December 29, 2022
Mizuho Financial Group, Inc.

Strengthening initiatives for achieving net zero by 2050

Mizuho Financial Group, Inc. (President & CEO: Masahiro Kihara) has included responding to climate change as a key pillar of our business strategy, and we are harnessing our group's capabilities to contribute to the achievement of a low-carbon society by 2050. To further our progress in these areas, we have strengthened the following initiatives.

1. **Setting new mid-term targets for reducing finance portfolio greenhouse gas emissions** (Attachment 1)
   (Oil and gas sector, thermal coal mining sector)

At Mizuho, we are pressing forward with setting mid-term greenhouse gas emissions reduction targets (to be reached by FY2030) in order to reach our long-term goal of achieving net-zero emissions from financing and investment by 2050. We had already set targets for the electric power sector, and we have recently set specific targets for the following sectors: (1) oil and gas, and (2) thermal coal mining.

Sector	Business	Scope(s)	Mid-term targets for FY2030
Oil and gas	Upstream production	Scope 1, 2	GHG emission intensity: 4.2 gCO_2e/MJ (FY2019 result: 6.6 gCO_2e/MJ)
		Scope 3	Absolute GHG emissions: Reduction of between 12% and 29% from FY2019 result
Thermal coal mining	Thermal coal mining	Scope 1, 2, 3	Absolute GHG emissions: Zero balance by FY2030 for OECD economies Zero balance by FY2040 for non-OECD economies

With the aim of achieving a net-zero real economy, we will support initiatives on the transition to low carbon, including the business structure transformation initiatives of clients in relevant sectors. We will also pursue efforts to limit the increase in global temperature to 1.5°C through cooperation with a range of stakeholders.

2. **Strengthening support for transition towards achieving a low-carbon society** (Attachment 2)

Having recognized that the transition of high-emitting industries is critical to achieving a low-carbon society, we support the business structure transformation of clients in relevant

sectors, with engagement as our starting point.

At Mizuho, we have now developed a framework (standards and verification process) to confirm the credibility and transparency of transition strategies in order to more proactively supply the necessary financing for our clients' business structure transformation. Among our clients in high-risk areas,[1] we have begun implementing this framework for those in the electric power sector that are formulating transition strategies.

We will continually reinforce this framework to reflect external trends and other factors, and we will look into expanding the scope of the clients to which we apply it.

Enhanced risk control in carbon-related sectors through this initiative

When we can confirm that the client's transition strategy meets the standards of our internal verification process, we will proactively provide financing for their business structure transformation.

This may result in a temporary increase in our exposure in high-risk areas. However, assisting our clients with their transition strategy design and execution enables us to manage our transition risk appropriately and mitigate our medium- to long-term transition risk.

Standards

We have set standards with reference to the four key elements of the disclosures recommended in the International Capital Market Association's Climate Transition Finance Handbook. The standards cover strategy and materiality, disclosure, governance structure, science-based targets, and outlook for decarbonization technology development / adoption.

Verification process

We engage with our clients to verify their transition strategy. Specialist departments with insight into the relevant sector and into sustainability assess whether or not it satisfies the above standards.

1: Out of sectors Mizuho has recognized as facing transition risk at particularly high levels (carbon-related sectors), high-risk areas are identified by evaluating risk along two axes: (1) our clients' sectors, and (2) our clients' measures to address transition risk.

- Over 80% of emissions in the oil and gas sector are Scope 3 (greenhouse gas (GHG) emissions from burning of sold products). As such, when setting our targets, we covered Scope 3 emissions (indirect) as well as Scope 1 and 2 emissions (direct).
- Compared to Scope 1 and 2, Scope 3 emissions require different actions on the part of oil and gas companies, and also have a different level of impact. In order to raise the effectiveness of our target-setting initiatives, we set separate targets for Scope 1 and 2 emissions (based on GHG emission intensity) and for Scope 3 emissions (based on absolute GHG emissions).

