MIZUHO

TCFD Report 2021

Mizuho Financial Group

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1. Introduction

1.1 Business environment

Climate change is one of the most critical, urgent issues facing humanity, with impacts on our society, economy, and security. Since the adoption of the Paris Agreement in 2015, governments around the world, including in Japan, have declared their intention to decarbonize and pursue net zero emissions and have been accelerating their efforts to address climate change in order to realize a low-carbon society.

In the financial sector, the possibility that climate change may have major impacts on the business activities of the sector's financing and investment clients has led to a growing international movement to assess the impacts of climate change on assets.[1]

In December 2015, the Financial Stability Board (FSB) established the Task Force on Climate-related Financial Disclosures (TCFD), and in June 2017 the TCFD released its final recommendations ("TCFD Recommendations"), which put forth a framework for all organizations to disclose climate change-related risks and opportunities.

At the Leaders' Summit on Climate held in April 2021, participating countries announced ambitious greenhouse gas emission reduction goals, at once accelerating the global movement towards becoming carbon neutral.

1.2 Efforts to address climate change

In April 2020, we established our Environmental Policy alongside our Human Rights Policy under the Mizuho Code of Conduct in order to clarify our stance on climate change as well as our environmental awareness and specific actions that we will take on environmental initiatives, including those targeting climate change, as we work toward transitioning to a low-carbon society. We have been implementing such initiatives on a group-wide basis.

In order to further strengthen our response to climate change, we revised our Environmental Policy in April 2021, clarifying our contribution to achieving a low-carbon society (net-zero greenhouse gas emissions) by 2050, our support for the objective of the Paris Agreement ("strengthen the global response to the threat of climate change"), and our transformation to a portfolio aligned with the targets in the Paris Agreement.

Based on this Environmental Policy, we are implementing initiatives responding to climate change, including supporting our clients' efforts to transition to a low-carbon society, and are disclosing information in line with the TCFD Recommendations.

[1] "Guidance on Climate-related Financial Disclosures (TCFD Guidance)", p. 1, December 2018, Ministry of Economy, Trade and Industry.

Efforts to address climate change

We recognize climate change as one of the most crucial global issues with the potential to impact the stability of financial markets, representing a threat to the environment, society, people's lifestyles and businesses.

At the same time, we believe there are new business opportunities arising from the need to transition to a low-carbon society, such as the field of renewable energy and other businesses and innovations which contribute to mitigating and adapting to the impact of climate change.

Mizuho supports the Paris Agreement's objective to "strengthen the global response to the threat of climate change".

In light of this, **we have included responding to climate change as a key pillar of our business strategy and will take the following actions in order to proactively fulfill our role as a financial services group in the effort to achieve a low-carbon society (achieve net-zero greenhouse gas emissions) and to develop a climate change resilient society by 2050**.

- We are directing finance flows towards achievement of the Paris Agreement targets to limit global average temperature rise, and we are undertaking phased transformation to a finance portfolio aligned with said targets.
- We will engage in proactive, constructive dialogue in response to our clients' individual concerns and needs, and in support of their efforts to introduce climate change countermeasures and transition to a low-carbon society in both the medium and long term.
- We will proactively develop and offer financial products and services designed to support clients' efforts to introduce climate change countermeasures and transition to a low-carbon society.
- We understand the importance of climate-related financial disclosures, and we utilize the framework under the Recommendations of the TCFD in order to leverage growth opportunities and strengthen risk management as well as disclose information in a transparent manner regarding our progress.

Underlined portions indicate April 2021 revisions

1.3 Progress in FY2020

At Mizuho, based on our awareness that climate change is one of the most crucial global issues having the potential to impact the stability of financial markets, we have positioned addressing environmental issues and climate change as a key part of our corporate strategy and have bolstered a range of initiatives as a result of numerous discussions at bodies including the Executive Management Committee, Risk Committee, and the Board of Directors.

Progress made on the FY2020 action plan for the TCFD Recommendations is shown in Table 1 on the following page.

Table 1: FY2020 action plan and progress

TCFD thematic area	FY2020 action plan	Progress	Pages
Governance	Based on our Environmental Policy, report on the status of responses to TCFD Recommendations to the Board of Directors.	・Our progress on responding to the TCFD Recommendations and our challenges are reported to the Risk Committee and the Board of Directors following deliberation at the Executive Management Committee.	11– 13
		・Revised our Environmental Policy and clarified our transformation to a portfolio aligned with the targets in the Paris Agreement.	2 – 3
Strategy	Expand the sectors and regions under consideration in our scenario analysis and incorporate the analysis results into our strategy and risk management.	・Utilized scenario analysis results and expanded the scope of analysis.	21 – 23
		・Utilized engagement as a starting point to proactively develop and provide both financial and non-financial solutions.	14 – 19
	Promote sustainable business.	・Strengthened structure for promoting sustainable business.	14 – 19
Risk Management	Identify and evaluate climate change risks in our top risk management and conduct periodic monitoring of climate change risks as “emerging risks”.	・Monitored as an emerging risk. In FY2021, designated the rapid advancement of social change occurring due to climate change as a “top risk” and enhanced our monitoring.	28 – 30
	Review our Environmental and Social Management Policy for Financing and Investment Activity on an annual basis and maintain and enhance our engagement with clients.	・Updated our Environmental and Social Management Policy for Financing and Investment Activity.	35 – 41
		・Enhanced measures to address transition risk (expanded engagement, improved risk control for carbon-related sectors, etc.).	31 – 35

Metrics and Targets	Examine our target for reducing our own environmental footprint. Continue discussions on setting of SBTs.	・Set new medium- to long-term targets for reducing Mizuho's greenhouse gas emissions.	43
		・Revised target to reduce the outstanding credit balance for coal-fired power generation facilities.	41, 42
		・Confirmed guidance and other information provided by initiatives such as SBT and PCAF and considered feasibility.	46 – 48
		・Calculated greenhouse gas emissions (Scope 3) associated with project finance for power generation projects.	46 – 48

1.4 Status of Mizuho's response to TCFD Recommendations

The TCFD Recommendations call for disclosures on governance, strategy, risk management, and metrics and targets relevant to climate change-related risks and opportunities.[2]

At Mizuho, we have supported the intent and aims of the TCFD Recommendations since December 2017, and we are working to engage in initiatives and enhance disclosures in accordance with the recommendations. The current status of our response to the TCFD Recommendations is as follows.

Governance	Disclose the organization's governance around climate-related risks and opportunities. a) Describe the board's oversight of climate-related risks and opportunities. b) Describe management's role in assessing and managing climate-related risks and opportunities.

- The Board of Directors approved and established the Environmental Policy, which clarifies our stance on climate change as we work toward transitioning to a low-carbon society. We revised our Environmental Policy in April 2021 and clarified our contribution to achieving a low-carbon society (net-zero greenhouse gas emissions) by 2050, our support for the objective of the Paris Agreement, and our phased transformation to a portfolio aligned with the targets in the Paris Agreement.
- Based on our Environmental Policy, we assess our progress on environmental initiatives, including the status of our response to the TCFD Recommendations, and other relevant information under the oversight of the Board of Directors, with consideration of the deliberations of executive management and the advice of the Risk Committee.
- We have identified key sustainability areas, including responses to climate change, and incorporated them into our 5-Year Business Plan, based on deliberation by our Executive Management Committee and Board of Directors. These enable us to advance our sustainability initiatives as an integral part of our strategy.
- We have identified climate-related risks and opportunities for each in-house company, unit, and group and incorporated them into our business plan.
- In addition to the above, we have conducted a qualitative evaluation of climate change-related opportunities, transition risks, and physical risks in each sector, as they will unfold over short-, medium-, and long-term time frames. The results of this evaluation are used to strengthen risk management and capture business opportunities.

[2] https://www.fsb-tcfd.org/

Strategy	Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material. a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term. b) Describe the impact of climate-related risks and opportunities on the organization's business, strategy, and financial planning. c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

- We have identified the following climate-related risks and opportunities and impacts on business activities, and we have further strengthened our structure for promoting sustainable business group-wide, with engagement as our starting point, to support the transition to a low-carbon society. We actively promote financial products and services that help mitigate climate change or facilitate adaptation to it and, at the same time, conduct appropriate risk management based on international concerns, trends, and other factors.

■ Opportunities for Mizuho

- Utilizing engagement with clients as a starting point, expand business opportunities to support clients' transition to a low-carbon society and their climate change responses.
  - ・ Provide sustainable finance, transition finance, and environmental finance.
  - ・ Provide financial and non-financial solutions that meet the diverse needs of clients.
  - ・ Increase medium- to long-term business opportunities for Mizuho by supporting clients' continuous growth.
- Enhance our reputation in society through strengthened climate change response and proactive disclosure.
  - ・ Gain increased trust and recognition from stakeholders and strengthen our market presence.
  - ・ Improve evaluation from investors and capital markets that emphasize ESG.

■ Risks for Mizuho

- In terms of climate-related risks, we are taking into account both physical risks and transition risks.
- Our transition risks include credit risk related to financing and investment clients who are impacted by more stringent carbon taxes, fuel efficiency regulations, or other policies or by delays in shifting to low-carbon and other environmental technologies. Our transition risks also include operational risk related to reputational damage from financing fossil fuel projects.
- Our physical risks include operational risk related to the possibility of extreme weather causing damage to our assets (such as data centers) and similar risk of damage to customer assets (such as real estate collateral), with both of these being acute risks. Our physical risks also include credit risk arising from deterioration in the macro economy due to increased instances of infectious disease, heatstroke, and similar, which is a chronic risk.

■ Scenario analysis

- Transition risk

Scenario	International Energy Agency (IEA)'s World Energy Outlook 2020 Sustainable Development Scenario (SDS)[3] / Stated Policies Scenario (STEPS)[4]
Analysis method	We specify a parameter for evaluating the impact of risks and opportunities faced by clients in the sector subject to analysis. We then analyze changes in Mizuho's credit costs by formulating an outlook for the impact on clients' financial results, based on changes to the parameter under the scenario. In our outlook for impacts on our clients' business, we employ two scenarios: a static scenario which assumes that no attempt is made to transform the present business structure, and a dynamic scenario under which the business structure is transformed. We determine the scenario to apply based on the client's progress in responding to transition risk.
Targeted sectors	Electric utilities and oil, gas & coal sectors (worldwide) Automobile sector (worldwide)
Period	2050 (while the IEA scenarios are until 2040, the period for this analysis is until 2050)
Credit costs	The increase in credit costs for the electric utilities; oil, gas & coal; and automobiles sectors combined is estimated to be around ¥620 billion through 2050 (with March 31, 2021 as the base point).
Implications and necessary actions	We confirmed the importance of advancing business structure transformation over the medium to long term in order to transition to a low-carbon society. Further strengthening engagement with clients and responding with a deep understanding of their challenges and needs will allow us to capture business opportunities and strengthen risk management.

- Physical risk

Types of risk	Acute risks	Chronic risks
Scenario	Intergovernmental Panel on Climate Change (IPCC) Representative Concentration Pathway (RCP) 8.5 scenario (4°C scenario) / RCP 2.6 scenario (2°C scenario)	
Analysis method	We employed a Monte Carlo simulation to calculate the rates at which typhoons and other storms cause wind- and water-related building loss or damage. We then analyzed the potential direct (collateral value) and indirect (business stagnation) impacts on Mizuho's credit costs from the loss or damage of mortgaged real estate (buildings) in Japan.	We analyzed the impacts on credit costs from changes in the macroeconomic environment brought about by increases in infectious disease (e.g. malaria, dengue) and heatstroke as well as by heatstroke prevention practices causing concomitant decreases in summer working hours among outdoor laborers.
Target of analysis	Japan only, for impact of business stagnation this is based on the location of the client's headquarters (this analysis targeted middle-market firms and SMEs)	Japan only
Credit costs	Impact on mortgage lending value: limited Impact of business stagnation: Up to ¥52 billion as of 2050, based on testing under both 2°C and 4°C scenarios	Up to ¥40 billion through 2100, based on testing under both 2°C and 4°C scenarios for 2100
Implications	The analysis confirmed that there will not be a significant impact compared to our income during the period.	

[3] Sustainable Development Scenario: A scenario under which a surge in clean energy policies and investment puts the energy system on track to achieve sustainable energy objectives in full, including the Paris Agreement, energy access and air quality goals.
[4] Stated Policies Scenario (STEPS): Scenarios which reflect the impact of existing policy frameworks and today's announced policy intentions.

Risk Management	Disclose how the organization identifies, assesses, and manages climate-related risks. a) Describe the organization's processes for identifying and assessing climate-related risks. b) Describe the organization's processes for managing climate-related risks. c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.

■ Identification of climate change risks and integration with comprehensive risk management

- By identifying physical and transition risks resulting from climate change and integrating them into our overall risk management framework for credit, operational, and other types of risk, we are ensuring comprehensive risk management.

■ Management of top risks

- Under our management of "top risks", which are risks recognized by management as having major potential impact on the group, we position the rapid advancement of social change occurring due to climate change as a "top risk". Through discussions with management as part of the risk designation process, we determine related indicators which require monitoring as well as risk control measures. Reports on the status of our response are made to the Board of Directors and other bodies.

■ Enhanced response to transition risks

- Based on the results of our FY2019 scenario analysis, we strengthened engagement with clients (undertook engagement with approximately 900 clients from the perspective of responsible financing and investment and, among these, in-depth engagement with approximately 70 large credit and similar clients).
- Strengthened risk management by improving risk control in carbon-related sectors, revising our Environmental and Social Management Policy for Financing and Investment Activity (enhanced it to further address climate change, biodiversity, and human rights), practicing due diligence in line with the Equator Principles[5], and other actions.

[5] A financial industry benchmark for determining, assessing, and managing environmental and social risk related to financing of large-scale development projects.

