Attachment 5

Enhancing our response to the TCFD Recommendations

Introduction

The Task Force on Climate-related Financial Disclosures (TCFD) is a task force led by representatives of the private sector, established in December 2015 based on recommendations from the Financial Stability Board in order to enhance the availability of corporate information related to climate change. It issued its final recommendations report in 2017. At Mizuho we support the intent and aims of the TCFD Recommendations and are working to engage in initiatives and enhance disclosures in accordance with the recommendations.

In our Environmental Policy established in April 2020, we clearly lay out our stance on climate change initiatives according to the following.

■ 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.
- 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 by 2050.
  - ➢ 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[1] in order to leverage growth opportunities and strengthen risk management as well as disclose information in a transparent manner regarding our progress.

[1] TCFD: Task Force on Climate-related Financial Disclosures

Executive summary

Item	Status of FY2019 initiatives
1. Corporate governance	■ Oversight by the Board of Directors: We established the Environmental Policy and clarified matters regarding the Board of Directors' oversight of the status of environmental initiatives.
2. Strategy	■ Qualitative evaluation of the opportunities and risks posed by climate change: We qualitatively analyzed opportunities, transition risks, and physical risks posed by climate change for each sector over short-, medium-, and long-term time frames. ■ Scenario analysis: We conducted scenario analysis of transition risks and physical risks.
3. Risk management	■ Identification of climate change risks and integration with comprehensive risk management ■ Top risk management: We continued to monitor financing and investment from the perspective of environmental and social responsibility in our management of "top risks", which are risks recognized by management as having major potential impact on the group. We now position climate change risks as "emerging risks", which we define as 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, and we have begun periodic monitoring of related indicators. ■ Reviewing our policies in light of climate change risks: We managed relevant risks through reviewing our Environmental and Social Management Policy for Financing and Investment Activity (e.g. tightening our policy on coal-fired power generation), conducting due diligence based on the Equator Principles, and through

	engagement with clients.
4. Indicators and targets	■ Targets pertaining to risks and opportunities: We set targets on sustainable/environmental finance, reducing our outstanding credit balance for coal-fired power generation, and reducing our environmental impact. ■ Monitoring indicators

(Underlined sections indicate areas in which we strengthened initiatives)

1. Corporate governance

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.

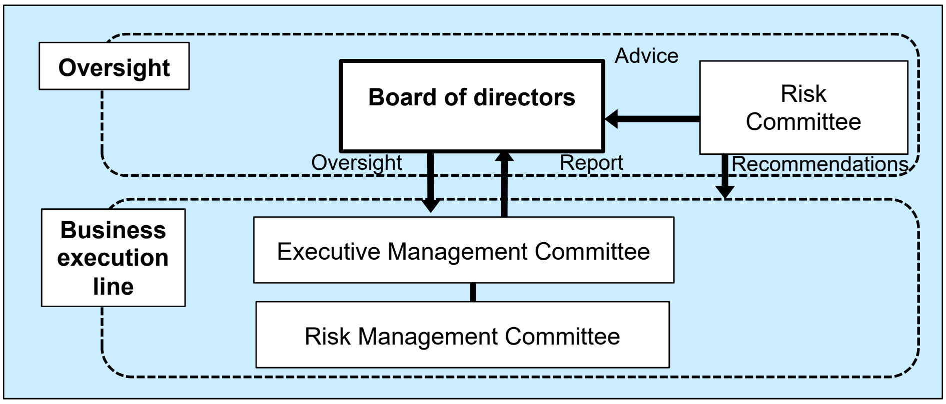
Based on the Environmental Policy, reports on the status of responses to TCFD Recommendations will periodically be made to the Board of Directors, which will provide oversight.

Also, 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, oversight will be provided by the Risk Committee and Board of Directors in accordance with the structure for advancing and managing each initiative.