Overview of oil and gas sector targets

Targeted value chain	Companies and projects whose primary business is in upstream production (including integrated oil and gas companies)	
Metric	GHG emission intensity (gCO_2e/MJ)	Absolute GHG emissions (Mt CO_2e)
Targeted emissions	Direct GHG emissions from oil and gas production operations (including methane leaks) (Scope 1 + Scope 2)	Indirect GHG emissions from oil and gas production operations (Scope 3 (Category 11[1]))
Targeted production	Upstream oil and gas production volume	
Target assets	Loans (Total across corporate finance and project finance)[2]	
Metric formula	Σ [GHG emission intensity of each company or project $\times$ Balance of loans from Mizuho to company or project / Overall loan balance across target portfolio]	Σ [GHG emissions of each company or project $\times$ Balance of loans from Mizuho to each company or project / Corporate value[3] of each company or project]
Target year	Base year: FY2019	Target year: FY2030
Numerical target	FY2030: 4.2 gCO_2e/MJ (FY2019 result: 6.6 gCO_2e/MJ)	FY2030: Reduction of between 12% and 29% from FY2019 result (FY2019 result: 60.6 Mt CO_2e)
Benchmark scenarios	IEA Net Zero Emissions by 2050 Scenario (NZE)[4]	-29%: IEA Net Zero Emissions by 2050 Scenario (NZE)[4] -12%: IEA Sustainable Development Scenario (SDS)[4]
Data source	Wood Mackenzie, information disclosed by clients, meeting discussion points, etc.	

1. Emissions from use (burning) of sold products.
2. Aggregate for Mizuho Bank and Mizuho Trust & Banking.
3. Total equity + debt of each company and project. Based on the Partnership for Carbon Accounting Financials' Global GHG Accounting & Reporting Standard for the Financial Industry.
4. International Energy Agency World Energy Outlook 2021.

Emissions from financing and investment: Approach to mid-term targets for the oil and gas sector

Reasons for selecting oil and gas sector	● Over 80% of the world's CO_2 emissions come from fossil fuels. **Reducing these emissions is essential to achieving a low-carbon society**. ● The greenhouse gas methane is second only to CO_2 in driving global warming and is released in the oil and gas production process. **There is a need for the oil and gas business to make improvements to production processes, including the reduction of methane emissions.** ● The oil and gas sector accounts for a significant percentage of the GHG emissions from Mizuho's financing and invesment. ● GHG emissions data is more readily available and science-based scenarios are more advanced for this sector than for other sectors.
Approach to targeted value chain and scope of emissions	● **We have focused on upstream production** due to the share it comprises of Mizuho's oil and gas sector portfolio and the impact it has on the overall value chain in regard to transition in the real economy. ● Over 80% of emissions in the oil and gas sector are Scope 3 (CO_2 emissions from burning of sold products). As such, we have targeted **Scope 3 emissions as well as Scope 1 and 2 emissions**.
Approach to metrics	● Decarbonization of the oil and gas sector entails **reducing absolute emissions by scaling back use of fossil fuels and reducing emission intensity by having oil and gas companies improve their production processes**. ● Compared to Scope 1 and 2 emissions (direct), Scope 3 emissions (indirect) **require different actions on the part of oil and gas companies and also have a different level of impact. In order to raise the effectiveness of our target-setting initiatives, we set separate emission targets for Scope 1 and 2 and for Scope 3**. Scope 1 and 2: GHG emission intensity (gCO_2e/MJ: Metric for measuring oil and gas companies' improvements to their production processes) Scope 3: Absolute GHG emissions (Mt CO_2e: Metric for measuring reduction of emissions from use of sold oil and gas)
Benchmark scenarios	● To pursue efforts to limit temperature increase to 1.5°C, **we adopted the IEA NZE scenario**. ● However, because the IEA NZE scenario assumes a significant drop in demand for oil and gas leading up to 2030 and because initiatives must match the actual speed of transition in the real economy, **we have made our target for Scope 3 emissions (absolute emissions) a range between the IEA NZE scenario and the IEA SDS scenario, which is a well-below 2°C scenario**.
Initiatives for achieving targets	● Reducing emissions from the oil and gas sector encompasses both **initiatives to reduce emissions from oil and gas companies and initiatives to decarbonize the demand side for use of oil and gas**. ● We are engaging with clients in the oil and gas sector, verifying their progress on transition, and providing them with both financial and non-financial solutions. **In this way, we are supporting their initiatives to transform their business structures and improve their production processes**. ● In tandem, we are furthering our initiatives **to encourage decarbonization on the demand side.** - Progress on mid-term target-setting: Set target for electric power sector in May 2022; looking into setting targets for the steel, automobile, and maritime transportation sectors. - Supporting renewable energy, energy conservation, circular economy, and other initiatives for reducing use of oil and gas. ● **We give due consideration to social impacts, such as impacts on stable energy supply**, when implementing initiatives.

In accordance with the Glasgow Climate Pact adopted at COP26 and other agreements, we have set our targets for the thermal coal mining sector as a zero balance of absolute GHG emissions by FY2030 for OECD economies and by FY2040 for non-OECD economies.

