

FY2022

# Sustainability Progress

Initiatives addressing Climate Change

April 2023





# Message from the Group CEO

Climate change has clearly become an even more pressing issue gravely impacting the lives of all people. Moreover, the Russia-Ukraine conflict is tightening the supply and demand of energy and driving prices higher. As the pathway to realize a low-carbon society is facing obstacles, we are confronting these essential issues head on through initiatives that find the difficult balance between a stable energy supply and price.

In this social landscape, Mizuho would like to once again share its unwavering goals and approach to its efforts that strive to realize net zero by 2050 and achieve the Paris Agreement goal of limiting global warming to 1.5°C. In FY2022, we set medium-term FY2030 targets for the electric power, oil and gas, and thermal coal mining sectors toward net zero GHG emissions from Mizuho financial portfolios (Scope 3). Mizuho has set these targets to help promote real economy transition. We will listen closely to feedback from and engage in a dialogue with our clients and all other diverse stakeholders to make steady progress toward each of these targets, while also taking into account the social and industrial impacts and differences in each country and region.

Decarbonization initiatives are a major paradigm shift influencing the future growth and the competitiveness of each company, industry, and country. At this tipping point, our stakeholders have particularly high expectations that Mizuho will take a leadership role in Japan's industrial growth strategy, GX (green transformation), and transitions in Asia. We will leverage our environmental and industrial knowledge to consider Japan's transition strategy with a view to achieving net zero by 2050. Moreover, Mizuho actively strives to participate broadly in discussions about the policies on energy and industry in Japan toward the realization of a low-carbon society and involved in the practical application of new technologies through industry-academia collaboration. Recognizing the role of Asia in global decarbonization, we also support transitions in Asia through public-private partnerships, such as participating in the Just Energy Transition Partnerships (JETP). Mizuho will continue to leverage our domestic and international networks and customer base to spread our decarbonization initiatives in and outside Japan.

Japan is said to require GX investments surpassing JPY 150 trillion over the next decade—more than USD 4 trillion annually on a global scale. This means the mobilization of funds through public and private partnerships is key to realizing decarbonization. Mizuho will provide reliable financing necessary for such a transition to clients endeavoring to decarbonize by dramatically increasing its sustainable finance target by FY2030 to JPY 100 trillion, of which the target for environment and climate change related finance is JPY 50 trillion. Moreover, utilizing equity investment budget for the transition areas set in April 2022 as a lever, we will continue to expand the provision of risk money to state-of-the-art technologies and companies that contribute to solutions to environmental and social issues.

To realize a low-carbon society and remain as a medium to long-term partner of our clients, each and every Mizuho employee must also see climate change as a personal issue, while building enough knowledge to fully understand the challenges and needs of customers and engage in a constructive dialogue or engagement. We have positioned human resource development as a priority issue and will strengthen human resource versed in sustainability.

Mizuho will contribute to the sustainable growth of Japan and the world alongside its own growth by anticipating the future trend to identify changes in the client and social landscape and creating new solutions to realize a sustainable society. We still have a long and hard road to walk before realizing a low-carbon society. Mizuho will demonstrate wisdom and take clear steps unified as a Group toward such a society together with our clients.



*M. Kihara*

Masahiro Kihara  
President & Group CEO  
Mizuho Financial Group, Inc.

## Major progress in FY2022

- We revised the **Net Zero Transition Plan** and strengthened the following initiatives toward realizing net zero by 2050.

### Governance

- **Strengthening of climate change-related corporate governance structure**

- Establishment of Chief Sustainability Officer and group-wide sustainability-related departments, discussions by business execution and supervisory lines to strengthen climate change response

p.5-6

### Strategy

- **Strengthening of climate change-related promotion structure**

- Establishment of Climate Change Response Taskforce, enhancement of sustainable business promotion structure

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- **Strengthening of initiatives to realize a low-carbon society**

- Initiatives fostering a structural transformation of economy/industry, commercialization of technology, enhancement of financial intermediary functions

p.8,10,24,25

- **Increasing targets for sustainable finance and environment and climate change related finance**

- Sustainable finance target: JPY 100 trillion, of which finance related to environment and climate change: JPY 50 trillion

