensitive parts of the firm's portfolio to climate risks, based on the counterparty loan equivalent (LEQ). This includes both on-balance sheet and off-balance sheet credit exposures. The firm has updated its measures from 2021 to align with the revised TCFD recommendations for Carbon Related Assets, as well as making some minor changes in the consolidation method and sector classifications to streamline the process and increase transparency. The governance and reporting structure of these metrics are being implemented.

■ Carbon Related Assets (CRA)

In line with the revised TCFD definition, our carbon-related assets are now defined as those assets tied to the following four non-financial groups: "Energy", "Transportation", "Materials and Buildings" and "Agriculture, Food and Forest Product." Water, independent power and renewable electricity production industries are excluded. In-scope exposures are identified using our industry level sectors, which align most closely to the GICS sectors in scope of each measure. Each of the four non-financial groups identified above will have their own metric value, in addition to the umbrella CRA.

We monitor and disclose this TCFD aligned measure for the purpose of transparency and peer group comparison. The added exposures in this measure have been closely reviewed through a transactional due diligence process to ensure the transaction is in line with our appetite. Our approach to managing these exposures to ensure alignment to the firm's Net Zero strategy is currently under development.

■ High Transition Risk (HTR)

To estimate the risk we would be exposed to due to decarbonization of global economies, we have established a concentration measure for total credit exposure to "High Transition Risk" sectors. The scope includes all counterparties in industry sectors that are assessed as having the highest risk in the sector heatmap for Transition Risk.

High Physical Risk (HPR)

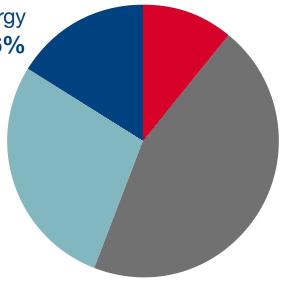
Nomura is introducing this new metric to capture exposures to physical risk impacts, acute and chronic, that result from climate change. The scope of this metric is defined using Nomura's country heatmap and sector heatmap. Counterparties in countries and sectors (defined by the industry level classification) labelled as "High Physical Risk" are included in scope of the metrics.

Our Exposures

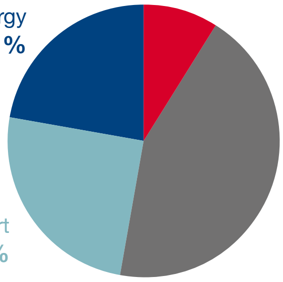
Metrics	% of total Counterparty LEQ (Of which loans) Mar-21	Mar-22	Change
Carbon Related Assets (CRA)	6.6% 3.6%	7.9% 5.0%	1.3% 1.3%
High Transition Risk (HTR)	1.5% 0.6%	2.2% 1.4%	0.6% 0.7%
High Physical Risk (HPR)	1.8% 1.6%	2.2% 2.0%	0.4% 0.4%

Breakdown of the Carbon Related Asset

Mar-21



Mar-22



There is currently no credit exposure to counterparties in the industry sector Coal, as of March 31, 2022

To measure the credit exposure we use the "Counterparty LEQ" metric based on our internal methodology. Counterparty LEQ is the total amount of Loan and Loan Equivalent Exposure ("LEQ") of the counterparty credit exposures. The value of the measure equates to the sum of Counterparty LEQ for each Counterparty that meets the sector (and country for HPR) criteria for the measure. As these metrics are sector-based they may include investments which are beneficial from the climate change perspective, and / or exposures to counterparties with low carbon footprint. For example, a reduction of GHG emissions, from project finance for carbon capture and storage for a power plant would be included.

Assessment with PACTA

Nomura is taking steps to align its corporate loan book to achieve net-zero by 2050. Nomura has conducted an initial assessment of the Loans portfolio using the "PACTA for Banks" tool developed by 2° Investing Initiative, which can be used to measure the alignment of Nomura's loan portfolio with benchmark scenarios developed by independent organisations (such as IEA World Energy Model).

The sectors in scope of the PACTA tool include seven high-carbon sectors: Oil & Gas, Coal, Power, Automotive, Aviation, Steel and Cement. Together, these sectors are responsible for over 75% of global emissions. Nomura currently only has material Loans exposures to the Power Generation Sector. This sector covers 6.78% of our portfolio of Loans.