Overview of thermal coal mining sector targets	
Targeted value chain	Companies whose primary businesses are in thermal coal mining
Metric	Absolute GHG emissions (Mt CO_2e)
Targeted emissions	Direct (Scope 1 + Scope 2) and indirect (Scope 3 (Category 11[1])) emissions from thermal coal mining companies
Target assets	Loans (Total across corporate finance and project finance)[2]
Metric formula	$\Sigma \left(\text{GHG emissions of each company or project} \times \frac{\text{Balance of loans from Mizuho to each company or project}}{\text{Corporate value}^3 \text{ of each company or project}} \right)$
Target year	Base year: FY2020 Target year: FY2030, FY2040
Numerical target	Zero balance by FY2030 for OECD economies, by FY2040 for non-OECD economies (FY2020 result: 5.1 Mt CO_2e)
Benchmark scenarios	Following the approach of the IEA NZE scenario[4]
Data source	Wood Mackenzie, information disclosed by clients, meeting discussion points, etc.

1. Emissions from use (burning) of sold products.
2. Aggregate for Mizuho Bank and Mizuho Trust & Banking.
3. Total equity + debt of each company or project. Based on the Partnership for Carbon Accounting Financials' Global GHG Accounting & Reporting Standard for the Financial Industry.
4. Phase-out of unabated coal in advanced economies (2030), phase-out of all unabated coal (2040).

Reasons for selecting thermal coal mining sector	● Over 80% of the world's CO_2 emissions come from fossil fuels. **Reducing these emissions is essential to achieving a low-carbon society**. ● There is international consensus, most prominently in the Glasgow Climate Pact adopted at COP26, on phasing out coal-fired power generation.[1]
Approach to targeted value chain and scope of emissions	● In light of the Glasgow Climate Pact adopted at COP26, we focused on the mining of thermal coal, which is used as fuel in coal-fired power generation. ● Over 90% of emissions in the thermal coal mining sector are Scope 3 (CO_2 emissions from burning of sold products). As such, we have covered **Scope 3 emissions as well as Scope 1 and 2 emissions**.
Approach to metrics	● Decarbonization of the thermal coal mining sector requires **reducing emissions from use of thermal coal. Accordingly, we have made absolute GHG emissions (Mt CO_2e) our metric.**
Benchmark scenarios	● To pursue efforts to limit temperature increase to 1.5°C, **we have set the targets as a zero balance by FY2030 for OECD economies and by FY2040 for non-OECD economies, based on the Glasgow Climate Pact adopted at COP26 and the approach in the IEA NZE scenario.**
Initiatives for achieving targets	● As in our Environmental and Social Management Policy for Financing and Investment Activity, we are phasing out financing for thermal coal mining. ● We are engaging with clients in the thermal coal mining sector, verifying their progress on transition, and providing them with both financial and non-financial solutions. **In this way, we are supporting their initiatives to transform their business structures**. ● **We give due consideration to social impacts, such as impacts on stable energy supply**, when implementing initiatives. We set a mid-term target (FY2030 target) for the electric power sector in May 2022 and are continuing to advance initiatives towards achieving the target.

1. Coal-fired power generation with no measures for reducing emissions.

Emissions from financing and investment: Common approaches to mid-term targets for the oil and gas sector and thermal coal mining sector

- We have set our mid-term targets with reference to the Net-Zero Banking Alliance (NZBA)'s Guidelines for Climate Target Setting for Banks, and they have been approved by the Board of Directors of Mizuho Financial Group.
- We will continue striving to improve our setting of mid-term targets and our monitoring of performance based on the following approach.

Method for sorting companies and projects into the portfolio	● The portfolio consists of companies or projects that belong to our clients in the relevant sectors, and whose primary businesses are in the value chain subject to targets. ● We determine sectors and primary businesses based on what represents the largest component of the sales from business activities.[1] ● Regarding our classification method, we determine sectors based on the industry type classification established by the Bank of Japan.
Measurement coverage percentage	● When we are not able to obtain emissions data, production data, financial data, or other such data for companies in the target portfolio and are consequently unable to calculate the necessary metric (GHG emission intensity or absolute GHG emissions), we consider them outside the scope of measurement. ● We have been able to calculate metrics for almost 100% of the loan balances of portfolios in the sectors for which we have set our new targets. ● Through engagement, we regularly confirm and update our records of our clients' primary businesses. Because of this, the portfolio and percentage of the portfolio subject to measurement may change going forward.
Data quality score	● Following the Partnership for Carbon Accounting Financials' Global GHG Accounting & Reporting Standard for the Financial Industry, we calculated the average GHG emissions data quality weighted by amount of lending.[2] The results are as below.
Approach to carbon offsets	● We do not currently take carbon offsets into account. ● We will continue to look into approaches to them while tracking the direction of international discussions and development of international standards.
Ongoing data enhancement	● Calculating GHG emissions from financial institutions' financing and investment portfolios requires relevant data on emissions and production aligned with consistent global standards. At present, consistent corporate disclosure data is limited. We have had to rely on data from external vendors with expert insight into the oil and gas sector and coal sector to calculate our results. ● Our figures for GHG emissions and GHG emission intensity may change going forward as companies expand and enhance their emissions disclosures. We will continue endeavoring to improve the accuracy of our methods for collecting data and aggregating results in line with our findings from engagement with clients, the development of our clients' disclosures, and other factors. As part of this, we will revise our results and targets as needed.