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- **Strengthening of human resource development to support sustainability promotion**

- Initiatives to develop the skills and knowledge of employees, actions for in-house penetration

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### Risk Management

- **Strengthening of climate change risk management structure**

- Establishment of the Sustainability Risk Management Office and formulation of the Basic Policy for Climate-related Risk Management (April 2023)

p.5,29-30

- **Improving risk management system in carbon-related sectors**

- Implementing a framework to verify the credibility and transparency of customer's/client's transition strategies (Oct. 2022)

p.31

- **Revision of the ES Policy**

- Revising the Environmental and Social Management Policy for Financing and Investment Activity (ES Policy) on the thermal coal mining as well as oil & gas sectors (Revising: Mar. 2023, Commencement: Jul. 2023)

p.32

### Metrics and Targets

- **Engagement with clients**

- Progress of engagement with clients, examination of client's status of the response to transition risks

p.14,19,33

- **Initiatives to reduce our own GHG emissions (Scope 1 and 2)**

- Introduction of renewable energy at approx. 200 locations in Japan, the corporate power purchase agreement and electric vehicles

p.34

- **Setting and promoting emission reduction targets associated with financing and investments**

- Progress in setting electric power, oil and gas, and coal mining sector targets

p.13,18,21

### Other

- **Initiatives for natural capital**

- Initial analysis on the relevance between Mizuho portfolios and natural capital

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## Net Zero Transition Plan – Overview -

- Mizuho has more specifically shaped the Net Zero Transition Plan established in 2022 through its revision to promote a real economy transition and realize net zero by 2050.

<b>Basis</b>	<table border="1"> <thead> <tr> <th data-bbox="303 261 1166 314">Policy</th> <th data-bbox="1166 261 2084 314">Aims and action</th> </tr> </thead> <tbody> <tr> <td data-bbox="303 314 1166 374">Environmental Policy (climate change-related initiatives)</td> <td data-bbox="1166 314 2084 374">Mizuho's Approach to Achieving Net Zero by 2050</td> </tr> </tbody> </table>	Policy	Aims and action	Environmental Policy (climate change-related initiatives)	Mizuho's Approach to Achieving Net Zero by 2050											
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<b>Governance</b>	<p style="text-align: center;"><b>Climate-related corporate governance structure in the Transition Plan</b></p> <p>[Approval/supervision/reporting] The Board of Director approves the transition plan and supervises its progress reported and discussed by the execution line.</p> <p>[Accountability/review] The business execution lines have the responsibility and authority to execute the transition plans, and must regularly review and report the progress made to the Board of Directors.</p> <p>[Transparency] The details and progress of the transition plans is regularly disclosed and report to external stakeholders.</p>															
<b>Strategy</b>	<p style="text-align: center;"><b>Identification of important topics</b></p> <table border="1"> <tr> <td data-bbox="340 677 590 768">[Materiality] Set as environment/society</td> <td data-bbox="612 677 901 768">[Top risks] Set as increasing severity of climate change impacts</td> <td data-bbox="922 677 1360 768">[Scenario analysis] Recognized as a response to corporate transition risks and the importance of engagement</td> <td data-bbox="1381 677 1720 768">[Key sectors] Identified key sectors to the net zero transition <b>Newly identified</b></td> <td data-bbox="1742 677 2065 768">[Next-generation tech] Identified next-generation tech related to key sectors <b>New item</b></td> </tr> </table> <table border="1"> <tr> <th data-bbox="340 798 1166 836">Capturing business opportunities</th> <th data-bbox="1187 798 2065 836">Risk management</th> </tr> <tr> <td data-bbox="340 836 1166 926">Support a transition and structural transformation through financial and non-financial solutions - Supply of transition financing, creation of new businesses, etc.</td> <td data-bbox="1187 836 2065 926">Continual enhancements to risk management structures and policies - Implementation and continuous review of risk management system in carbon-related sectors and the ES Policy</td> </tr> <tr> <th data-bbox="340 957 1166 994">Strengthening engagement</th> <th data-bbox="1187 957 2065 994">Capability building</th> </tr> <tr> <td data-bbox="340 994 750 1040">Client engagement</td> <td data-bbox="771 994 1166 1040">Representing views for rule-making</td> </tr> <tr> <td colspan="2" data-bbox="1187 994 2065 1040" style="text-align: center;">Strengthen SX human capital and in-house penetration</td> </tr> </table>	[Materiality] Set as environment/society	[Top risks] Set as increasing severity of climate change impacts	[Scenario analysis] Recognized as a response to corporate transition risks and the importance of engagement	[Key sectors] Identified key sectors to the net zero transition <b>Newly identified</b>	[Next-generation tech] Identified next-generation tech related to key sectors <b>New item</b>	Capturing business opportunities	Risk management	Support a transition and structural transformation through financial and non-financial solutions - Supply of transition financing, creation of new businesses, etc.	Continual enhancements to risk management structures and policies - Implementation and continuous review of risk management system in carbon-related sectors and the ES Policy	Strengthening engagement	Capability building	Client engagement	Representing views for rule-making	Strengthen SX human capital and in-house penetration	
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## Strengthening of climate change-related corporate governance structure