Metrics and Targets	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material. a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process. b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks. c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

■ Targets

- Sustainable finance & Environmental finance targets:
  FY2019 – FY2030 total: ¥25 trillion (of which the target for environmental finance is ¥12 trillion)
- Target to reduce the outstanding credit balance for coal-fired power generation facilities based on our Environmental and Social Management Policy for Financing and Investment Activity:
  Reduce the FY2019 amount by 50% by FY2030, and achieve an outstanding credit balance of zero by FY2040
- Target to reduce our own environmental footprint:
  Reduce the FY2019 amount of worldwide Scope 1 and Scope 2 greenhouse gas emissions from the eight group companies **by 35% by FY2030, and aim to become carbon neutral by FY2050**

■ Monitoring indicators

- Scope 1 and Scope 2: CO_2 emissions and energy usage
- Scope 3: Environmental footprint from business trip-related CO_2 emissions and large-scale power generation projects for which we have newly concluded financing or investment contracts (amount of contribution to CO_2 emissions)
- Environmental conservation associated with large-scale power generation projects for which we have newly concluded financing or investment contracts (amount of contribution to CO_2 emission reductions)
- Exposure to high-risk areas within transition risk sectors

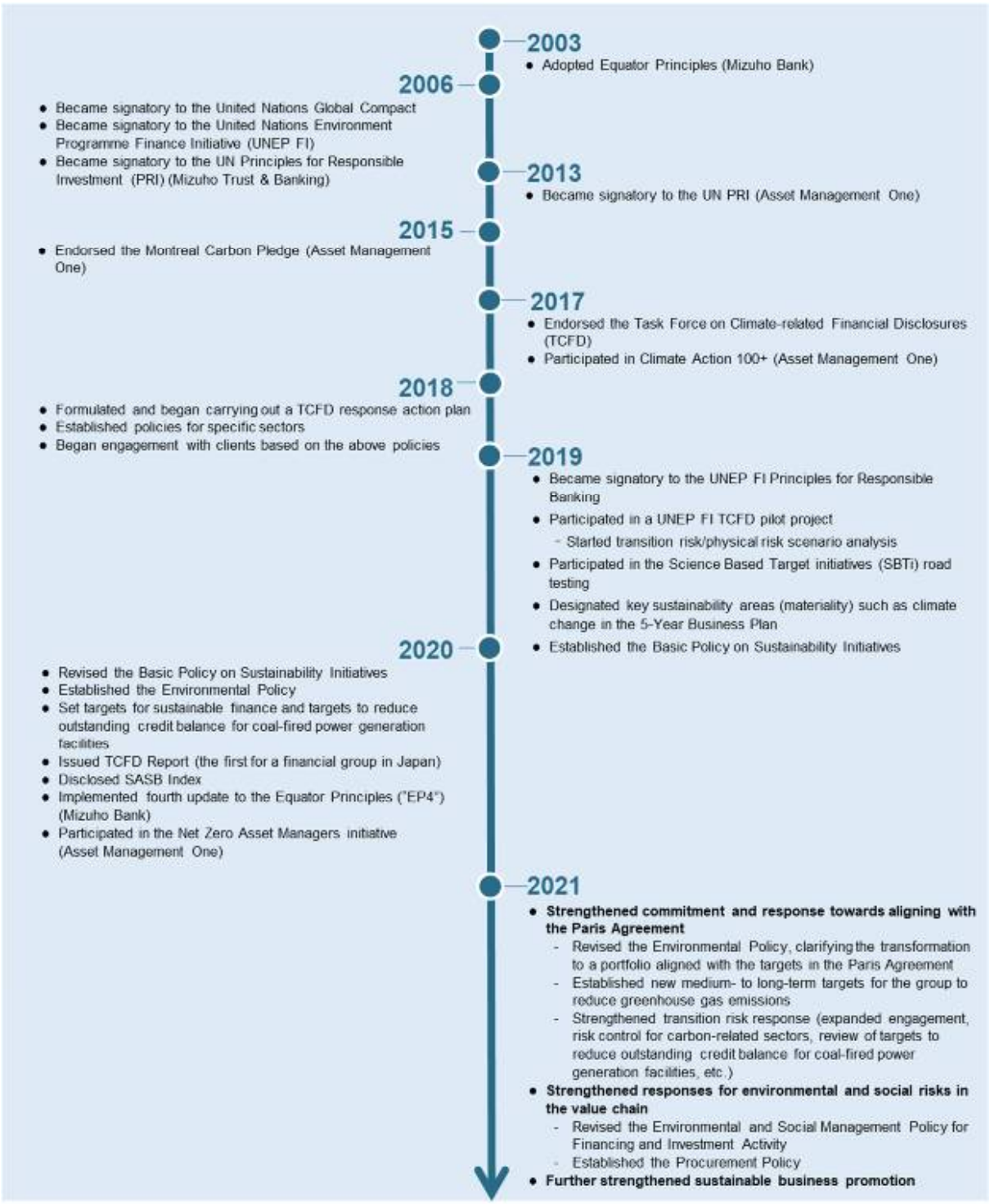
- As a first step toward Scope 3 measurement and management, we estimated greenhouse gas emission intensity (basic units) in relation to project finance for power generation projects, based on the Financial Sector Science-Based Targets Guidance and the Partnership for Carbon Accounting Financials Global GHG Accounting and Reporting Standard for the Financial Industry

(Underlined portions indicate initiatives that we have enhanced since our previous disclosure in May 2020.)

1.5 About Mizuho Financial Group

The Mizuho group is composed of Mizuho Financial Group, Inc. (the holding company), its consolidated subsidiaries, and affiliates accounted for under the equity method. As a financial services group, our business domains include banking, trust banking, securities, and other financial services. The group has five "in-house companies" under the holding company, which determine and promote unified strategies across banking, trust banking, securities, and other business areas according to customer attributes. There are also two units that support the in-house companies. Mizuho has over 870 offices in around 40 countries and approximately 54,000 employees around the world.

1.6 Our initiatives thus far

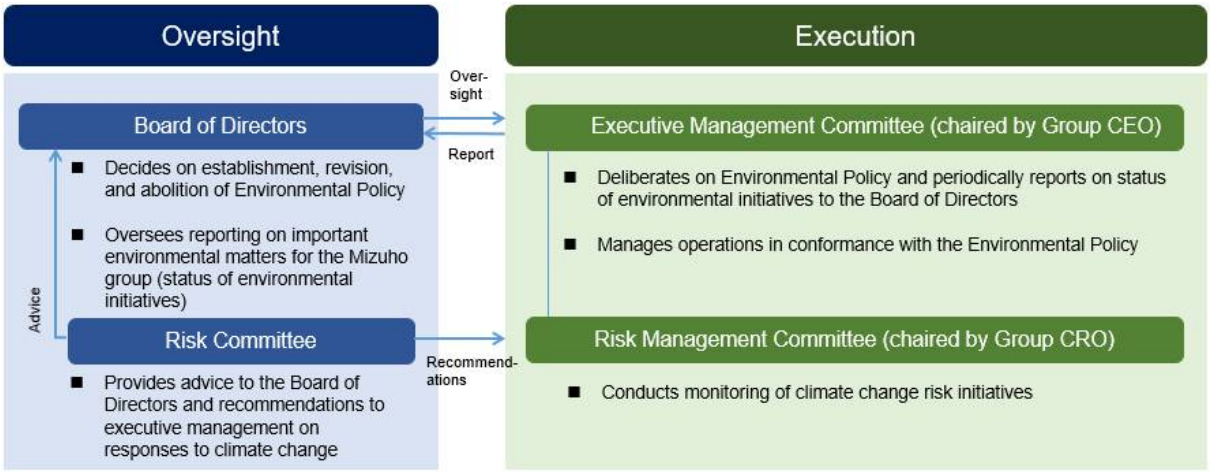


2. Corporate governance

2.1 Corporate governance related to climate change

As our various climate change initiatives are deeply interrelated with sustainability promotion, risk management, etc., following discussions at the business execution line, e.g. the Risk Management Committee and Executive Management Committee, and reporting to the Board of Directors, oversight is provided by the Risk Committee and Board of Directors in accordance with the structure for advancing and managing each initiative (Figure 1, Table 2).

Figure 1: Corporate governance structure



2.1.1 Oversight

2.1.1.1 Board of Directors

The main roles of the Board of Directors are making decisions on business execution such as basic management policy and supervising the execution of duties by directors and executive officers. In order to fulfill these roles, the Board of Directors appropriately establishes and supervises the operation of Mizuho's internal control systems (regarding matters such as risk management, compliance, and internal auditing) and risk governance systems.

In addition, the Board of Directors resolves the basic matters relating to Mizuho Financial Group's sustainability, and the Environmental Policy established by Mizuho Financial Group in April 2020 states clearly that the Board of Directors provides oversight regarding matters including the status of environmental initiatives.

Based on the Environmental Policy, the business execution line periodically reports on environmental initiatives, including the status of responses to the TCFD Recommendations, to the Board of Directors, which provides oversight.

2.1.1.2 Risk Committee

The Risk Committee acts as an advisory body to the Board of Directors to ensure that the Board of Directors is maintaining effective oversight. The Risk Committee is currently composed of four members* in total: an internal non-executive director who serves as the chairman, an outside director, and two external experts. The committee evaluates the Mizuho group's risk strategy implementation for consistency with risk strategy basic policy and offers advice to the Board of Directors.

Regarding climate change initiatives, the committee has deliberated on our revision of the Environmental Policy, our management system for responsible financing and investment, our

response to the TCFD Recommendations, and other measures we are taking to address climate change risks. It has provided the Board of Directors with advice on these matters accordingly, including on the sufficiency of such measures from the perspective of external expert opinion. Going forward, the Risk Committee will continue to assess consistency with our risk strategy and basic management policy and give advice to the Board of Directors to facilitate the Board of Directors' oversight of our responses to climate change risks.

* Outside director: Izumi Kobayashi
External experts: Rintaro Tamaki (President, Japan Center for International Finance)
Hiroshi Naka (Professor, Tokyo University Institute for Future Initiatives)

2.1.2 Business execution line

2.1.2.1 Executive Management Committee

The Executive Management Committee acts as an advisory body to the President & Group CEO. It is chaired by the President & Group CEO and deliberates on important business execution matters. These matters include Mizuho's business policies and strategies, annual and medium- to long-term business plans, risk governance, and risk management.

Regarding climate change initiatives, based on our Environmental Policy, the committee deliberates and reports on the setting of indicators and targets, on periodic progress assessment and review related to our environmental initiatives, on the status of TCFD responses, and on revisions to the Environmental and Social Management Policy for Financing and Investment Activity. It then reports to the Board of Directors.

2.1.2.2 Risk Management Committee

The Risk Management Committee is chaired by the Group Chief Risk Officer and undertakes centralized management and monitoring of risk across the group. Specifically, based on the external business environment and our risk profiles, the committee analyzes the group's vulnerabilities, identifies early warning signs of materializing risks, and offers advice on risk reduction measures while comprehensively deliberating and coordinating issues related to group-wide risk.

The Risk Management Committee deliberated on designating the rapid advancement of social change occurring due to climate change as a "top risk", reflecting our awareness that climate change must be urgently addressed as delaying our response and not taking adequate initiative would have a significant impact on our business. The committee also deliberated on revisions to the Environmental and Social Management Policy for Financing and Investment Activity which address climate change, biodiversity, and human rights issues and enhanced our response to environmental and social risks. Going forward, the Risk Management Committee will continue to analyze the resilience of our strategy in relation to climate change through its monitoring and scenario analysis and to deliberate, coordinate, and advise on risk reduction measures.

Table 2: Corporate governance initiatives responding to climate change (FY2020)

Description	Frequency	Business execution line		Supervisory line	
		Risk Management Committee	Executive Management Committee	Risk Committee	Board of Directors
Revised our Environmental Policy **(clarified our transformation to a portfolio aligned with the targets in the Paris Agreement, among other revisions)**	N/A	✓	✓	✓	✓
Status of response to TCFD Recommendations	Annually	✓	✓	✓	✓
Review of management system for responsible financing, investment, and other services	Annually	✓	✓	✓	✓
Risk appetite policy	Annually	✓	✓	✓	✓
Our management of top risks	Quarterly	✓	✓	✓	✓
Sustainability initiatives (including climate change response)	2 – 3 times/year		✓	✓	✓
FY2021 business plan (including key sustainability areas, initiative planning, and targets)	Annually		✓		✓

2.1.3 Corporate officer remuneration

Mizuho has introduced a stock compensation program that uses a trust to provide an incentive for each officer to fulfill their role to the best of their ability, as well as to function as a value placed on the fulfillment of said role, as part of Mizuho Financial Group's corporate vision, which, based on the basic management policy, aims to realize management that takes into consideration the creation of value for various stakeholders and improve corporate value through sustainable, stable growth for the Mizuho group.

Additionally, the Compensation Committee places weight on Consolidated Net Business Profits + Net Gains (Losses) related to ETFs and other factors when deliberating and deciding performance-based compensation (variable compensation) amounts, and comprehensively evaluates results that reflect Consolidated ROE, Expense Ratio, Consolidated Gross Profits RORA, Common Equity Tier 1 (CET1) capital ratio, reduction of cross-shareholdings, etc. The committee's evaluation also includes the business performance of organizations (in-house companies/units) that officers manage as compared to business plans, past years, and other companies, in addition to medium- to long-term initiatives and other measures that include such sustainability matters as climate change.

3. Strategy

3.1 Approach to climate change and positioning

We have defined key sustainability areas in our 5-Year Business Plan in line with the expectations and requirements of stakeholders and based on the importance and affinity of such initiatives with our strategy, as well as on the medium- to long-term impact on our corporate value. Based on this, each in-house company, unit, and group has established a strategy incorporating sustainability initiatives. Additionally, we have set targets/KPIs based on our key sustainability areas. The key sustainability areas and other items are revised each fiscal year and reflected into our business plan.

At Mizuho, we have positioned addressing climate change as a key part of our corporate strategy, defined it as a key sustainability area (Figure 2), and are advancing initiatives with an eye towards risks and opportunities.

Figure 2: FY2021 key sustainability areas (materiality)

Businesses and innovation that contribute to climate change mitigation and adaptation which are necessary for transitioning to a low-carbon society as envisioned by the Paris Agreement and the SDGs, such as renewable energy businesses, present business opportunities for us at Mizuho.

However, risks concerning the continued medium- to long-term feasibility of business models for industries and companies facing high levels of transition risk[6] may increase if these industries and companies are slow to address the transition or if their response is not sufficient. Similarly, risks concerning both our clients' and our own capacity to continue operating will increase if we are slow to respond to physical risks[7] such as extreme weather conditions, or if our response is not sufficient.

One way that we fulfill our role as a financial institution is emphasizing the importance of engaging and holding constructive dialogue with our varied stakeholders. We are regularly

[6] Transition risk generally refers to risks stemming from widespread policy, legal, technological, and market changes which occur as the result of transitioning to a low-carbon society.
[7] Physical risk generally refers to risks such as the loss or damage of assets as a direct result of climate change, as well as supply chain disruptions and other impacts as an indirect result of climate change.

participating in engagement about climate change-related business issues with our clients. In doing so, we are working to reduce climate-related risk for our clients and ourselves by supporting our clients' efforts to transition to a low-carbon society.

3.2 Opportunities created for the Mizuho group by climate change

Climate change creates the following opportunities for Mizuho:

- Utilizing engagement with clients as a starting point, expand business opportunities to support clients' transition to a low-carbon society and their climate change responses.
  - Provide sustainable finance, transition finance, and environmental finance.
  - Provide financial and non-financial solutions that meet the diverse needs of clients.
  - Increase medium- to long-term business opportunities for Mizuho by supporting clients' continuous growth.
- Enhance our reputation in society through strengthened climate change response and proactive disclosure.
  - Gain increased trust and recognition from stakeholders and strengthen our market presence.
  - Improve evaluation from investors and capital markets that emphasize ESG.