Nomura elected to compare the Loan portfolio against the scenario developed by International Energy Agency (IEA) which aligns to a Net Zero trajectory and the possibility of limiting the rise in global temperatures to 1.5 degrees by the end of the century, with a 50% probability.

The current fuel mix results demonstrate a good alignment of Nomura's loan portfolio with the IEA Net Zero 2050 pathway, reflecting Nomura's commitment to financing sustainable projects. The portfolio will need to continue repositioning towards renewables to remain aligned to this scenario in 2025. Since the tool is limited to loan book i.e. off-balance sheet credit exposures are not in scope, the assessment is considered to be a component of our holistic approach to the Net Zero by 2050 strategy.

4.2.3. Portfolio-Wide Approach: Scenario Analysis

■ Overview of scenario analysis

Stress testing is typically performed to capture risks that are not easily identified by other risk management methods. In response to the risks of climate change, Nomura began developing stress scenarios for climate change in Fiscal year 2020 and assessing the impact on our company's portfolio.

In developing stress scenarios related to climate change, we use transition scenarios from the Network for Greening the Financial System (NGFS) and RCP scenarios from the Intergovernmental Panel on Climate Change (IPCC). Nomura views climate change risk as a long-term risk and has conducted analyses focusing on the impact of climate change on the credit-worthiness of Nomura's counterparties.

In Fiscal year 2021, we conducted a new analysis of the impact of climate change on our company's capital and risk-weighted assets, assuming that climate-related policy implementation leads to a disorderly transition, with the aim of accessing the short-term impact of climate change on the country's financial condition.

Although we believe the impact of climate change on our company's finances is expected to be limited based on the result, we are making further efforts to enhance the scenario analysis approaches.

	Physical Risk	**Transition Risk**	
Calculation Period	**Long Term (2050)**	**Long Term (2030 and 2050)**	**Short Term (3 years)**
Analytic Method	Estimate the incremental expected loss* due to potential downgrade under the high physical risk scenario based on country and sector heat map	Estimate the incremental expected loss* due to potential downgrade under the high transition risk scenario based on due diligence of counterparty utilizing disclosures and ESG related data etc	Estimate the impact on capital and RWA utilizing macro economic variables of NGFS under the high transition risk scenario.
Reference	IPCC RCP8.5	NGFS Phase 1 Orderly Scenario: Immediate 2°C with CDR Disorderly Scenario: Immediate 1.5°C with limited CDR	NGFS Phase 2 Disorderly Scenario: Divergent Net Zero
Narrative	Currently implemented policies are preserved. Nationally Determined Contributions (NDCs) are not met. Emissions grow leading to 3°C+ of warming and severe physical risks.	Orderly: climate policies are introduced early and become gradually more stringent limiting global warming to below 2°C. Disorderly: climate policies are introduced early to reach net zero emissions by 2050 to limit global warming to 1.5°C. Reduction is much more rapid leading to higher transition risks. Low level of CDR technology deployed in this scenario.	Reaches net zero around 2050 but with higher costs due to divergent policies introduced across sectors. Policy uncertainty leads to a higher investment premium for two years, with the premium gradually returning to baseline thereafter.
Risk Category	Credit Risk		Credit Risk Market Risk

Counterparty exposures are not stressed and held constant over the life of long term scenarios.

■ **Physical Risk**

In the scenario analysis of physical risks, we estimate the credit ratings and credit costs of each counterparty, focusing on 2050 in IPCC RCP 8.5. Specifically, we define and estimate country scores from the distribution of the expected growth rate of per capita income in each country under this scenario, as well as define and estimate sectoral scores using a heat map that shows the impact of physical risks on each sector, and then estimate the credit ratings and credit costs of each counterparty based on the score distribution of the country and sector combination to which the counterparty belongs.

■ **Transition Risk**

In the transition risk scenario analysis, the "Current policies" of "Hot house world" in the NGFS is regarded as the baseline that the current policy is maintained, and we estimate the incremental expected losses due to the deterioration in the creditworthiness of counterparties in 2030 and 2050, assuming that the "Orderly scenario – Below 2°C" or "Disorderly Scenario – Divergent Net Zero" occurs.