- Given that the response to climate change is one of the most important management issues, we have appointed the Chief Sustainable Officer under the CEO to drive sustainability initiatives throughout the group.
- Mizuho has established a Sustainability Risk Management Office under the Group CRO to facilitate the central handling and management of sustainability-related risks.

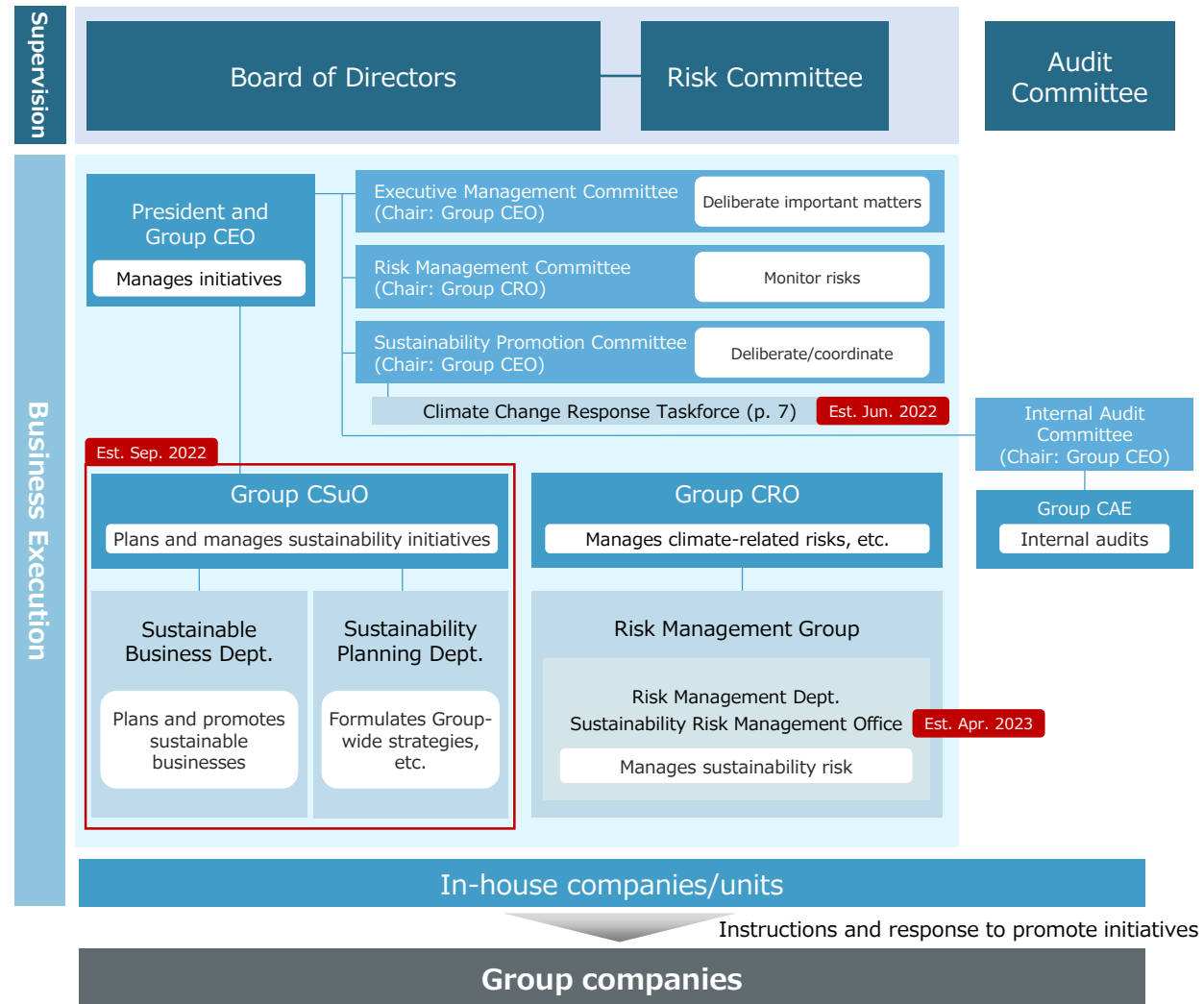
### Points to strengthen our structure

#### Appointment of a Group CSuO and strengthening of the Group-wide sustainability promotion structure (September 2022)

- Chief Sustainability Officer (CSuO) appointed as a new position under the CEO to drive forward sustainability initiatives
- Sustainable Business Department and Sustainability Planning Department established under the CSuO as a body to aggregate and strengthen a wide range of expertise and promote forward-looking initiatives

#### Newly established Sustainability Risk Management Office (April 2023)

- Sustainability Risk Management Office established under the Group CRO as a body to facilitate the central handling and management of sustainability-related risks
- Formulation of the Basic Policy on Climate-related Risk Management in April 2023 which would help establish a suitable risk management system based on the characteristics of relevant climate-related risks



\*CEO: Chief Executive Officer, CSuO: Chief Sustainability Officer, CRO: Chief Risk Officer, CAE: Chief Audit Executive

## Discussions by supervisory and business execution lines to strengthen climate change response

- Supervisory and business execution lines engage in an active discussion our response to climate change throughout the year, which helps to rapidly strengthen our initiatives.

### Committee structure of supervisory/business execution line and reporting & deliberation

The Sustainability Promotion Committee, Risk Management Committee, and Executive Management Committee act as the business execution line and deliberate on various climate change initiatives, which it reports to the Board of Directors. The Board of Directors and the Risk Committee act as bodies providing supervision.