3.2.1 Sustainability-centered business promotion

The trend toward sustainability is an irreversible structural change, and is a significant challenge for which our clients should also take action. An urgent response is particularly needed for environmental sustainability, especially climate change. We engage in proactive, constructive dialogue with our clients to develop a deep understanding of their individual concerns and needs and support their efforts to introduce climate change countermeasures and transition to a low-carbon society over both the medium and long term.

Supporting clients' climate change responses and transitions to a low-carbon society will create more opportunities for us to provide both financial and non-financial solutions. In addition, promoting the continuous growth of clients through such initiatives can result in an increase in medium- to long-term business opportunities for Mizuho.

To capture such business opportunities, in addition to appointing employees in charge of advancing sustainable business in each in-house company and unit, we regularly hold the Sustainable Business Strategy Meeting with working-level staff members involved in the group's sustainable business. Through these meetings, we are establishing our group-wide support of sustainable business by sharing information related to changes in the business environment and the status of group initiatives, and by holding discussions toward strengthening our business.

In FY2021, to respond more rapidly to our clients' growing needs, we are expanding our sustainable business planning and promotion as well as our sustainability support functions, which leverage our research and consulting insights. In addition, we are also further enhancing our engagement in line with the unique characteristics of each client segment, as well as the solutions we provide based on such engagement. Additionally, we have newly appointed and assigned employees responsible for promoting and developing sustainable business ("ESG Champions") in offices outside Japan, and will continue to further strengthen our group's global collaboration (Figure 3).

At Mizuho, in addition to carrying out sustainability training for all group employees, we are particularly focusing our efforts on enhancing group-wide knowledge, such as by providing relationship managers with internal training to enable them to accumulate expertise on sustainability and strengthen their ability to identify issues and propose solutions to clients. At

present, approximately 1,000 employees participate in each of the learning sessions we regularly hold on transition finance and other topics garnering a high level of interest from clients.

3.2.2 Providing solutions that support clients' transition to a low-carbon society

Mizuho develops and provides financial and non-financial solutions in order to support clients' initiatives toward environmental, social, and governance (ESG) and Sustainable Development Goals (SDG)-related challenges, such as the transition to a low-carbon society (Figure 4).

Since FY2020, we have set long-term targets for sustainable finance and environmental finance and have been actively providing financing in order to direct capital toward environmental conservation and achievement of the SDGs (3.2.3 Our promotion of sustainable finance and environmental finance).

Leveraging the industry insight, research knowledge, and consulting expertise that we have cultivated over many years, we are also providing support and information for clients' ESG and SDG-related challenges. We provided sustainability-related consulting in approximately 440 cases[8] in FY2020.

Further, in addition to providing individual solutions, we are also focusing on supporting business structure transformation, such as by working together with clients to consider business strategies that capture sustainability trends and by proposing restructured business portfolios centered on sustainability.

3.2.3 Our promotion of sustainable finance and environmental finance

We have been pursuing the long-term target we set for sustainable finance and environmental finance in April 2020 (FY2019 - FY2030: ¥25 trillion, of which ¥12 trillion for environmental finance).[9]

We are making strong progress, as our overall result for FY2019 to FY2020 was ¥7.1 trillion (of which the result for environmental finance was ¥2.6 trillion).

While promoting finance aimed at increasing the adoption of renewable energy, we are also supporting clients in setting goals and advancing initiatives toward ESG and SDG-related measures, including for climate change, through the provision of various forms of sustainable finance.

In addition, we are proactively developing and providing new financial products and have expanded our product offerings in order to meet the diversifying needs of clients related to SDGs and ESG (Figure 5).

We are particularly strengthening our transition finance initiatives to support the transition of clients in sectors with high levels of carbon emissions. Transition finance is a financing method[10] that aims to support the initiatives of clients considering climate change measures for greenhouse gas reduction in line with a long-term strategy toward a low-carbon society. We will contribute to the realization of a low-carbon society by supporting clients' transitions through client engagement, in which we confirm the status of clients' response to transition risk and provide financing and investment to clients that intend to and will reliably carry out business structure transformation aligned with the Paris Agreement.

In March 2021, we arranged the first transition loan[11] to be executed in Japan.

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[8] FY2020 Mizuho Research & Technologies new cases.

[9] The definitions and outline of sustainable finance and environmental finance are listed in Table 3 and Figure 5.

[10] From the "Basic Guidelines on Climate Transition Finance" released by Japan's Financial Services Agency, Ministry of Economy, Trade and Industry, and Ministry of the Environment.

[11] Follows the Climate Transition Finance Handbook from the International Capital Market Association (ICMA) and the Green Loan Principles from the Loan Market Association (LMA).

Figure 3: Our structure for promoting sustainable business (as of May 2021)

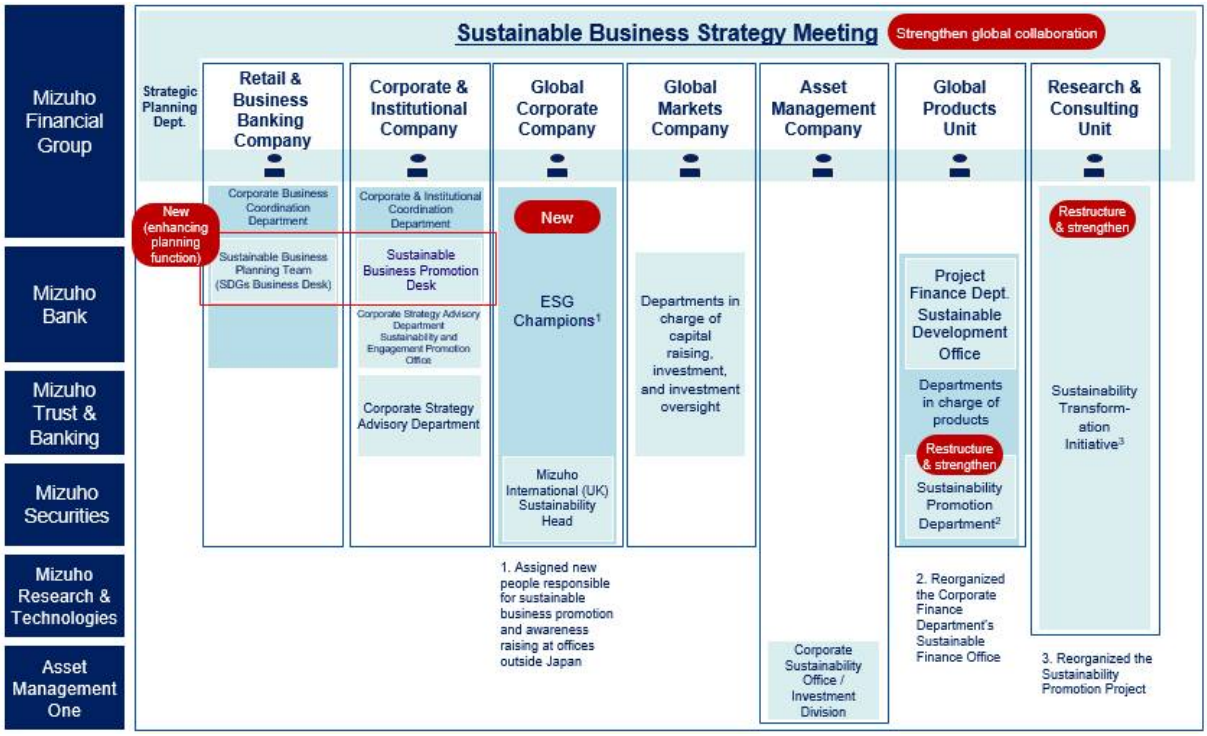
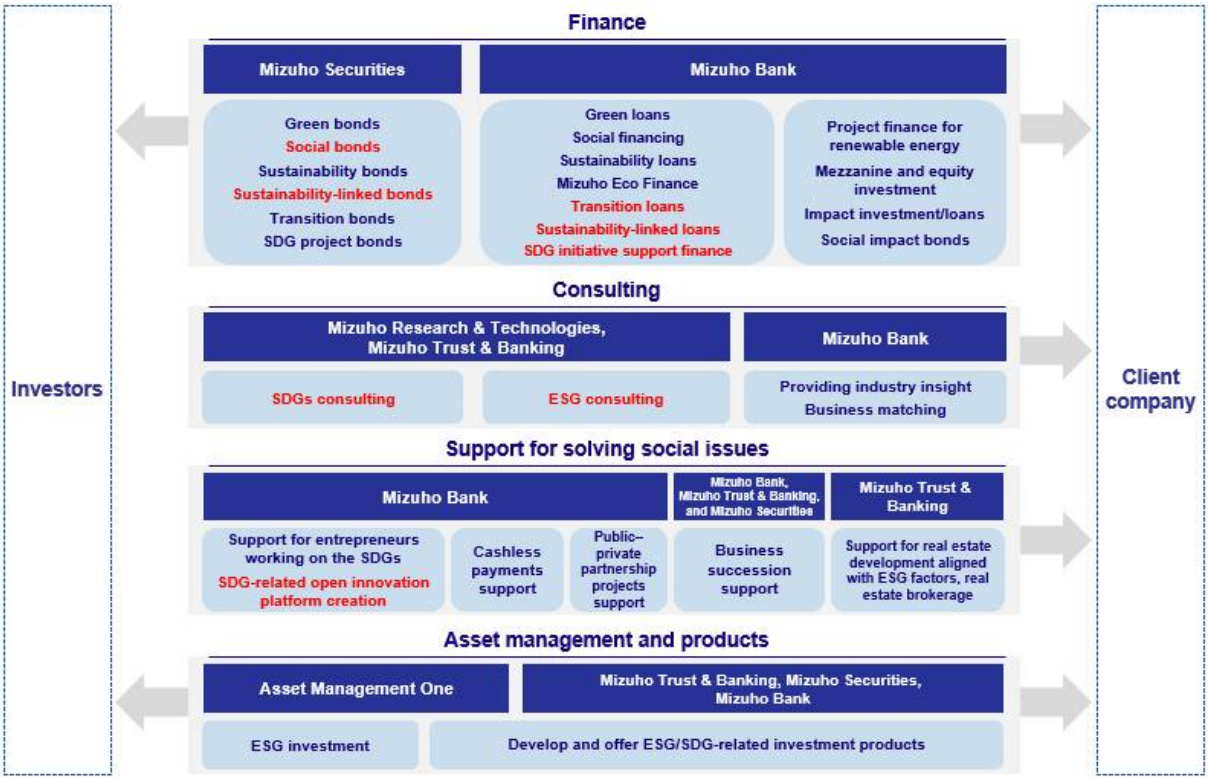


Figure 4: Our sustainable solutions

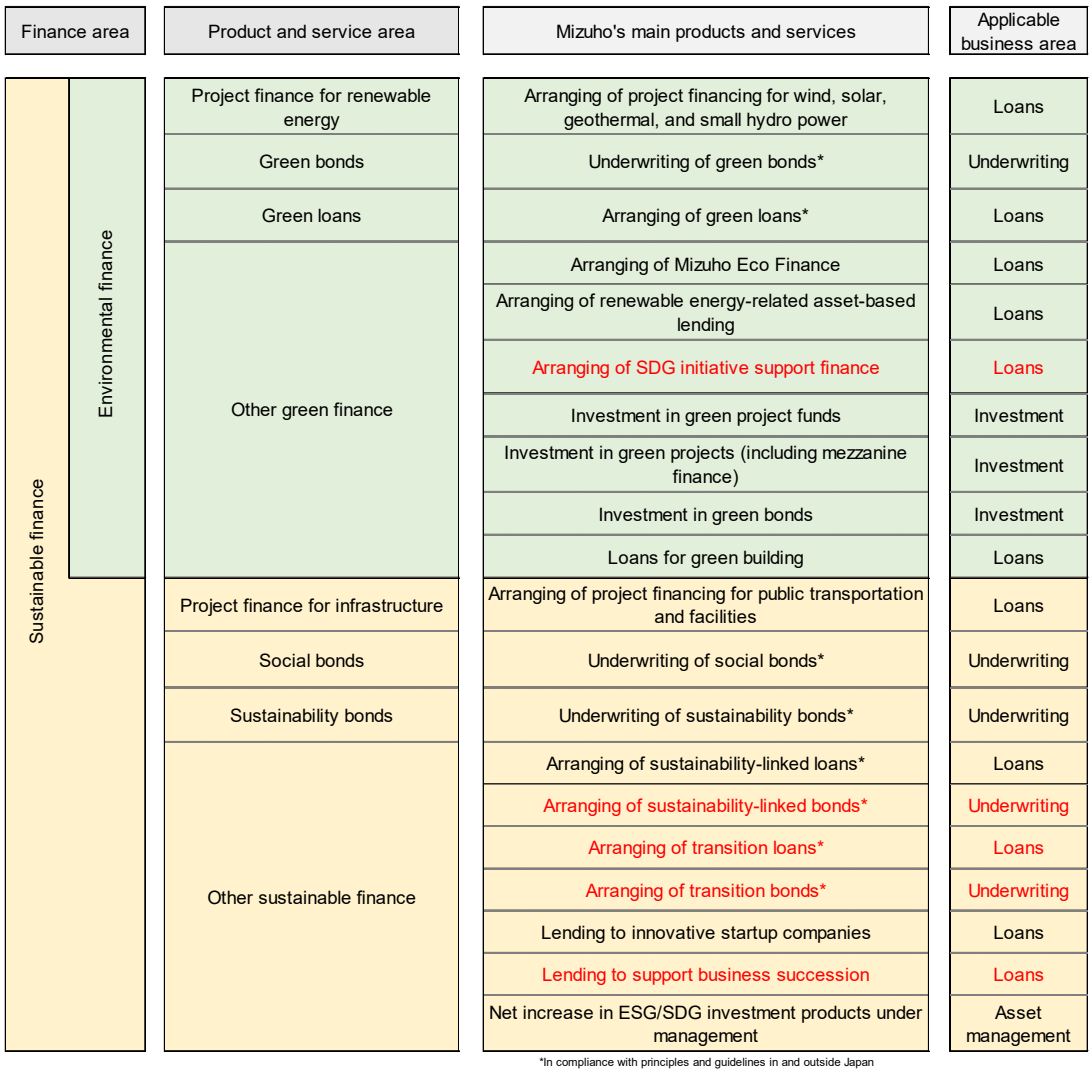


(Red text indicates newly added or novel solutions from FY2020 onward)

Table 3: Our definition of sustainable finance and environmental finance

Approach	Our definition of sustainable finance and environmental finance is based on Mizuho's key sustainability areas. The primary key sustainability areas referenced are as follows: ● Environmental considerations: Promoting action to address climate change and supporting the transition to a low-carbon society ● Sound economic growth: Strengthening capital markets functions ● Industrial development & innovation: (1) Smooth business succession, (2) Accelerating innovation, (3) Creating resilient social infrastructure
Applicable finance areas	1. Finance for clients where the intended use of funds is environmental and/or social projects 2. Financing to support and facilitate clients' response to ESG/SDG-related areas, including financing requiring clients to meet certain related conditions, and providing consulting and assessment of clients' response to ESG/SDG-related areas
Applicable business areas	Loans, underwriting, investments, asset management

Figure 5: Outline of sustainable finance and environmental finance



Finance area		Product and service area	Mizuho's main products and services	Applicable business area
Sustainable finance	Environmental finance	Project finance for renewable energy	Arranging of project financing for wind, solar, geothermal, and small hydro power	Loans
		Green bonds	Underwriting of green bonds*	Underwriting
		Green loans	Arranging of green loans*	Loans
		Other green finance	Arranging of Mizuho Eco Finance	Loans
			Arranging of renewable energy-related asset-based lending	Loans
			Arranging of SDG initiative support finance	Loans
			Investment in green project funds	Investment
			Investment in green projects (including mezzanine finance)	Investment
			Investment in green bonds	Investment
			Loans for green building	Loans
		Project finance for infrastructure	Arranging of project financing for public transportation and facilities	Loans
		Social bonds	Underwriting of social bonds*	Underwriting
		Sustainability bonds	Underwriting of sustainability bonds*	Underwriting
		Other sustainable finance	Arranging of sustainability-linked loans*	Loans
			Arranging of sustainability-linked bonds*	Underwriting
			Arranging of transition loans*	Loans
			Arranging of transition bonds*	Underwriting
			Lending to innovative startup companies	Loans
			Lending to support business succession	Loans
			Net increase in ESG/SDG investment products under management	Asset management

*In compliance with principles and guidelines in and outside Japan

(Red text indicates April 2021 additions)

3.2.4 Enhancing our reputation in society through strengthened climate change response and proactive disclosure

We are advancing our initiatives toward both opportunity and risk in line with the TCFD Recommendations in order to enhance our sustainable business promotion framework, promote sustainable finance and environmental finance, and strengthen climate change risk management. We are also actively disclosing information, as seen in the issuance of our TCFD Report. Appropriate initiatives for climate change and proactive disclosures will contribute toward further improving our reputation in society.