	GHG emission intensity (Scope 1 and 2)	Absolute GHG emissions (Scope 3)
Oil and gas sector	3.0	2.8

	Absolute GHG emissions (Scope 1, 2, and 3)
Thermal coal mining sector	3.2

1. The NZBA stipulates inclusion in target setting of any companies that make 5% or more of their direct sales from the thermal coal mining business. However, there is no established method for identifying these companies. We will continue to examine this issue going forward.
2. A score of 1 indicates high data quality (data from disclosures, certified by a third party) and a score of 5 indicates low data quality (data from estimates, based on asset balances).

Strengthening support for transition towards achieving a low-carbon society

Attachment 2

Engagement-focused support for transitioning to a low-carbon society

- Mizuho recognizes that a transition of high-emitting industries is critical to achieving a low-carbon society.
- With engagement as our starting point, we maintain a deep understanding of our clients' challenges and needs and provide a wide range of solutions in finance and consulting to support our clients in designing and executing transition strategies.

Framework to confirm the credibility and transparency of transition strategies

- In order to more proactively supply the necessary financing for our clients' business structure transformation and other initiatives, we have developed a framework (standards and verification process) to confirm the credibility and transparency of clients' transition strategies. Among our clients in high-risk areas, we have begun implementing this framework for those in the electric power sector that are formulating transition strategies.

Standards to confirm the credibility and transparency of transition strategies

✓ We have set the following standards with reference to the four key elements* of the disclosures recommended in the International Capital Market Association's Climate Transition Finance Handbook.

Strategy and materiality	**Meet the transition strategy requirements.**
Disclosure	**Strategy and targets are transparent able to track the progress.**
Governance structure	**Appropriate governance structure of strategy and target setting is in place.**
Science-based targets	**Science-based targets aligned with the Paris Agreement.**
Outlook for decarbonization technology development/ adoption	**Outlook for adoption of technology based on strategy**

Verification process

- ✓ We engage with the client at one of our offices and verify their transition strategy in line with our standards.
- ✓ Specialist departments with insight into the relevant sector and into sustainability review the transition strategy and assess whether or not it satisfies the standards.
- ✓ The Risk Management related Department monitors the verification by the office and specialist departments and the details of the assessment to ensure the validity of the process.

Policy going forward

- ✓ We will continually reinforce this framework to reflect external trends and other factors, and we will look into expanding the scope of the clients to which we apply it.

* 1. Climate transition strategy and governance; 2. Business model environmental materiality; 3. Climate transition strategy to be science-based including targets and pathways; and 4. Implementation transparency.