	Committees	Major matters for reporting and deliberations
Supervision	Board of Directors	<ul style="list-style-type: none"> <li>Resolutions on the policies and plans listed below               <ul style="list-style-type: none"> <li>Sustainability promotion structure</li> <li>Net Zero Transition Plan</li> <li>Basic Policy on Climate-related Risk Management</li> <li>Mid-term GHG emission reduction targets</li> </ul> </li> <li>Status of response to TCFD</li> <li>Review of the management system for responsible financing and investment</li> </ul>
	Risk Committee	Recommendations to the Board of Directors regarding the above-mentioned resolution or approval matters
Business Execution	Executive Management Committee	<ul style="list-style-type: none"> <li>Deliberations on the policies and plans listed below:               <ul style="list-style-type: none"> <li>Sustainability promotion structure</li> <li>Net Zero Transition Plan</li> <li>Basic Policy on Climate-related Risk Management</li> <li>Mid-term GHG emission reduction targets</li> </ul> </li> <li>Status of response to TCFD</li> <li>Review of the management system for responsible financing and investment</li> </ul>
	Risk Management Committee	<ul style="list-style-type: none"> <li>Deliberations and report on climate-related risk management               <ul style="list-style-type: none"> <li>Deliberations about establishing basic policies</li> <li>Deliberations on risk control policies in carbon-related sectors</li> <li>Reporting on the status of risk management and progress in preparing a management approach</li> </ul> </li> <li>Status of response to TCFD</li> <li>Review of the management system for responsible financing and investment</li> </ul>
	Sustainability Promotion Committee	As shown on right