Specifically, Mizuho Financial Group has been selected to be included in the Dow Jones Sustainability Asia Pacific Index (DJSI Asia Pacific). The DJSI Asia Pacific is part of the Dow Jones Sustainability Indices (DJSI)[12], which are a global family of environment, social, and

[12] The Dow Jones Sustainability Indices are a family of indexes that incorporate companies with outstanding sustainability performance based on economic, environmental, and social criteria, and is provided by S&P Dow Jones Indices of the US.

governance (ESG) stock indexes. Mizuho was the only Japanese bank to be selected.[13]

In addition to DJSI Asia Pacific, Mizuho is also included in many other global ESG indexes.

These indexes select companies that are highly evaluated based on global ESG criteria, and have become a crucial investment standard for ESG investors worldwide.

Additionally, Mizuho Financial Group is issuing a green bond in capital markets to serve as funds for environmental finance. Mizuho Financial Group is providing the funds we raise through the green bond to our subsidiary Mizuho Bank, which is using them to finance environmentally friendly projects, including renewable energy. While meeting the needs of investors with a high level of interest in the environmental field through the issuance of a green bond, we are also supporting environmental and climate change responses such as promoting the adoption of renewable energy through environmental finance.

[13] As researched by Mizuho Financial Group, Inc. based on publicly available information issued by S&P Global (as of May 2021).

3.3 Risks posed to the Mizuho group by climate change

Table 4 shows the main transition risks and physical risks that climate change poses for Mizuho as a financial institution.

Table 4: Main risks accompanying climate change

Type	Climate-related risk	Description	Time frame
Transition risk	Policy Legal Technological Market	・Increase in credit costs for sectors with high levels of GHG emissions, as a result of the shift to low carbon ・Obstacles to funding and increases in funding costs resulting from climate change-related market turmoil	Medium to long term
	Policy	・Compliance with regulatory changes reflecting increasing international demand for more drastic responses to climate change	Short term
	Reputational	・Reputational damage resulting from financing of fossil fuel projects (e.g. coal-fired power generation)	Short term
Physical risk	Acute Chronic	・Increase in credit costs attributable to wind- and water-related damages from typhoons and other storms and to damages from forest fires and other natural disasters, which cause clients' financial performance to deteriorate as a result of business stagnation, as well as cause damage to mortgaged real estate ・Impact on business continuity due to the loss or damage of Mizuho assets (e.g. data centers) as a result of extreme weather conditions, and increases in management costs ・Increased credit costs from deterioration in the macro economy as a result of an increase in infectious disease, heatstroke, etc.	Short, medium, and long term

3.4 Scenario analysis

The TCFD Recommendations include a recommendation to conduct scenario analysis for the purpose of increasing the flexibility of plans and resilience of strategy in anticipation of various future climate change-related circumstances.

In accordance with the TCFD Recommendations, we conducted scenario analysis of multiple scenarios, including a 2°C or lower scenario. We will continue enhancing our scenario analysis and utilize the results in engagement (constructive dialogue) opportunities.

3.4.1 Approach to scenario analysis

Below is the process we employed to conduct our scenario analysis.

1) Analyze the risks (transition risk, physical risk) and opportunities of each sector through qualitative evaluation.
2) Select the sectors for transition risk scenario analysis based on the above results.
3) Set scenarios for both transition risk and physical risk according to the targets to be analyzed, and analyze the impacts on credit costs.

3.4.2 Qualitative evaluation of climate change risks and opportunities

Focusing on the sectors advised by the TCFD Recommendations, we qualitatively evaluated climate change risks as they will unfold over short-, medium-, and long-term time frames and categorized each risk as high risk (H), medium risk (M) or low risk (L).

Further, we categorized the level of climate change opportunities as high (H), medium (M), or low (L) (Table 5).

- We identified the electric utilities and oil, gas & coal sectors as sectors facing high transition risks.
- We identified the electric utilities and automobile sectors as sectors with high levels of opportunities.

Table 5: Results of evaluation of risks and opportunities by sector

Sector	Transition risk	Physical risk	Opportunities
Electric utilities	H	M	H
Oil & gas	H	M	M
Coal	H	M	L
Logistics	M	M	M
Automobiles	M	M	H
Metals & mining	M	M	M
Chemical	M	M	M
Agriculture, food & forestry	M	H	M
Steelmaking	M	M	L
Real estate*	L	H	M

*In the qualitative evaluation, “real estate” does not indicate impacts on the real estate business but rather on real estate property, broadly speaking (for example, risk of wind- or water-related damage to buildings, risk of rising sea levels submerging land, and similar).

3.4.3 Targets for scenario analysis

We selected targets for scenario analysis as in Table 6.

Table 6: Targets for scenario analysis

	Previous	Current (underlines indicate changes)
Transition risk: Targeted sectors	Electric utilities (in Japan) Oil, gas & coal sectors (in Japan)	Electric utilities (<u>worldwide</u>) Oil, gas & coal sectors (<u>worldwide</u>) <u>Automobiles (worldwide)</u>
Physical risk: Targets of analysis	Acute risks (risk of wind- and water-related damages from typhoons and other storms)	<u>Chronic risks</u> (risk of increase in heatstroke and infectious disease)

➢ Transition risk

In our qualitative evaluation, we identified the electric utilities sector and the oil, gas & coal sectors as being at high risk. While last year our analysis covered these sectors only in Japan, this year our analysis covered them worldwide.

In addition, in our qualitative evaluation we identified the automobile sector as presenting considerable business opportunities. As such, in order to confirm the impact associated risk may have on our pursuit of finance opportunities, we added it to the targeted sectors.

➢ Physical risk

Physical risk consists of acute risks (wind- and water-related damages from typhoons and other storms) and chronic risks (increase in heatstroke and infectious disease, rising sea levels, droughts, etc.). Because in our last scenario analysis we confirmed the impact of acute risks associated with wind- and water-related damages would be limited, in this scenario analysis we newly included chronic risks.

In regard to chronic risks, we expect rising sea levels to have only minimal impact in Japan, which is well equipped with levees. We also expect events such as droughts and the resulting fluctuations in primary commodity prices to have only minimal impact, due to the very modest share of credit exposure to the forestry, fishery, and agriculture industries in our Japan portfolio. By contrast, increases in infectious diseases (malaria, dengue, etc.) and heatstroke may have a comparatively large impact on Japan, with preventative measures leading to reductions in working hours and deterioration in the real economy. These are the impacts we selected to analyze.

Physical risks are likely to be highly unevenly distributed in the areas they affect. Middle-market and small- and medium-sized enterprises, which have less diversified office locations in comparison to large firms, could be especially vulnerable to impacts. Because of this, our analysis focuses on Japan for both acute and chronic risks.

3.4.4 Implementation of transition risk scenario analysis

(1) Scenario design and analysis methodology

We selected critical risks and opportunities which companies in the targeted sectors are facing and which relate to demand, prices, tighter regulations, and similar.

In order to assess the selected risks and opportunities, we defined parameters using the projections from the Sustainable Development Scenario (SDS)[14] in the International Energy Agency (IEA)'s World Energy Outlook 2020, as well as publicly disclosed data from our clients. By anticipating impacts on our clients' business performance, we were able to analyze possible consequences for Mizuho's credit costs.

Specifically, we divided the sectors above into multiple subsectors according to regions and other characteristics. We also incorporated into the outlook trends in the percentage of fossil fuels in overall power generation (Figure 6), production by resource type (Figures 7), automobile sales by powertrain[15] type (Figure 8), and other variables, looking forward to 2050 (Figure 9).

[14] Sustainable Development Scenario: A scenario under which a surge in clean energy policies and investment puts the energy system on track to achieve sustainable energy objectives in full, including the Paris Agreement, energy access and air quality goals.

[15] A mechanism for efficiently transmitting rotational energy from the engine to the drive wheel. The IEA divides powertrains into two types: those for electric vehicles (EVs) and fuel cell vehicles (FCVs) and those for internal combustion engine vehicles (gasoline, diesel, hybrid, and natural gas vehicles).

Figure 6: Percentage of fossil fuel power generation (SDS)

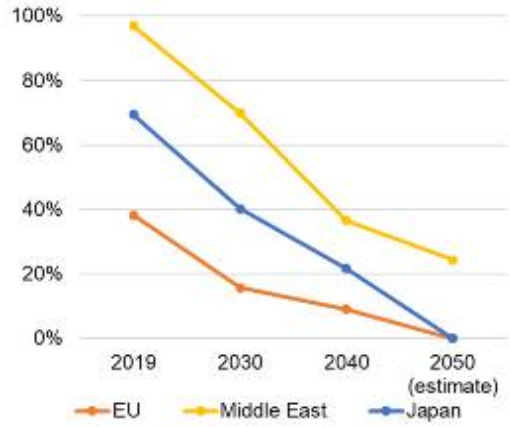


Figure 7: Production by resource type (SDS)

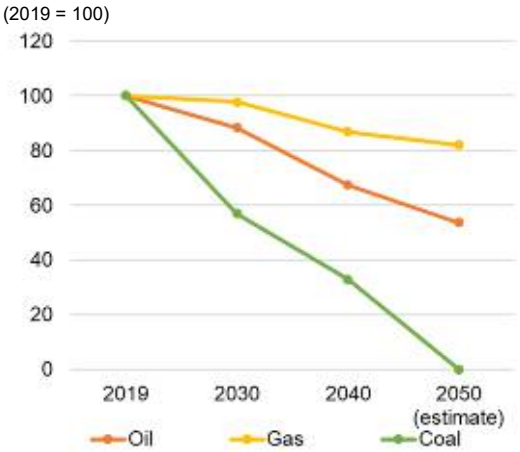
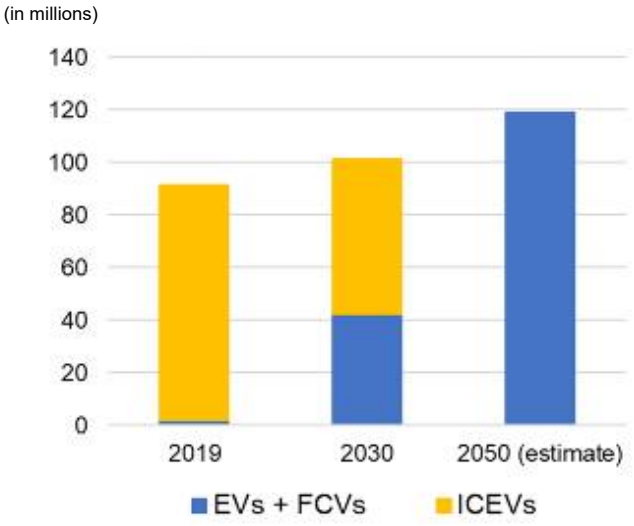


Figure 8: Automobile sales by powertrain type (SDS)



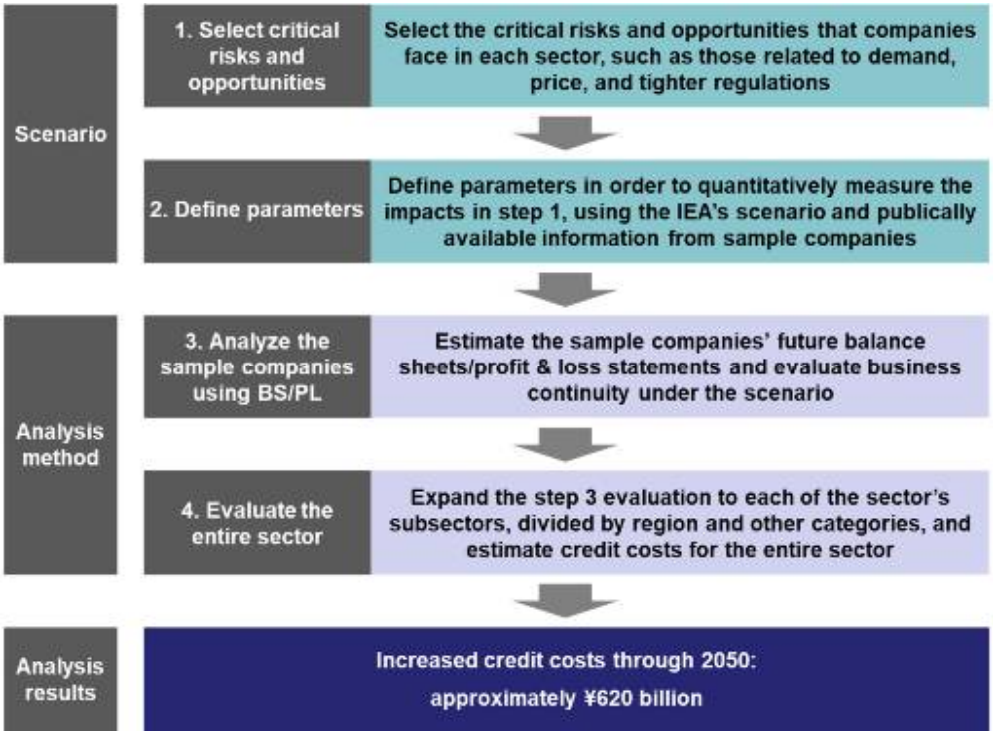
Source (Figures 6 to 8):
Projections through 2040 (for automobile sales, through 2030) are from the SDS in the IEA's World Energy Outlook 2020.
Projections from 2040 to 2050 are from our own calculations of average rates of increase, based on the SDS.