In estimating creditworthiness, we refer to transition heatmaps and assessment models from a pilot project for climate-related financial disclosure banks led by the United Nations Environment Programme Finance Initiative (UNEP FI), NGFS scenario variables (e.g. carbon pricing), corporate disclosures, and ESG data from external data providers. We then conduct deep dive assessments on the impact of the climate change scenarios on the credit ratings of several counterparties, and use this to determine the impact on a group of counterparties with similar climate risk vulnerabilities.

As a new initiative in Fiscal 2021, we analyzed the short-term impact of transition risks on our company's financial position. Under the assumption that the transition to Net Zero by 2050 would be disorderly, we used the first 3 years of the NGFS Divergent Net Zero scenario to estimate expected impact to capital and RWA due to changes in counterparty creditworthiness and market fluctuations resulting from a rapid transition.

4.2.4. New Product and Transactional Assessment

When Nomura contemplates a new product, or enters into a new transaction, inherent risks are closely examined to ensure the proposal would be within Nomura's Group Risk Appetite. We have established robust processes to identify inherent risks, as well as to assess risk mitigation from various perspectives to determine whether to proceed with new opportunities.

■ **New Product Approval Process**

The process to evaluate and approve new products that Nomura intends to offer. The risks and the associated management processes are examined cross-functionally, and identified risks must be well mitigated for the requested products to be approved.

■ **Transaction Committee Process**

There are various risks inherent in transactions depending upon the market, transaction type, counterparty, and asset class. To assess the key risks and mitigations related to proposed transactions, Nomura has established a committee process in which the risk threshold linked to each committee and the escalation process have been defined.

In September 2020, Wholesale Division set out the Wholesale Division: ESG Sectoral Appetite Statement which has evolved over time and was revised in January 2022. The appetite forms the basis for the transaction screening process, which is live across the regions to ensure the firm operates in a consistent manner to address ESG risks. Where material ESG risks are identified in new transactional and product opportunities, they are escalated to the firm's senior management committee for the top of the house decision making.

5. Metrics and Targets

As described in "3.Strategy" and "4.Risk Management", Nomura Group will use metrics related to greenhouse gas emissions to measure and manage the risks and opportunities associated with climate change as well as to steadily implement initiatives to align with the Paris Agreement and achieve net zero.

Major Climate Change-Related Metrics and Targets

Metrics	Target
Greenhouse gas (GHG) emissions for its own operations*	Net Zero by 2030
Greenhouse gas emissions from its lending and investment portfolios	Net Zero in 2050
Sustainable Financing	US$125bn in sustainable financing over five years by March 2026

*Click here for more information on Nomura's greenhouse gas emissions.

6. Activities as an Asset Manager

Nomura Asset Management (NAM) is the core company within the Investment Management Division of Nomura. As a responsible institutional investor, NAM aims to realize a decarbonized society by enhancing management of climate risks and opportunities through engagement with portfolio companies and encouraging incorporation of climate change measures into the companies' management strategies. NAM conducts analyses and assessment of advanced climate risks and opportunities based on its own ESG scores, and works to enhance portfolio companies' enterprise value, and the performance of the funds it manages, through engagement, voting, and other approaches to investee companies. The company also promotes partnerships with stakeholders on climate change-related initiatives. In March 2019, NAM announced its support for the TCFD, and the company discloses information based on the TCFD recommendations. For more information, see Nomura Asset Management Responsible Investment Report.

7. Postscript

Nomura views sustainability initiatives, including climate change, as an important management issue. We promote sustainability initiatives and risk management through discussions at the management level. We formulate and implement sustainability strategies based on our management vision of achieving sustainable growth by helping resolve social issues. Our efforts are aimed at achieving two goals: "For Our Clients: supporting the sustainability efforts of our clients and various stakeholders through our business" and "For Our Society: as a member of society, we promote environmental impact of our operations as a corporate citizen".

We will continue to enhance information disclosure to our clients and other stakeholders in line with the TCFD recommendations.

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