### Sustainability Promotion Committee deliberations on climate change

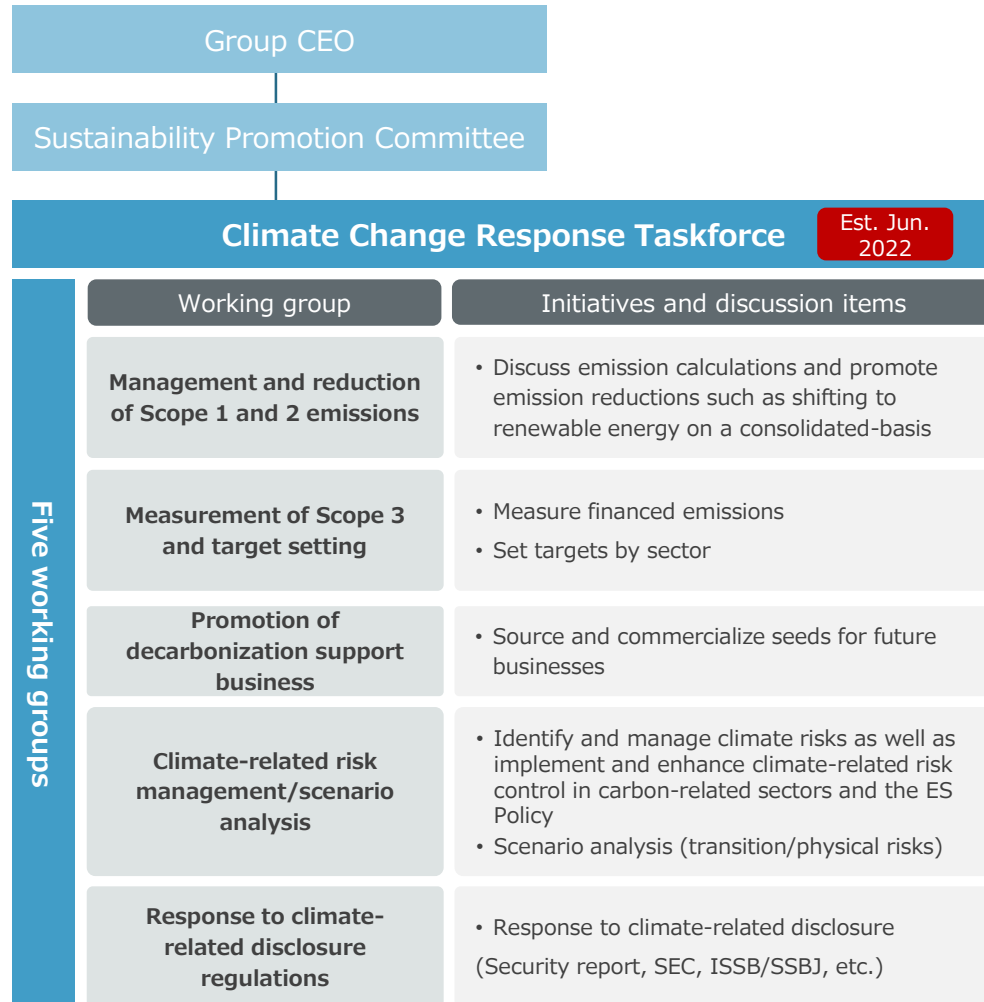
The Group CEO and other relevant executives engage in an active discussion through the Sustainability Promotion Committee about a wide range of issues in furthering climate change initiatives.

Month	Major matters for deliberation and adjustment
May 2022	<ul style="list-style-type: none"> <li>Strengthening of stance to promote a response to climate change</li> <li>Publication of the TCFD Report 2022</li> </ul>
July 2022	<ul style="list-style-type: none"> <li>Concepts of transition support in carbon-related sectors</li> </ul>
October 2022	<ul style="list-style-type: none"> <li>Growth strategies of sustainable business</li> </ul>
October 2022	<ul style="list-style-type: none"> <li>Setting targets for GHG emissions associated with financing and investment in the oil and gas as well as coal (thermal coal mining) sectors and response to achieve those targets</li> </ul>
February 2023	<ul style="list-style-type: none"> <li>Direction to revise the Net Zero Transition Plan               <ul style="list-style-type: none"> <li>Identification of key sectors and technologies for the transition to net zero</li> </ul> </li> </ul>
February 2023	<ul style="list-style-type: none"> <li>Strengthening of initiatives for climate-related risk management               <ul style="list-style-type: none"> <li>Risk management system in carbon-related sectors</li> <li>Revisions to ES policy etc.</li> </ul> </li> <li>Increasing targets for sustainable finance /environment and climate change related finance</li> </ul>