EV: electric vehicle, FCV: fuel cell vehicle,
ICEV: internal combustion engine vehicle

Using the projections in the IEA's SDS, we were able to estimate that developed countries will see the percentage of fossil fuels in overall power generation fall to almost 0% by 2050, even as some developing countries continue to have demand. Global production of oil, gas, and coal will fall through 2050, with coal in particular showing a steep drop. In automobile sales, electric vehicles and fuel cell vehicles will constitute 100% of the market in 2050. These changes in the business environment formed the assumptions for our scenario analysis.

In our outlook for impacts on our clients' business, we employed two scenarios: a static scenario which assumes that no attempt is made to transform the present business structure, and a dynamic scenario under which the business structure is transformed. We determined the scenario to apply based on the company's current progress on addressing transition risk.

Figure 9: Transition risk analysis process



(2) Scenario analysis results

Through this analysis and under the assumption that our credit exposure will remain the same from March 31, 2021 to 2050, we estimated that our credit costs will increase by approximately ¥620 billion by 2050.

Regarding the electric utilities and oil, gas & coal sectors, we found that for companies to which the scenario with business structure transformation (the dynamic scenario) was applied, while there were some impacts in the short term, the increase in our credit costs over the medium to long term was limited. We expect that business structure transformation would lead to lesser or no fossil fuel dependency, which would in turn drive investment in new energy such as renewables and hydrogen over the medium to long term and improve business performance.

Regarding the automobile sector, by analyzing original equipment manufacturers, we confirmed the impacts on credit costs of advancing business structure transformation through investment in electric vehicles. While the uncertainty surrounding future fuel efficiency regulations and other factors means these findings are subject to change, they do indicate that the increase in credit costs will be limited. One reason for this is that the companies able to survive the financially burdensome transition to electric vehicles will also be able to maintain their business continuity and capture business opportunities.

In light of our FY2019 scenario analysis results and other factors,[16] since FY2020 we have been further strengthening our constructive dialogue (engagement) with our clients concerning their efforts to address climate change. Taking into account our most recent scenario analysis results, with engagement as a starting point, we are striving to deepen our understanding of our clients' challenges and needs in relation to climate change countermeasures and the transition to a low-carbon society and to work with them to develop sustainability strategies incorporating business

[16] FY2019 scenario analysis results (transition risk): Analyzed carbon-related sectors in Japan using two scenarios: one with no transformation of the present business structure and one with such transformation. We confirmed that the scenario with transformation of the present business structure, while involving some impacts in the short term, would limit the increase in credit costs over the medium to long term (lesser or no fossil fuel dependency would improve business performance). For further details, see our TCFD Report 2020.

structure transformation. In this way, we are capturing business opportunities by providing both financial and non-financial solutions supporting our clients' initiatives while also strengthening risk management.

Also, we recognize that there is no internationally agreed upon methodology for scenario analysis and that each firm and organization is advancing their initiatives by a trial-and-error approach. Our participation in regulatory authorities' work on climate scenario analysis and in the United Nations Environment Programme Financial Initiative (UNEP FI) pilot project are some of the ways in which we are keeping on top of global trends and striving to improve available analytical methods going forward.

3.4.5 Implementation of physical risk scenario analysis

(1) Scenario design and analysis methodology

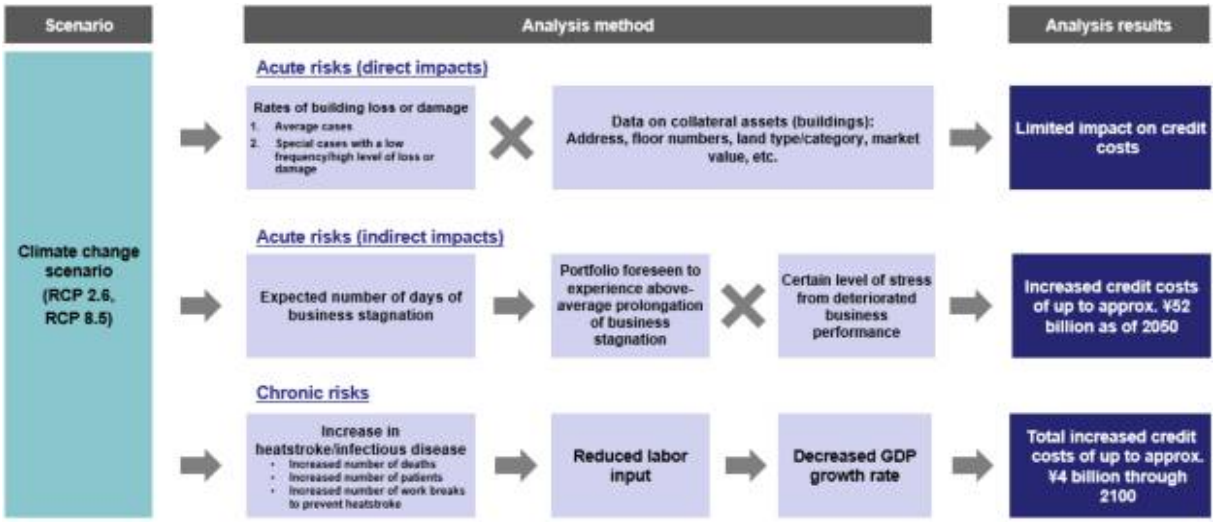
In our analysis of physical risk, we based our assumptions on the Intergovernmental Panel on Climate Change (IPCC)'s Fifth Assessment Report and collaborated with a consulting firm.

For acute risks, we employed a Monte Carlo simulation to calculate the rates at which typhoons and other storms cause wind- and water-related building loss or damage. We then analyzed the potential direct (collateral value) and indirect (business stagnation) impacts on Mizuho's credit costs from the loss or damage of mortgaged real estate (buildings).

Because we had already confirmed the impact of acute risks would be limited, in our FY2020 scenario analysis we included chronic risks as well as acute risks.

In verifying chronic risks, we accounted for the rise in average temperatures causing increases in infectious disease (e.g. malaria, dengue) and heatstroke as well as for heatstroke prevention practices causing concomitant decreases in summer working hours among outdoor laborers. We calculated the macroeconomic effects of this reduced labor input and analyzed the impacts on Mizuho's credit costs (Figure 10).

Figure 10: Physical risk analysis process



(2) Scenario analysis results

1) Acute risks

➢ Direct impacts

According to the IPCC's Fifth Assessment Report, under global warming, rising sea surface temperatures will lead to an increase in atmospheric moisture, and the strength of typhoons that make landfall in Japan will increase. However, due to the smaller difference in sea and air temperatures, the convection currents (rising air currents) that cause typhoons will be weaker, and the number/frequency of typhoons will decrease. Because of this and other factors, we estimate that there will be only a limited impact on Mizuho's credit costs from loss or damage of mortgaged real estate (buildings) and consequent loss of value.

➢ Indirect impacts

To analyze what impacts there would be on Mizuho's credit costs in the event that damage to buildings by typhoons and other storms causes stagnation in our clients' businesses and affects their business performance, we employed two approaches: a bottom-up approach reflecting estimates of the number of days of business stagnation for each individual company and a top-down approach reflecting a certain level of stress on portfolios that were likely to see more days of business stagnation than the average. In addition to an impact analysis using the IPCC Fifth Assessment Report's RCP 2.6 scenario assuming a 2°C average temperature rise by 2050, we also conducted an impact analysis using the RCP 8.5 scenario assuming a 4°C average temperature rise by 2050, the worst-case scenario for global warming and physical risk. We estimated that our credit costs would increase by up to ¥52 billion as of 2050.

2) Chronic risks

Using the IPCC Fifth Assessment Report's RCP 2.6 and RCP 8.5 scenario, we analyzed the change in infectious disease and heatstroke-related patient numbers and deaths under a global average temperature rise of 2°C or 4°C by 2100. We also accounted for outdoor laborers having a certain period of time off during the summer in order to prevent heatstroke. We calculated the future impacts on GDP from the change these factors would cause in labor input and then estimated the impact on our credit costs. In total, we estimated that our credit costs would increase by up to ¥4 billion by 2100.

4. Risk management

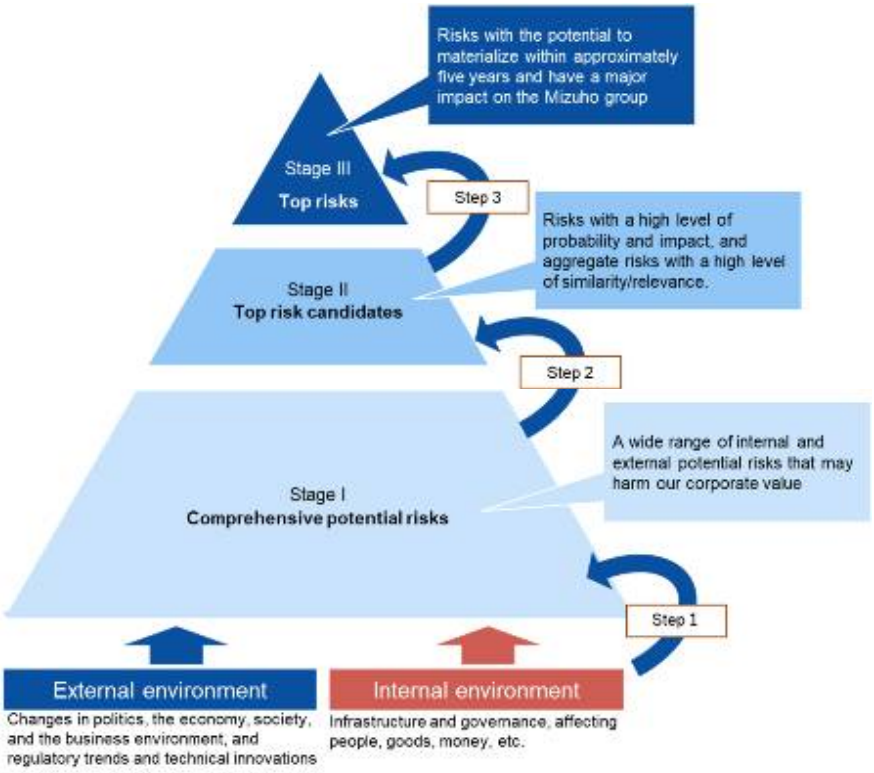
4.1 Management of top risks

We have in place a “top risk management” system (Figure 11) to designate risks with major potential impact on the group. In this top risk management system, we gather wide-ranging information on potential risk events which may harm our corporate value in light of our particular vulnerabilities, the external business environment, and other factors. With this information, we assess risk contagion channels, probabilities, impacts, and similar to identify critical potential risk events. We then designate top risks with consideration to the difficulty of risk control and based on discussions at the executive management level. Through this system we are deepening our risk communication across the Mizuho group, integrating our perspectives on risk awareness, and ensuring consistent risk recognition in each of our risk management frameworks. For designated top risks, we confirm the status of our controls and design additional control measures as needed. In addition, the Risk Committee and Board of Directors receive reports on these top risks, allowing for multifaceted confirmation of appropriateness and status of controls from external experts and outside directors as well.

In regard to climate change risks, we have defined related indicators which require monitoring throughout the top risk designation process, as well as risk control measures. While we previously positioned climate change risks as “emerging risks” (major risks that must be addressed in the next few years despite the fact that materialization of the risks will occur over a medium- to long-term time frame), we have now designated the rapid advancement of social change occurring due to climate change as a top risk, and we are enhancing our monitoring. This elevates its positioning as a matter that must be addressed urgently and reflects our awareness that, with both policy and corporate initiatives rapidly gaining momentum, there is a risk that delaying our response and not taking adequate initiative would have a significant impact on our business.

Going forward, we will continue to enhance our monitoring of climate change risks, design and implement additional risk control measures as necessary, and maintain reporting on the status of our responses to our Board of Directors on a quarterly basis.

Figure 11: Diagram of our top risk management



4.2 Integration of climate change risks into comprehensive risk management

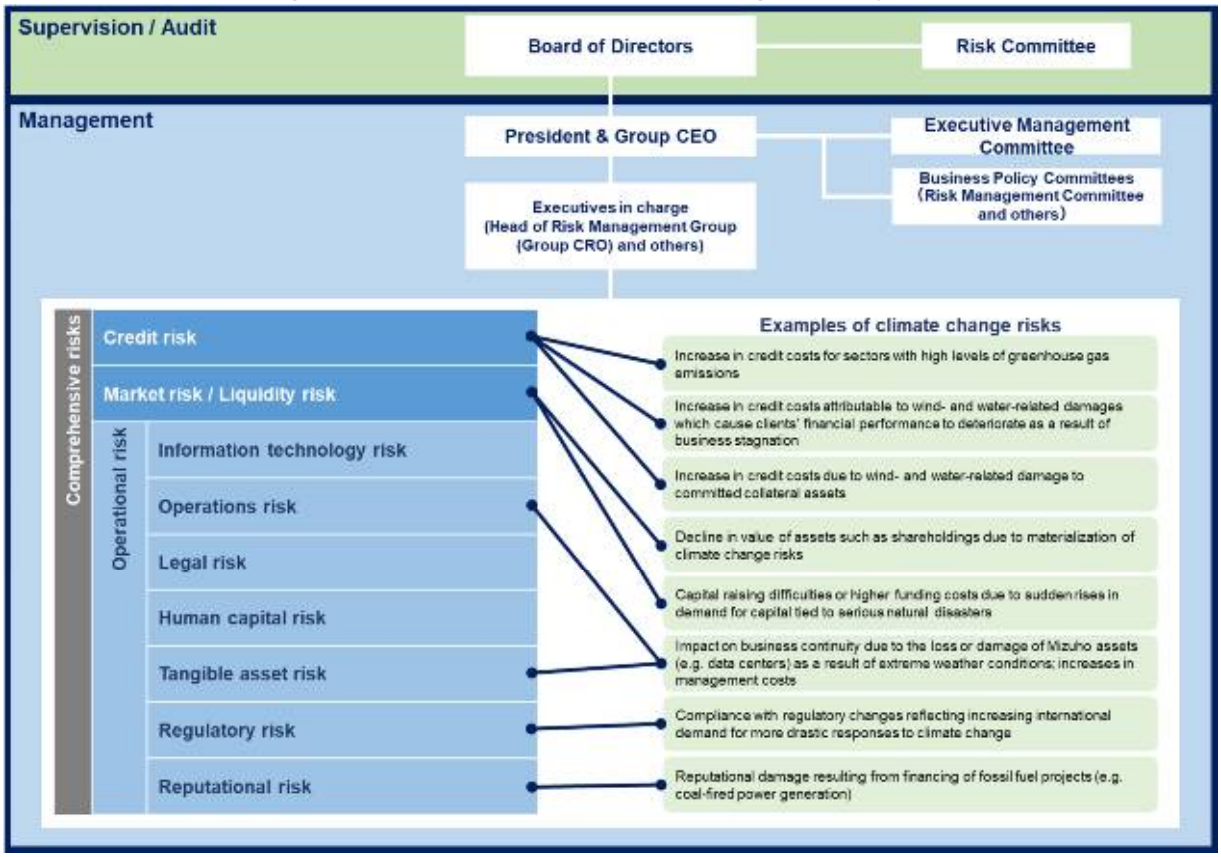
We recognize that conducting operations tailored to our risks and managing such risks is a key issue relating to overall management. In order to implement our business strategies while maintaining our financial stability, we maintain comprehensive risk management and control measures.