■ Involvement in FY2019 initiatives for addressing climate change

Description	Frequency	Business execution line		Supervisory line	
		Risk Management Committee	Executive Management Committee	Risk Committee	Board of Directors
Establishment of Environmental Policy to strengthen environmental initiatives	-	✓	✓	✓	✓
Status of response to TCFD Recommendations	Annually	✓	✓	✓	✓
Review of management system for responsible investment, financing, and other services	Annually	✓	✓	✓	✓
FY2020 top risks, risk appetite policy	Quarterly	✓	✓	✓	✓
Revision of the fundamental approach to sustainability initiatives	-		✓		✓
FY2020 business plan (including key sustainability areas, initiative planning, and targets)	Annually		✓		✓

■ **Corporate governance structure regarding responses to climate change**



2. Strategy

(1) Approach to climate change

At Mizuho, we have positioned addressing climate change as a key part of our corporate strategy, and are ascertaining risks and opportunities as we advance initiatives.

Businesses and innovation that contribute to climate change mitigation and adaptation which are necessary for achieving 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[2] may increase if they are slow to address the transition or if their response is not sufficient. Also, risks concerning the ability of companies to continue operating will increase if they are slow to respond to physical risks[3] such as extreme weather conditions, or if their response is not sufficient.

At Mizuho, one way that we fulfill our role as a financial institution is emphasizing the importance of engaging and holding constructive dialogue with our clients and other stakeholders on the topic of working toward a low-carbon society.

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[2] 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 economy.

[3] Physical risk refers to risks such as the loss or damage of assets as a direct result of climate change, as well as impact on business performance due to supply chain disruptions as an indirect result of climate change.

■ **Risks that climate change poses for the Mizuho group**

The following are the main transition risks and physical risks that climate change poses for Mizuho as a financial institution:

	Details	Time frame
Transition risks	● Increase in credit costs over the medium to long term for sectors with high levels of GHG emissions, as a result of the shift to low-carbon.[4] ● Increase in risks such as regulatory risk and reputational risk regarding the financing of fossil fuel projects (e.g. coal-fired power generation) in light of increasing international demand for more drastic responses to climate change.	Medium to long term Short term
Physical risks	● Increase in credit costs attributable to wind and water-related damages from typhoons and other storms, which cause clients' financial performance to deteriorate as a result of business stagnation, as well as 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.	Short, medium, and long term

(2) 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 the 2°C scenario. We will continue enhancing our scenario analysis and utilize the results in engagement opportunities.

[4] GHG (greenhouse gases): Gases which cause the greenhouse effect, thought to be the main cause of global warming.

■ FY2020 approach to scenario analysis

(1) Conduct qualitative evaluation and analysis of transition risks and physical risks by sector.
(2) Determine which transition risks and physical risks will be targeted by scenario analysis based on the results of (1) above.
(3) Set scenarios according to the risks to be analyzed, and conduct scenario analysis.

1 Qualitative evaluation of climate change risks

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).

- We identified the electric utilities and oil, gas & coal sectors as sectors facing high transition risks.
- We identified the agriculture, food & forestry sector as a sector facing high levels of physical risks.

Table 1: Results of evaluation of transition risks and physical risks by sector

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

* In this 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).

2 Sectors selected for scenario analysis

Based on the results of our qualitative evaluation by sector, we selected the following sectors for scenario analysis.

- Transition risk: We selected for scenario analysis the electric utilities sector and the oil, gas & coal sectors, which we identified as being at high risk in our qualitative evaluation.
- Physical risk: Although we identified the agriculture, food & forestry sector as being at high risk in our qualitative evaluation, we determined that our credit exposure in this sector was relatively low. Because of this, we selected for scenario analysis the potential impacts of building loss or damage and business stagnation in the real estate sector, which is subject to physical risk that would cause impacts across multiple industries.

3-1 Implementation of transition risk scenario analysis

■ Scenario design

We used the projections in the International Energy Agency (IEA)'s Sustainable Development Scenario (SDS)[5] to anticipate the impacts on our clients' business performance and to analyze the possible consequences for Mizuho's credit costs.

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.

Specifically, we divided the sectors above into multiple subsectors according to their business categories and other characteristics. We also incorporated into the outlook the forecasted trend of electricity generation by source and production by energy type looking forward to 2050.

We designed this scenario analysis around particular assumptions and did not take into account our clients' individual business plans, financing

[5] Sustainable Development Scenario (SDS): Scenario under which advancement of low-carbon holds the increase in the global average temperatures to below 2°C.

agreements, or other factors.