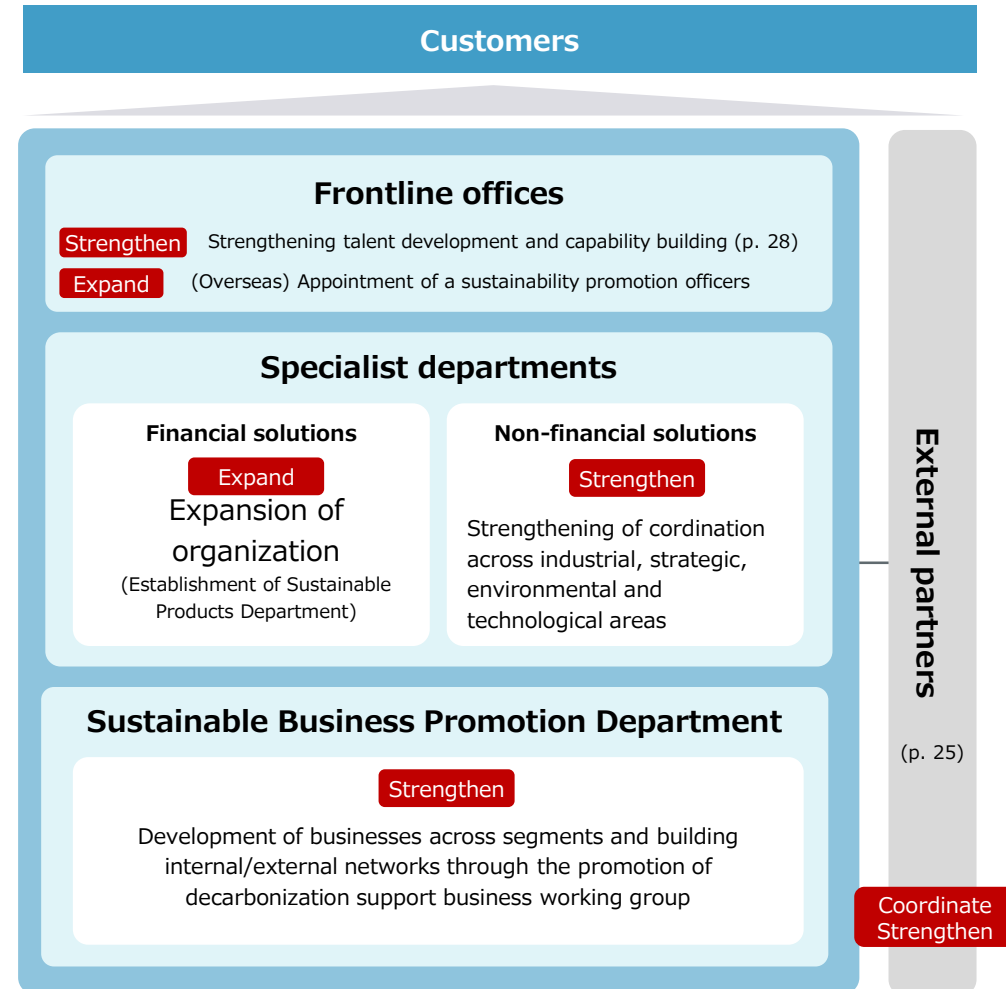
## Framework for promoting climate initiatives (Climate Change Response TF/Sustainable business promotion structure)

- Climate Change Response Taskforce launched in FY2022 to proceed responses across the entire organization regarding topics which need to have the cooperation of multiple departments.
- We also are strengthening the sustainable business promotion structure in an effort to provide more comprehensive solutions to customers.