Mizuho Financial Group maintains basic policies for risk management established by the Board of Directors that are applicable to the entire group. In line with these basic policies, we maintain various measures to strengthen and enhance the sophistication of our risk management system.

We classify and manage the risks that arise in our businesses according to the various types of risk, including credit risk, market risk, liquidity risk, and operational risk. In addition to managing each type of risk individually, we have established a risk management structure to identify and evaluate overall risk and to keep risk within limits that are acceptable.

Regarding climate-change related risks, we have also integrated the risks described in section 3.3 (Risks posed to the Mizuho group by climate change) into our overall risk management framework, ensuring comprehensive risk management (Figure 12).

Figure 12: Comprehensive risk management system



4.3 Strengthening risk management

4.3.1 Engagement with clients / risk control for carbon-related sectors

(1) Engagement with clients

In light of our FY2019 scenario analysis results and other factors[17], since FY2020 we have been further strengthening our constructive dialogue (engagement) with our clients concerning their efforts to address climate change. Providing solutions based on a deep understanding of our clients' challenges and needs allows us to capture business opportunities and strengthen risk management.

In FY2020, as part of our efforts towards risk management and responsible financing and investment, we undertook engagement with approximately 900 clients and, among these, in-depth engagement with approximately 70 large credit and similar clients. Our in-depth engagement incorporated discussions on plans for responding to transition risk (e.g. business structure transformation strategies), awareness of risks and opportunities, and plans for capital raising (Tables 7 and 8).

Table 7: Engagement with clients from a perspective of responsible financing and investment

	FY2019	FY2020
Engagement with clients	Approx. 530 clients	Approx. 900 clients[18]
Target clients	Clients in sectors subject to the Environmental and Social Management Policy for Financing and Investment Activity (oil and gas, coal-fired power generation, coal mining, palm oil, lumber, and pulp)	
In-depth engagement with clients	Approx. 30 clients	Approx. 70 clients
Examples of engagement topics	・ Status of measures to address critical environmental and social risks in each sector ・ Risks and opportunities related to environmental, social, and governance (ESG) issues and climate change ・ Approaches to and response plans for transition risks (business structure transformation strategies and similar) ・ CO_2 emissions and medium- to long-term reduction plans ・ Capital raising plans related to renewable energy business, technological development for CO_2 emission reductions, etc.	

[17] FY2019 scenario analysis results (transition risk): Analyzed carbon-related sectors in Japan using two scenarios: one with no transformation of the present business structure and one with such transformation. We confirmed that the scenario with transformation of the present business structure, while involving some impacts in the short term, would limit the increase in credit costs over the medium to long term (lesser or no fossil fuel dependency would improve business performance). For further details, see our TCFD Report 2020.

[18] Expanded the scope of clients with which to engage by revising the standards for the oil and gas sector (expanding from clients with a credit balance of USD 50 million or more to all credit clients), adding the coal mining sector, and making other changes. In FY2020, we engaged with all credit clients in fossil fuel-related sectors, as well as all credit clients in the palm oil sector.

Table 8: Examples of engagement with clients

Client	Examples of engagement topics
Company A (Japan / conglomerate)	We proposed and discussed business portfolio strategy in light of trends in sustainability. ・ We proposed and discussed a new vision for the client's business portfolio which combined existing decision-making criteria (decisions on core and non-core business) with sustainability (decisions on contribution or non-contribution to sustainability). ・ While the client is already advancing specific initiatives, having developed a strategy incorporating perspectives towards sustainability opportunities and risks and towards decarbonization aligned with the Paris Agreement, they have reached the point of formulating and considering their next medium-term business plan. Consequently, we will continue to deepen engagement with them in pursuit of further improving their corporate value.
Company B (Japan / electric power)	With engagement, we confirmed the client's transition strategy and their considerable progress on their initiatives. ・ The client had previously incorporated the transition to a low-carbon society into their business strategy and was implementing initiatives for reducing their CO_2 emissions. ・ The client had also further strengthened their outward-facing commitments in FY2020 by, among other actions, announcing a goal of becoming carbon neutral by 2050. ・ We were able to confirm that the client had positioned sustainability as their most critical challenge and was moving forward with responding to it at the executive management level. Their other initiatives included suspending or decommissioning inefficient coal-fired power plants and creating a roadmap for trialing new technology. ・ We discussed with the client their views on the challenges in developing and disseminating new technology, as well as the support needed from financial institutions. ・ We confirmed the importance of Mizuho offering support for the client's transition strategy as a united group in order to improve corporate value for the client and secure medium- to long-term business opportunities for Mizuho.
Company C (Indonesia / palm oil)	Our corporate banking and credit divisions coordinated to confirm and discuss policies and management for the following topics related to the client's consideration for environmental and social issues in their business operations. We will continue to engage with the client on a quarterly basis going forward. ● Forest conservation, peatland management, forest burning bans, greenhouse gas emissions, waste and wastewater management, international certification, third-party audits, human rights/workers' rights management, and communication with the local community.

Client	Examples of engagement topics
Company D (Canada / energy)	We discussed transitioning towards a low-carbon society with our client's CEO. ● Our executive management and our client's executive management held discussions on responses to the opportunities and risks associated with the fossil fuel business. ● We confirmed the importance of implementing renewable energy initiatives, undertaking upgrade investment to reduce the environmental footprint of existing businesses, and pushing forward on transition while also giving attention to stable energy supply. ● We also confirmed the outsize importance of energy companies' ability to implement ESG strategies and effective plans and disclose information.

(2) Risk control in carbon-related sectors

1) Risk assessment in carbon-related sectors

At Mizuho, in line with the TCFD Recommendations, we have been measuring and disclosing the percentage of our credit exposure[19] in carbon-related sectors.[20] Taking into account our FY2019 scenario analysis results and the details of engagement given above, we have assessed risk along two axes—our clients' sectors and our clients' measures to address transition risk—in order to identify high-risk areas (Figure 13). Going forward, we will add our exposure in high-risk areas to our monitoring indicators and disclose this information alongside our exposure in carbon-related sectors. We will also continue to improve our scope of analysis and approach for high-risk areas.

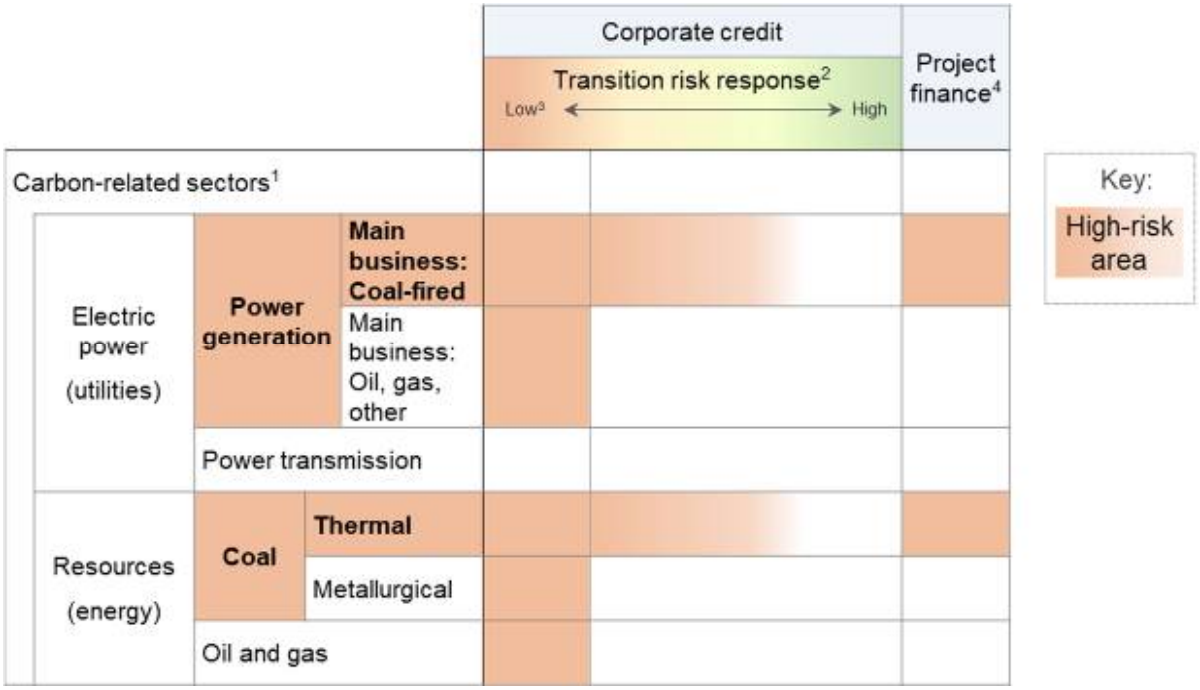
Table 9: Reference: Exposure in carbon-related sectors as of March 31, 2021

	Exposure amount	Percentage	(As of March 31, 2020)
Carbon-related sectors subtotal	¥12.8 trillion	5.5%	(7.3%)
1) Electric Utilities	¥5.1 trillion	2.2%	
Power generation (main business: coal-fired power generation)	¥1.7 trillion	0.8%	
Power generation (main business: gas and others)	¥2.6 trillion	1.1%	
Power transmission	¥0.7 trillion	0.3%	
2) Resources (energy)	¥7.7 trillion	3.3%	
Thermal coal	¥0.1 trillion	0.0%	
Metallurgical coal	¥0.0 trillion	0.0%	
Oil and gas	¥7.5 trillion	3.3%	
All-sector total	¥231.7 trillion	100.0%	

[19] Total of Mizuho Bank and Mizuho Trust & Banking's loans, foreign exchange assets, acceptances and guarantees, and committed lines of credit.

[20] Carbon-related sectors: Classified according to the TCFD Recommendations (includes the Energy and Utilities sectors as defined by the Global Industry Classification Standard (GICS) but not water utilities, independent power producers, or renewable energy businesses).

Figure 13: Mapping of risk assessment in carbon-related sectors



As of March 31, 2021, exposure in high-risk areas: ¥1.8 trillion (to be managed as a monitoring indicator going forward)

1. Sector: Companies are divided into sectors based on the largest component in the sales/energy mix of their business activities. See previous page for notes on carbon-related sectors.
2. Transition risk response: Based on disclosures, interviews, and other sources of information on the status of our clients' measures to address transition risk. Accounts for the adequacy of targets in terms of quantitative rigor, alignment with the Paris Agreement, and similar; the specificity of methods and progress on achieving targets; performance and objectivity; and other factors.
3. Transition risk response low: Indicates no effective strategy for responding to transition risk has been confirmed.
4. Credit for project finance.

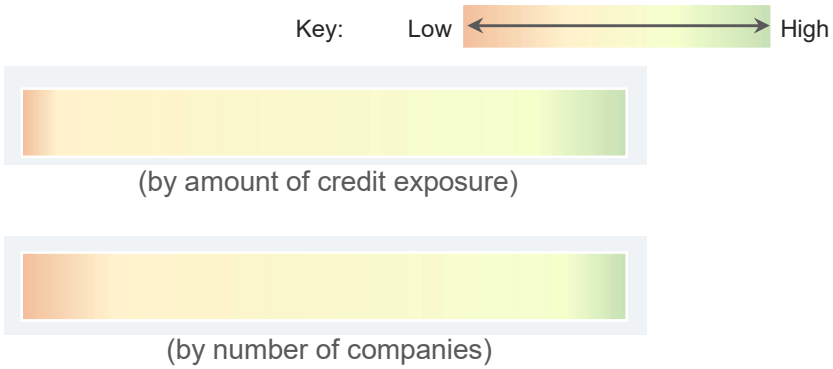
2) Response policy for high-risk areas

In regard to high-risk areas, we are more thoroughly engaging with clients to support them in formulating effective strategies for transition risks, in disclosing their progress, and in embarking on business structure transformation towards a lower risk sector at an early stage. In undertaking such engagement with our clients, if a client does not make progress on addressing their transition risks even after a certain period of time, we carefully consider our transactions with the client. In this way, we are enhancing our risk control and reducing our exposure in high-risk areas over the medium to long term.

3) Distribution of client progress on addressing transition risk

Figure 14 shows the distribution of our clients' progress on addressing transition risk, as confirmed through disclosures, interviews, and other sources of information. Through engagement, we will support our clients in elevating their responses to transition risk to a high level over the medium to long term. In doing so, we will improve climate change resilience for both our clients and Mizuho.

Figure 14: Distribution of client progress on addressing transition risk (ratio)



4.3.2 Review of our climate change policies

From a standpoint of managing credit and reputational risk, we apply both our Environmental and Social Management Policy for Financing and Investment Activity and the Equator Principles to each of our transactions.

4.3.2.1 Enhanced initiatives based on our Environmental and Social Management Policy for Financing and Investment Activity

At Mizuho, in light of the expectations and perspectives of our stakeholders and for the purpose of strengthening our environmental and societal considerations in financing and investment, we previously established an Environmental and Social Management Policy for Financing and Investment Activity. We have since revised the policy to enhance our handling of climate change, biodiversity, and human rights and our initiatives thereof (Figures 15 and 16).

Specifically, in an effort to enhance our responses to climate change risks, we have gathered companies whose primary businesses are in coal-fired power generation, oil-fired power generation, gas-fired power generation, coal mining, or other oil and gas operations—companies highly likely to be exposed to transition risk—under the heading of “transition risk sectors”. We have also stated our risk awareness and policies in regard to these transition risk sectors, becoming the first Japanese bank to do so. Going forward, we will implement risk control through engagement.