- Scenario analysis results

Through this analysis, we estimated that our credit costs will increase by ¥120 billion to ¥310 billion by 2050. The range between these amounts reflects the difference between the dynamic and static scenarios. With the dynamic scenario, we confirmed that business structure transformation, while involving some impacts in the short term, would limit the increase in credit costs over the medium to long term. We expect that business structure transformation would lead to lesser or no fossil fuel dependency, which would in turn reduce medium- to long-term carbon costs and improve business performance.

With our analysis, we reaffirmed the importance of implementing immediate responses to climate change to contribute to the transition to a low-carbon society over the medium to long term. We will further strengthen constructive dialogue (engagement) with our clients regarding their efforts to address climate change and respond with a deep understanding of their challenges and needs. In doing so, we will capture business opportunities by providing solutions supporting our clients' initiatives and also strengthen risk management.

3-2 Implementation of physical risk scenario analysis

- Scenario design

With the Intergovernmental Panel on Climate Change (IPCC)'s Fifth Assessment Report as a base, we collaborated with an insurance consulting firm to calculate the rates at which typhoons and other storms cause wind and water-related building loss or damage. We then analyzed the potential impacts on Mizuho's credit costs from the loss or damage of mortgaged real estate (buildings) in Japan.

- Scenario analysis results

  - Direct impacts

    While the strength of typhoons that make landfall in Japan will increase, the number/frequency of typhoons will decrease. Because of this and other factors, 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
  We are currently in the process of analyzing what impacts there would be on Mizuho's credit costs were damage to buildings by typhoons and other storms to cause stagnation in our clients' businesses and affect their business performance. We plan to release the results of our analysis at a later date. We will look into necessary measures in line with our results going forward.

(3) Opportunities posed by climate change

Based on the results of our qualitative analysis of these sectors, we will proactively participate in engagement (constructive dialogue) with our clients, ascertain their business challenges and needs, and support their efforts to introduce climate change countermeasures and to transition to a low-carbon society from a medium- to long-term perspective. This will enable us to expand our business opportunities.

At Mizuho, we have been holding active discussions across our group about driving forward our sustainability business, and we have enhanced our relevant capabilities group-wide by fortifying our existing teams and by creating brand new teams. In this way, we are proactively focusing on our key sustainability area of promoting action to address climate change and supporting the transition to a low-carbon society, and we are capturing expanding business opportunities.

(4) Issues going forward

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 the United Nations Environment Programme Financial Initiative (UNEP FI) pilot project[6] and in the Financial Services Agency of Japan partnership with 2° Investing Initiative[7]

[6] United Nations Environment Programme Finance Initiative (UNEP FI): The UNEP FI has launched a project to develop TCFD scenario analysis methods, and 28 banks from around the world are currently taking part.
[7] Partnership with 2° Investing Initiative: Japan's Financial Services Agency has partnered with 2° Investing Initiative to conduct an impact evaluation of climate-related risks to Japan's financial institutions.

are some of the ways in which we are keeping on top of global trends and striving to improve available methods.

The scenario analysis we have conducted this fiscal year is only a pilot analysis based on particular assumptions (a first fiscal year measure). How to incorporate it fully into our strategy and risk management requires further examination going forward. From next fiscal year onward, we will also be looking into improving our scenario analysis by expanding the sectors and regions under consideration and making other changes.

3. Risk management

(1) Identification of climate change risks and integration with comprehensive risk management

As described in Section 2. Strategy, for financial institutions the main transition and physical risks resulting from climate change are as follows: increase in credit costs over the medium to long term for sectors with high levels of GHG emissions, as a result of the shift to a low-carbon society (credit risk); increase in risks such as regulatory risk and reputational risk regarding the financing of fossil fuel projects (e.g. coal-fired power generation) in light of increasing international demand for more drastic responses to climate change (operational risk); increase in credit costs attributable to wind and water-related damages from typhoons and other storms, which cause clients' financial performance to deteriorate as a result of business stagnation, as well as damage to mortgaged real estate (credit risk); and 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 (operational risk). Additional risks include the risk of shareholdings losing value (stock price risk or market risk) and the risk of new obstacles impeding funding (liquidity risk).