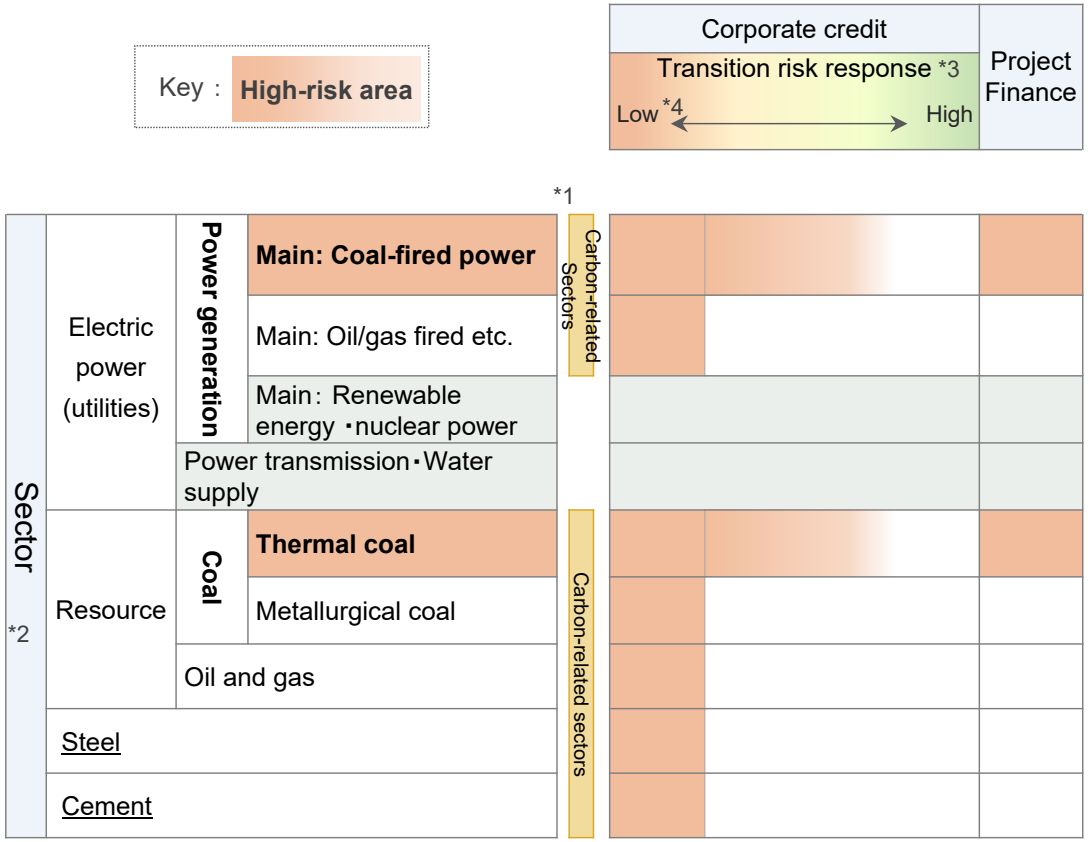
Enhanced risk control in carbon-related sectors through this initiative

- At Mizuho, we establish exposure control policies and control risk in high-risk areas among sectors recognized as facing transition risk at particularly high levels (carbon-related sectors; see the following page for details).
- When the client's transition strategy meets the above standards, we will proactively provide financing for their business structure transformation, even when their business falls under a high-risk area.
- This may result in a temporary increase in our exposure in high-risk areas. However, assisting our clients with their transition strategy design and execution enables us to manage our transition risk appropriately and mitigate our medium- to long-term transition risk.

Risk control framework for carbon-related sectors

Attachment 2

Risk Assessment mapping



Direction of support through engagement

(Vertical axis)
Support for transforming business composition to lower-risk fields

(Horizontal axis)
Support for promoting clients' responses to transaction risks

*1 Carbon-related sectors: Sectors Mizuho has recognized through a qualitative evaluation as facing transition risk at particularly high levels.

*2 Sector: Companies are divided into sectors based on the largest component in the sales/energy mix of their business activities.

*3 Transition risk response: Companies' responses to transition risk are confirmed through engagement. We consider willingness to take measures against transition risks, development of the strategy, setting of quantitative targets, target levels, specificity of means of achievement and status of efforts, performance and objectivity, etc.

*4 Transition risk response low: Indicates no willingness to take measures against transition risk and no effective transition strategy have been confirmed.

Risk assessment in carbon-related sectors

- We are establishing a structure to assess risk in carbon-related sectors (electric utilities, oil, gas, coal, steel, and cement sectors) along two axes our clients' sectors, and our clients' measures to address transition risk—in order to identify and monitor high-risk areas.

Response policy for high-risk areas

- We are more thoroughly engaging with clients to support them in formulating effective strategies for transition risks, in embarking on business structure transformation towards a lower risk sector at an early stage.
- With the aim of facilitating our clients' business structure transformation, we provide necessary transition support when we have been able to confirm that the client has set valid targets and planned an appropriate transition strategy in line with international standards.*

Enhance going forward

- We carefully consider whether or not to continue our business with a client in the event that the client is not willing to address transition risk and has not formulated a transition strategy even one year after the initial engagement.
- In this way, we are enhancing our risk control and reducing our exposure over the medium to long term.

***Framework to confirm the credibility and transparency of transition strategies**

- We have set standards with reference to the four key elements of the disclosures recommended in the International Capital Market Association's Climate Transition Finance Handbook. The standards cover strategy and materiality, disclosure, governance structure, science-based targets, and outlook for decarbonization technology development/ adoption.
- We will continually reinforce this framework to reflect external trends and other factors, and we will look into expanding the scope of the clients to which we apply it.

Enhance going forward