In addition, we have tightened the policy by adding the following. First, we will not provide financing or investment which will be used for new thermal coal mining projects. Second, when providing financing or investment for oil or gas extraction projects in the Arctic Circle or for oil sands, shale oil, or shale gas projects, we will conduct appropriate assessments of environmental and social risks with reference to standards such as the Equator Principles. This will enable us to request greater consideration for the environment, human rights, and similar issues from our clients. Further, based on the policy, we have revised our target year for reducing our outstanding credit balance for coal-fired power generation facilities. (5.1 Targets pertaining to risks and opportunities)

We have also added the large-scale agriculture and large-scale hydropower sectors to the policy and reinforced the due diligence on the palm oil sector in the policy from a standpoint of protecting forests, biodiversity, and human rights.

Figure 15: Positioning of our Environmental and Social Management Policy for Financing and Investment Activity

Figure 16: Overview of our Environmental and Social Management Policy for Financing and Investment Activity

Numbers in black text indicate the corresponding sections in the explanation below in section (3) of 4.3.2.4.

Going forward, relevant governing bodies within Mizuho such as our Executive Management Committee and/or Business Policy Committee will regularly review whether our measures related to the risks, sectors, and other factors covered under this policy are appropriate and sufficient, with consideration to changes in the external environment and the status of implementation. Following these reviews, our governing bodies may revise or otherwise make changes to our measures to enhance their implementation. At the same time, they will ensure all of our employees and executive officers are well-informed and trained in regard to the measures.

As part of our initiatives in this area, we place a strong emphasis on engagement with stakeholders. Our objective in taking this approach is to ensure that our initiatives are aligned with society's standards and expectations.

4.3.2.2 Approach of our Environmental and Social Management Policy for Financing and Investment Activity

Our approach under our Environmental and Social Management Policy for Financing and Investment Activity is as follows.

- Companies are expected to contribute to the sustainable development of society as good corporate citizens. In terms of the social and environmental impact of business decisions and business activity, companies need to consider the expectations of their stakeholders and ensure that their actions are not only aligned with international standards but also transparent and ethical.
- At Mizuho, we understand the importance of our social responsibility and duty to the public and we ensure that our corporate conduct fulfills our responsibilities to the communities in

which we operate, giving due consideration to the expectations of a diverse range of stakeholders. This enables us to contribute to sustainable social and economic development as well as be part of the solution to issues affecting society.

- In regards to environmental issues, including climate change and conservation of biodiversity, we will endeavor to leverage our financial intermediary and consulting capabilities to maximize beneficial impacts and avoid or mitigate adverse impacts on the environment.
- One of the ways in which we fulfill our social responsibility and duty to the public is to provide financial services such as financing and capital raising support ("financing and investment") to companies which are taking appropriate measures to address environmental and social issues. At the same time, we are also sensitive to the risks involved in engaging in business with companies which are facing environmental or social issues, such as responding to climate change, conserving biodiversity, or respecting human rights, or which are not taking appropriate measures to meet stakeholder expectations.

4.3.2.3 Businesses subject to this policy and implementation methods

In this policy, (1) Financing and Investment Transactions Prohibited Regardless of Sector lists projects for which we prohibit any financing or investment. (2) Financing and Investment Transactions which Require Additional Due Diligence Regardless of Sector and (3) Policies on Transition Risk Sectors and Specific Industrial Sectors describe our practices for determining whether to engage in transactions with clients/projects in subject sectors, accounting for the degree to which the client has taken steps to avoid or mitigate risk and other due diligence as appropriate, based on the characteristics of the services we are providing.

In addition, based on this policy, our primary subsidiaries participate in engagement (constructive dialogue) with specific clients in each sector with the aim of sharing a medium- to long-term perspective on opportunities and risks accompanying environmental, social, and governance (ESG) issues and climate change.

4.3.2.4 Specific measures of our Environmental and Social Management Policy for Financing and Investment Activity

(1) Financing and Investment Transactions Prohibited Regardless of Sector

In recognition of the serious risks to and adverse impacts on the environment and society, we refuse to engage in transactions related to the following types of projects:

- Projects with an adverse impact on wetlands designated as Wetlands of International Importance under the Ramsar Convention
- Projects with an adverse impact on UNESCO World Heritage sites, excluding projects that have received prior consent from the relevant national government and UNESCO.
- Projects violating the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington Convention), excluding cases permitted under any country's reservation(s) to the convention.
- Projects involving child labor or forced labor.

(2) Financing and Investment Transactions which Require Additional Due Diligence Regardless of Sector

In recognition of the serious risks to and adverse impacts on the environment and society, we make decisions on financing and investment for the following types of projects based on a cautious and considered approach aimed at accounting for the degree to which the client has taken steps to avoid or mitigate risk:

- Projects with adverse impacts on indigenous peoples' local communities.
- Projects involving land expropriation that causes forced relocation of residents.

(3) Policies on Transition Risk Sectors and Specific Industrial Sectors

For certain sectors such as those listed below, where there is a particularly high possibility of contributing to adverse environmental or social impacts, our decisions regarding whether to engage in business transactions take into consideration any applicable international standards or guidelines, whether the client or project has received relevant certifications, and whether there are any potential conflicts with local communities: In relation to climate change, the policy addresses transition risk sectors, coal-fired power generation, coal mining, oil and gas, large-scale hydropower, large-scale agriculture, palm oil, and lumber and pulp as below.

1) Transition risk sectors

Climate change is closely tied to various economic and social issues, and we recognize that addressing climate change is an important issue in the medium to long term.

Companies whose primary businesses are in coal-fired power generation, oil-fired power generation, gas-fired power generation, coal mining, or other oil and gas operations may be exposed to transition risk if they do not take appropriate measures for the transition to a low-carbon society.

At Mizuho, we are undertaking engagement with clients to ensure they make progress on addressing transition risks associated with climate change. In undertaking such engagement with our clients, if a client does not make progress on addressing their transition risks even after a certain period of time, we carefully consider our transactions with the client.

Further, in our engagement and decision-making, we also take into account the role of the client in national energy policies aligned with the Paris Agreement.

2) Coal-fired power generation

Compared to other forms of power generation, coal-fired power generation produces more greenhouse gases, in addition to producing harmful substances such as sulfur oxide and nitrogen oxide. Therefore, it presents a higher risk of contributing to climate change, air pollution, and other environmental impacts.

In light of this fact and in line with our policy on transition risk sectors, we do not provide financing or investment which will be used for new construction[21] of coal-fired power plants.

However, when a proposed coal-fired power plant is essential to the relevant country's stable energy supply and will contribute to reduction of greenhouse gas emissions by replacing an existing power plant, we may provide financing or investment for the project, based on careful consideration.

We will also continue to support development of innovative, clean, and efficient next-generation technology that will contribute to the expansion of sustainable energy, as well as other initiatives for the transition to a low-carbon society.

3) Thermal coal mining

We recognize that mining of thermal coal, when not managed properly, entails risk of adverse environmental and social impacts, which may include damage to ecosystems from hazardous waste produced in coal mines, as well as deaths or injuries resulting from mining accidents. Further, mined coal may also increase greenhouse gas emissions when burned for power generation or other purposes in the future.

In light of this fact and in line with our policy on transition risk sectors, we do not provide financing or investment which will be used for new thermal coal mining projects.

When an existing thermal coal mining project contributes to the stable energy supply of a country

[21] "New construction of coal-fired power plants" includes expansion of existing facilities.

which has announced policies aligned with the Paris Agreement, we may provide financing or investment for the project, based on careful consideration, only in these cases.

In addition, our decisions regarding financing and investment for companies whose businesses include thermal coal mining involve a thorough examination of their responses to the above risks.

4) Oil and gas

We recognize that oil and gas extraction and pipeline construction entail risk of adverse environmental and social impacts, which may include pollution of oceans and waterways from oil spills and gas leaks, as well as violations of the human rights of indigenous peoples. Accordingly, our decisions regarding financing and investment for oil and gas projects involve a thorough examination of the impacts on the environment and of the potential for conflicts with indigenous peoples or local communities.

Further, in light of the fact that oil, gas, and other fossil fuels contribute to emissions of greenhouse gases, we undertake engagement with clients to confirm their measures for addressing transition risk accompanying climate change.

In particular, we recognize that the Arctic Circle (the region with latitude 66°33′ north of the Equator) requires consideration for the conservation of endangered species and the lives of indigenous peoples. We also recognize that oil sands, shale oil, and shale gas development causes significant environmental degradation and may violate the human rights of indigenous peoples, among other risks. Because of this, when providing financing or investment for oil or gas extraction projects in the Arctic Circle or oil sands, shale oil, or shale gas projects, we conduct appropriate assessments of environmental and social risks.

5) Large-scale hydropower

We recognize that large-scale hydropower construction (an output of 25MW or more and a dam wall of 15m or more) entails risk of adverse environmental and social impacts, which may include disturbance of river basin ecosystems and destruction of biodiversity, as well as violation of the human rights of indigenous peoples and local communities due to resettlement. Accordingly, our decisions regarding financing and investment for large-scale hydropower projects involve a thorough examination of the impacts on the environment and of the potential for conflicts with indigenous peoples or local communities.

Further, when providing financing or investment for large-scale hydropower projects, we recommend the client perform an environmental and social impact assessment based on the Hydropower Sustainability Assessment Protocol.

6) Large-scale agriculture (soybeans and similar)

We recognize that development of large-scale agriculture of soybeans and similar crops (agriculture covering 10,000 ha or more) may entail environmental issues such as deforestation (including forest burning) and damage to biodiversity, in addition to potential human rights abuses such as the violation of indigenous peoples' rights or the use of child labor. Accordingly, our decisions regarding financing and investment for such agriculture involve a thorough examination of the client's measures to address environmental and social issues.

Further, we urge our clients in these sectors to formulate sustainable environmental and human rights policy, such as No Deforestation, No Peat, and No Exploitation (NDPE), and to respect Free, Prior, and Informed Consent (FPIC) in relation to local communities.

7) Palm oil

While we recognize that palm oil is an essential commodity for maintaining our lifestyles and infrastructure, we are also aware of the potential human rights abuses within the production process

such as the violation of indigenous peoples' rights or the use of child labor, in addition to environmental issues such as deforestation (including forest burning) and damage to biodiversity.

In order to avoid becoming involved in such projects which may inflict human rights abuses or environmental destruction, our business decisions involve a thorough examination of whether there are any potential conflicts involving indigenous peoples or local communities, and we take into consideration whether the client/project has received international certifications such as those for the production of sustainable palm oil.

Specifically, we require that all plantations be certified by the Roundtable on Sustainable Palm Oil (RSPO). When a client needs more time to have all their plantations certified by the RSPO, we ask that they formulate a plan with a set deadline to receive the certification. When the client does not have any plans to be certified by the RSPO, we ask that they take measures equivalent to those required for the certification and periodically report the status of said measures. When the client needs more time to establish such measures, we ask that they formulate a plan with a set deadline to do so.

In the event that we identify any unlawful act during the term of a transaction, we urge the client to take immediate remedial measures. In the event that the client has not taken appropriate measures to address social issues, we undertake engagement with the client to promote remedial measures and, if the client's remedial measures are unsatisfactory, we suspend new financing and investment.

Further, we urge our clients in these sectors to formulate sustainable environmental and human rights policy, such as No Deforestation, No Peat, and No Exploitation (NDPE), and to respect Free, Prior, and Informed Consent (FPIC) in relation to local communities.

8) Lumber and pulp

While we recognize that lumber and pulp are essential commodities for maintaining our lifestyles and infrastructure, we are also aware of the potential human rights abuses within the production process such as the violation of indigenous peoples' rights or the use of child labor, in addition to environmental issues such as deforestation (including forest burning) and damage to biodiversity.

In order to avoid becoming involved in such projects which may inflict human rights abuses or environmental destruction, our business decisions involve a thorough examination of whether there are any potential conflicts involving indigenous peoples or local communities, and we take into consideration whether the client/project has received international certifications such as those for responsible forest management.

In the event that we identify any unlawful act during the term of a transaction, we urge the client to take immediate remedial measures. In the event that the client has not taken appropriate measures to address social issues, we undertake engagement with the client to promote remedial measures and, if the client's remedial measures are unsatisfactory, we suspend new financing and investment.

Further, we urge our clients in these sectors to formulate sustainable environmental and human rights policy, such as No Deforestation, No Peat, and No Exploitation (NDPE), and to respect Free, Prior, and Informed Consent (FPIC) in relation to local communities.

4.3.3 Revised target to reduce the outstanding credit balance for coal-fired power generation facilities

Regarding the target we set in FY2020 to reduce our outstanding credit balance for coal-fired power generation facilities, we have moved up our target date for achieving a credit balance of zero from FY2050 to FY2040.

Target to reduce the outstanding credit balance for coal-fired power generation facilities based on our Environmental and Social Management Policy for Financing and Investment Activity	
Before revision	After revision
Reduce the FY2019 amount by 50% by FY2030, and achieve an outstanding credit balance of zero by FY2050	Reduce the FY2019 amount by 50% by FY2030, and achieve an outstanding credit balance of zero by **FY2040**

4.3.4 Implementation based on the Equator Principles

Mizuho Bank (formerly Mizuho Corporate Bank) became the first Asian financial institution to adopt the Equator Principles in 2003. Since our adoption of the Equator Principles in October 2003, Mizuho Bank has remained actively engaged with the Equator Principles Association as a member of the Steering Committee, which consists of 10 international financial institutions. Mizuho Bank was the first Asian bank to become Chair of the Steering Committee, serving from 2014 to 2015. Mizuho Bank is currently playing a leadership role by serving as the regional representative for Asia & Oceania and as lead of the EP4 Reference Working Group.

The fourth update to the Equator Principles (EP4), released in November 2019, strengthened requirements related to climate change risk and respect for human rights. Mizuho Bank has been applying EP4 for the financing of projects involving large-scale development or construction since July 2020, while working with clients to identify, assess, and manage environmental and social risks and impacts.

5. Metrics and targets

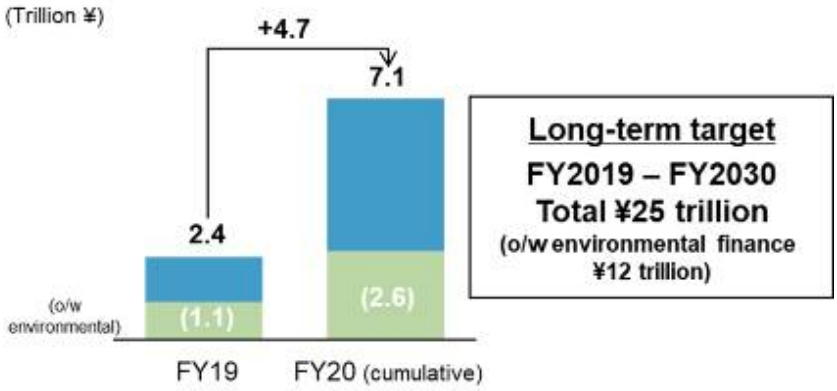
5.1 Targets pertaining to risks and opportunities

Based on our Environmental Policy, we have set targets for critical opportunities and risks related to climate change. In 2020 we set targets for sustainable finance and environmental finance, and in 2021 we have moved up our target for reducing our outstanding credit balance for coal-fired power generation facilities and set new targets aligned with the Paris Agreement for reducing our environmental footprint.