By identifying such climate change risks and integrating them into our overall risk management framework, we are ensuring comprehensive risk management.

(2) Our management of top risks

We have in place a "top risk management" system in which we designate risks with major potential impact on the group as “top risks”. Through this system, we have continually monitored financing and investment from the perspective of environmental and social responsibility.

The TCFD Recommendations point out that “for many organizations, the most significant effects of climate change are likely to emerge over the medium to longer term and their timing and magnitude are uncertain.”

In our top risk management system, we now designate climate change risks as “emerging risks”, which we define as 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, and we have begun climate change risk monitoring. Going forward, we will design and implement additional risk control measures as necessary, as well as continue reporting on the status of our responses to our Board of Directors.

(3) 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.

■ Enhanced implementation based on our Environmental and Social Management Policy for Financing and Investment Activity (previously titled the Policies on Specific Industrial Sectors)

Considering the expectations and perspectives of our stakeholders, for the purpose of strengthening our environmental and societal considerations in making investment and financing decisions, we previously established a policy on initiatives involving sectors which have a high possibility of contributing to adverse environmental and social impacts, but we have now revised the policy to be comprehensive in prohibiting investment and financing in such initiatives regardless of sector, as well as points of caution (“Environmental and Social Management Policy for Financing and Investment Activity”). Additionally, from the perspective of strengthening our response to climate change risks, we conducted revisions, including tightening the policy which states that we will not provide financing for the construction of new coal-fired power generation facilities and adding the coal mining sector, as well as additional clarification of our responses to transition risks in the oil and gas sectors, and based on this policy we set a quantitative target to reduce our outstanding credit balance for coal-fired power generation facilities.

- Implementation based on the Equator Principles

  Released in 2019, the fourth update to the Equator Principles (“EP4”) added a requirement for financial institutions to have clients conduct climate change risk assessments as part of due diligence. Aside from this, it also strengthened various other measures to address climate change. Mizuho Bank was an early adopter of the Equator Principles, and we continue to apply them to project finance involving large-scale development or construction, working with clients to identify, assess, and manage environmental and social risks and impacts. (Planned effective date: July 2020)

4. Indicators and targets

(1) Targets pertaining to risks and opportunities

In addition to our target of reducing our environmental impact, in April 2020 Mizuho set new targets pertaining to key opportunities and risks presented by climate change, based on our Environmental Policy.

- Sustainable finance & Environmental finance targets (new)
  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 (new):
  Reduce the FY2019 amount by 50% by FY2030, and achieve an outstanding credit balance of zero by FY2050

- Target to reduce our own environmental footprint:
  CO_2 emissions basic unit of electricity used at our offices in Japan (CO_2 emissions / total floor area)
  Long-term target:

By FY2030 achieve a 19.0% reduction compared to FY2009 levels

Medium-term target:

By FY2020 achieve a 10.5% reduction compared to FY2009 levels

Additionally, in FY2020 we plan to revise our target for reducing our own environmental footprint.

We are also continuing discussions on SBTs[8], including participating in the SBT road testing for financial institutions where we provided opinions on issues with SBT setting methods.

(2) Monitoring indicators

Monitoring indicator data will be totaled every fiscal year and disclosed on our website.[9]

- Scope 1 (direct) CO_2 emissions and energy usage
- Scope 2 (indirect) CO_2 emissions and energy usage
- Scope 3 (supply chain): Environmental impact of new large-scale projects (amount of contribution to CO_2 emissions) and environmental conservation (amount of contribution to CO_2 emission reductions)

Lastly: Working toward the future

At Mizuho, under the oversight of the Board of Directors and based on our policy of implementing initiatives in stages by 2022 in accordance with the TCFD Recommendations, we have established an action plan for the continual enhancement of initiatives every year.

[8] Science Based Target (SBT)

[9] Scope 1, 2: https://www.mizuho-fg.com/csr/mizuhocsr/report/data/index.html#anc01
Scope 3: https://www.mizuho-fg.com/csr/mizuhocsr/report/data/index.html#ka-bon