■ Sustainable finance & Environmental finance targets
FY2019 – FY2030 total: ¥25 trillion (of which the target for environmental finance is ¥12 trillion).

Our FY2019 to FY2020 overall result (preliminary figure[22]) for sustainable finance was ¥7.1 trillion (of which the result for environmental finance was ¥2.6 trillion).

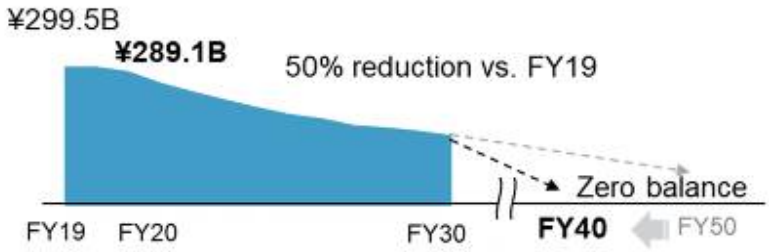
Figure 17: Sustainable finance & Environmental finance targets and progress



■ Revised: Target to reduce the outstanding credit balance for coal-fired power generation facilities based on our Environmental and Social Management Policy for Financing and Investment Activity.
Reduce the FY2019 amount by 50% by FY2030, and achieve an outstanding credit balance of zero by FY2040.

Our outstanding credit balance as of the end of FY2020 was ¥289.1 billion.

Figure 18: Target to reduce the outstanding credit balance for coal-fired power generation facilities and progress



[22] We plan to release final figures in our Integrated Report.

■ Target to reduce our own environmental footprint

New: Reduce the FY2019 amount of worldwide Scope 1 and Scope 2 greenhouse gas emissions from the eight group companies* by **35% by FY2030, and aim to become carbon neutral by FY2050.**

* Mizuho Financial Group, Mizuho Bank, Mizuho Trust & Banking, Mizuho Securities, Mizuho Research & Technologies, Asset Management One, Mizuho Private Wealth Management, and Mizuho Americas.

Reference: Targets through FY2020 (already achieved)

CO_2 emissions basic unit of electricity used at our offices in Japan

(CO_2 emissions / total floor area)

By FY2030 achieve a 19.0% reduction compared to FY2009 levels

By FY2020 achieve a 10.5% reduction compared to FY2009 levels

Result: By the end of FY2019 achieved a 25.9% reduction compared to FY2009 levels (achieved target)

New: Reduce 7 group companies'** paper usage in Japan by 1% compared to the previous fiscal year

** Mizuho Financial Group, Mizuho Bank, Mizuho Trust & Banking, Mizuho Securities, Mizuho Research & Technologies, Asset Management One, and Mizuho Private Wealth Management.

5.2 Monitoring indicators

Monitoring indicator results will be totaled every fiscal year and disclosed on our website.[23]

- Scope 1: Direct CO_2 emissions and energy usage
- Scope 2: Indirect CO_2 emissions and energy usage
- Scope 3: Business trip-related CO_2 emissions

  Environmental footprint of power generation projects utilizing project finance (amount of contribution to CO_2 emissions), according to the concepts of the Partnership for Carbon Accounting Financials (PCAF).[24]

- Avoided emissions associated with renewable energy power generation projects utilizing project finance (amount of contribution to CO_2 emission reductions), according to the concepts of PCAF.[25]
- Credit exposure in high-risk areas within transition risk sectors (new; 4.3.1 (2) Risk control in carbon-related sectors)

5.2.1 Scope 1, Scope 2, and Scope 3 performance

Item		Unit	FY2016	FY2017	FY2018	FY2019
CO_2 emissions		Tons of CO_2	235,629	224,896	213,055	188,674
	Scope 1 (direct emissions)	Tons of CO_2	16,026	16,028	15,845	14,756
	Scope 2 (indirect emissions)	Tons of CO_2	213,709	202,780	191,730	168,522
	Scope 3 (business trips)	Tons of CO_2	5,894	6,088	5,480	5,396
Energy consumption		Megawatt-hours	523,309	512,691	499,334	453,129
	Scope 1	Megawatt-hours	77,573	78,166	77,152	71,437
	Scope 2	Megawatt-hours	445,736	434,525	422,182	381,692

Scope of data collection

- 8 group companies below. Japan: all items and all locations; outside Japan: gasoline and electricity (in principle).

  Mizuho Financial Group, Mizuho Bank, Mizuho Trust & Banking, Mizuho Securities, Mizuho Research Institute*, Mizuho Information & Research Institute*, Asset Management One, and Mizuho Private Wealth Management.

  (* Now integrated as Mizuho Research & Technologies)

  Through FY2017, 9 companies, including Trust & Custody Services Bank (now Custody Bank of Japan).
- Business trip data is for air travel by employees of the eight group companies (up to and including FY2017, nine group companies) (the portion of business trips centrally managed).

[23] ESG Data Book pp. 7 - 9
https://www.mizuhogroup.com/binaries/content/assets/pdf/mizuhoglobal/sustainability/overview/report/esg-data/esg_databook.pdf

[24] A framework for financial institutions to consistently assess the greenhouse gas emissions of financing and investments. https://carbonaccountingfinancials.com/

[25] "Amount of contribution to CO_2 emissions/emission reductions" is defined as the project's CO_2 emissions/emission reductions multiplied by our contribution ratio, which is the ratio of the financing amount we provide to a project's total cost. For details, see the Carbon Accounting section of our website (https://www.mizuhogroup.com/sustainability/environment/activity/carbon).

Item	Unit	FY2016	FY2017	FY2018	FY2019
Scope 3: Environmental footprint associated with large-scale power generation projects for which we have newly concluded financing or investment contracts (amount of contribution to CO_2 emissions)	Kilotons of CO_2	4,132	1,559	2,807	2,679
Avoided emissions associated with large-scale power generation projects for which we have newly concluded financing or investment contracts (amount of contribution to CO_2 emission reductions)	Kilotons of CO_2	687	743	1,394	1,459

5.2.2 Towards measurement and management of Scope 3 emissions

Calculating greenhouse gas emissions (Scope 3) associated with project finance for power generation projects

Indirect greenhouse gas emissions from financing and investment occupy a large share of financial institutions' Scope 3 emissions (greenhouse gas emissions from other parties involved in financial institutions' activities). In our view, measuring, monitoring, and setting targets to reduce these emissions is a crucial and challenging issue.

Table 10: Reference – 15 categories of Scope 3 emissions

	No.	Category
Upstream	1	Purchased goods and services
	2	Capital goods
	3	Fuel- and energy-related activities not included in Scope 1 or Scope 2
	4	Upstream transportation and distribution
	5	Waste generated in operations
	6	Business travel
	7	Employee commuting
	8	Upstream leased assets

	No.	Category
Downstream	9	Downstream transportation and distribution
	10	Processing of sold products
	11	Use of sold products
	12	End-of-life treatment of sold products
	13	Downstream leased assets
	14	Franchises
	15	**Investments**

Source: Created by Mizuho based on Greenhouse Gas Protocol and Japan Ministry of the Environment materials.

At Mizuho Bank, we have been utilizing original carbon accounting methodology to calculate the CO_2 emissions and emission reductions from the power generation projects which we have financed. Since FY2006, we have been publicizing the results. (Reference: 5.2.1 Scope 1, Scope 2, and Scope 3 performance)

Until recently, there was no globally accepted detailed methodology for measuring greenhouse gas emissions from financing and investment. However, last November saw the release of PCAF's Global GHG Accounting and Reporting Standard for the Financial Industry ("the PCAF Standard"), which provides financial institutions with methods to calculate greenhouse gas emissions from financing and investment by asset class, including project finance.

Further, the Financial Sector Science-Based Targets Guidance released in October 2020 makes setting targets for greenhouse gas emissions associated with financing and investment activity a requirement for recognition under the Science Based Targets initiative (SBTi) as part of addressing Scope 3 emissions. The guidance sets forth target asset classes and boundaries and applicable methods for target setting. Given these developments, there is a need to set targets for greenhouse gas emission intensity (basic units) in relation to project finance for power generation projects.

At Mizuho, we are deepening our understanding of these methodologies while moving forward with feasibility studies. At this time, as a first step towards measuring our Scope 3 emissions, we

have estimated greenhouse gas emission intensity (basic units) in relation to project finance for power generation projects[26] (our first disclosure of such data).

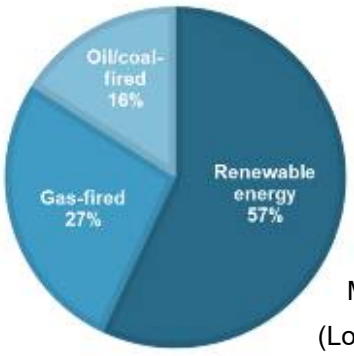
The outline of our estimates is as follows.

(1) Accounting criteria

1) Target

Mizuho Bank's project finance for power generation projects (worldwide; approx. 320 projects)

Figure 19: Reference – Energy portfolio of project finance for power generation projects



March 31, 2020

(Loan balance base)

2) Relevant guidance

Financial Sector Science-Based Targets Guidance (October 2020), Partnership for Carbon Accounting Financials Global GHG Accounting and Reporting Standard for the Financial Industry (November 2020)

3) Formula

$$\text{Emission intensity } (gCO_2/kWh) = \frac{\text{Project finance portfolio overall emissions}}{\text{Project finance portfolio overall power generation}}$$

$$= \frac{\sum (\text{annual power generation} * \text{sectorial emissions factor} * \text{attribution factor})}{\sum (\text{annual power generation (including renewable energy)} * \text{attribution factor})}$$

$$\text{Mizuho Bank attribution factor} = \frac{\text{Mizuho Bank debt balance for each project}}{\text{Total project cost for each project (equity + debt)}}$$

[26] Despite our best efforts, we are not able to disclose our estimates of greenhouse gas emission intensity associated with power generation-linked corporate finance at this time due to issues in the usability and accuracy of our financing and investment clients' emission intensity data.

(2) Resulting estimates

In our calculations, our greenhouse gas emission intensity from project finance for power generation projects (CO_2 emissions per unit of power generated) came to 364.51 gCO_2/kWh as of March 31, 2020. We found that this figure was lower than the global, Asia Pacific, and Japan averages from the 2019 figures reported in the International Energy Agency's World Energy Outlook 2020 (Table 11).

Table 11: Greenhouse gas emission intensity estimates

	(gCO_2/kWh)
Global average	508.47
Asia Pacific average	639.67
Japan average	456.34
Mizuho estimate	364.51

Regional averages are from the 2019 figures in the International Energy Agency's World Energy Outlook 2020.

(3) Actions going forward

In April 2021, we clarified our contribution to achieving a low-carbon society (achieving net zero) by 2050 and our transformation to a portfolio aligned with the targets in the Paris Agreement by revising our Environmental Policy. Under this policy, we will establish and release medium- to long-term targets for Scope 3 emissions by the end of FY2022, in order to develop a specific pathway toward these long-term goals.

Regarding our measurement of Scope 3 emissions / greenhouse gas emissions from financing and investment, which is a prerequisite for setting targets, we have now estimated our emissions from project finance for power generation projects. Going forward, we will strive to expand the range of target assets and sectors. There are three main challenges for us to consider in relation to such measurement.

1) Assets subject to measurement: Consider consumer loans, corporate loans, and investments in listed and unlisted stocks and bonds as potential assets to measure alongside project finance and assign priorities to each.

2) Sectors subject to measurement: Consider energy (oil, gas, and coal), automobiles, logistics, steel, real estate, and other options as potential sectors to measure alongside power generation and assign priorities to each.

3) Data collection: Consolidate methodology for collection of public data with consideration to data quality. Promote greater disclosure of currently non-public data through engagement with clients.

In conjunction with acting on these challenges, we will also survey and research trends in global initiatives such as SBTi, PCAF, and the Paris Agreement Capital Transition Assessment (PACTA)[27] and demonstrate leadership towards realizing a low-carbon society.

[27] A tool for analyzing alignment between climate change scenarios and portfolios, led by the French thinktank 2 Degree Investing Initiative.

6. Lastly: Working toward the future

Under the oversight of our Board of Directors, we will formulate an action plan each fiscal year and continue to improve our initiatives. Our FY2021 action plan is shown in Table 12.

Addressing climate change and achieving net zero by 2050 will be a long journey. In principle, every fiscal year we will examine our progress from the previous fiscal year, the external business environment, and other factors, review our action plan, and steadily advance our initiatives.

Table 12: FY2021 action plan

TCFD thematic area	FY2021 action plan
Governance	・Based on our Environmental Policy, report on the status of responses to TCFD Recommendations to the Board of Directors on an annual basis. ・Based on our revision of our Environmental Policy, gradually develop a pathway towards our long-term goal of being aligned with the targets in the Paris Agreement.
Strategy	・Implement initiatives reflecting climate-related risks and opportunities. ・Look into methods for assessing the impacts the climate-related matters identified above will have on our strategy and finances. ・Expand the sectors and regions under consideration in our scenario analysis and incorporate the analysis results into our strategy and risk management.
Risk Management	・Review framework for identifying and assessing risk, enhance monitoring, and continuously review financing and investment policy. ・Improve effectiveness of engagement based on coordination between the first and second lines of defense by utilizing a risk assessment and control framework for carbon-related credit exposure.
Metrics and Targets	・Look into expanding disclosure on our responses to transition risk. ・Look into actions reflecting trends in various types of initiatives, including the SBTi. ・Look into measuring Scope 3 emissions (greenhouse gas emissions from financing and investment) and setting quantitative metrics and targets.

Forward-Looking Statements

This report contains forward-looking statements, including estimates, forecasts, targets and plans. These statements are based on management's current expectations and are subject to uncertainty and changes in circumstances. These forward-looking statements do not represent any guarantee by management of future performance. These statements reflect our current views with respect to future events and are subject to risks, uncertainties and assumptions. Actual results may differ materially from those included in these statements due to a variety of factors, including, among others, global socio-demographic and economic trends, energy prices, technological innovations, climate-related conditions and weather events, governmental policies and legislative and regulatory changes as well as other unforeseen events or conditions. Further information regarding factors that could affect our results is included in "Item 3.D. Key Information—Risk Factors" in our most recent Form 20-F filed with the U.S. Securities and Exchange Commission, which is available in the Financial Information section of our web page at www.mizuhofg.com/index.html and also at the SEC's web site at www.sec.gov. We are under no obligation, and disclaim any obligation, to update or alter our forward-looking statements, whether as a result of new information, future events or otherwise.

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