### Climate Change Response Taskforce

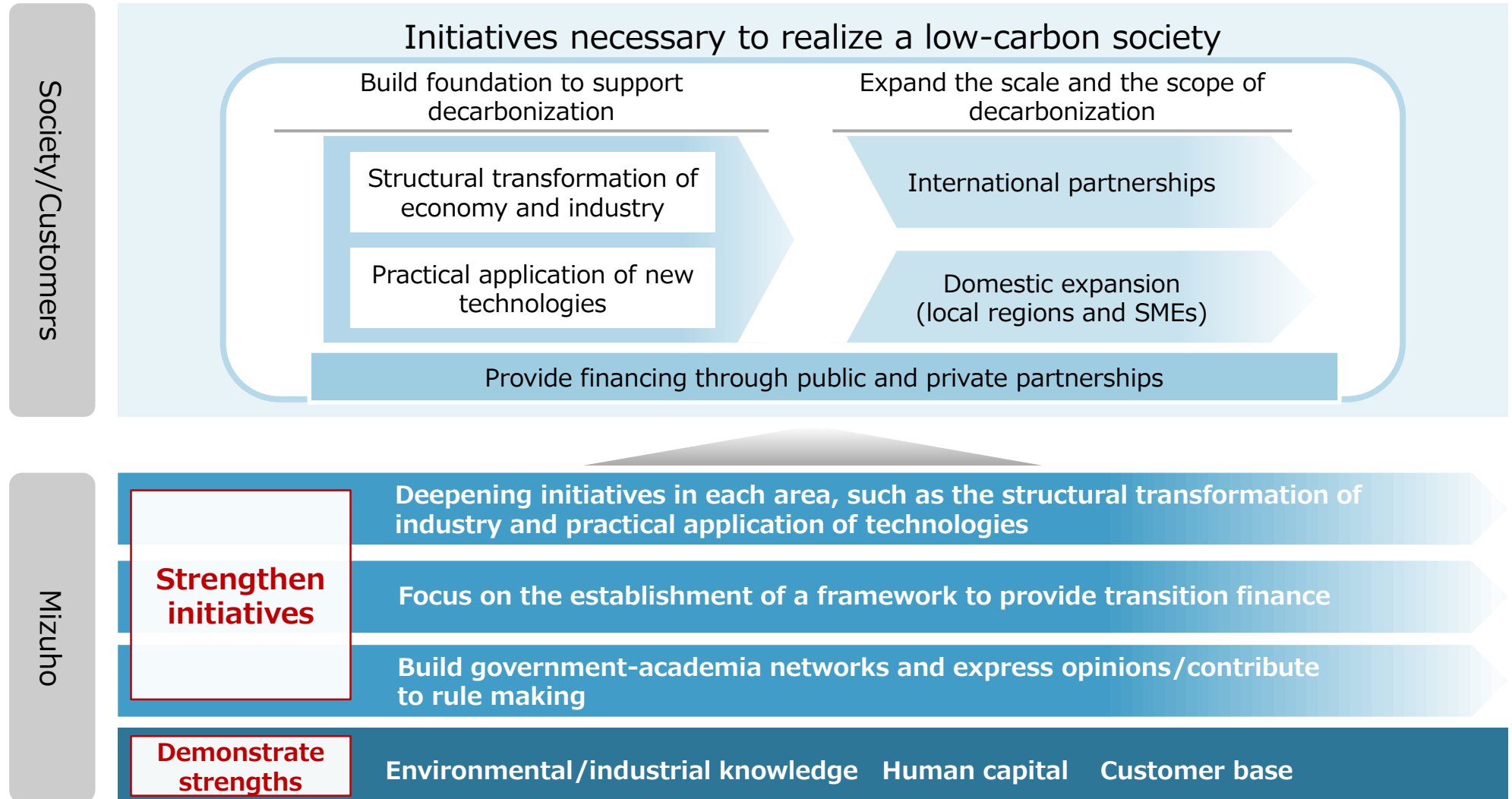


### Strengthening of sustainable business promotion structure



## Overview of Mizuho's strategy to realize a low-carbon society

- Mizuho co-works with its customers to encourage a structural transformation of economy and industry and commercialize new technologies to realize a low-carbon society. We will leverage our internal and external networks and customer base to spread initiatives to domestic and overseas markets.
- Mizuho will supply reliable transition financing necessary for these initiatives and develop its human capital as well as deepen its expertise.

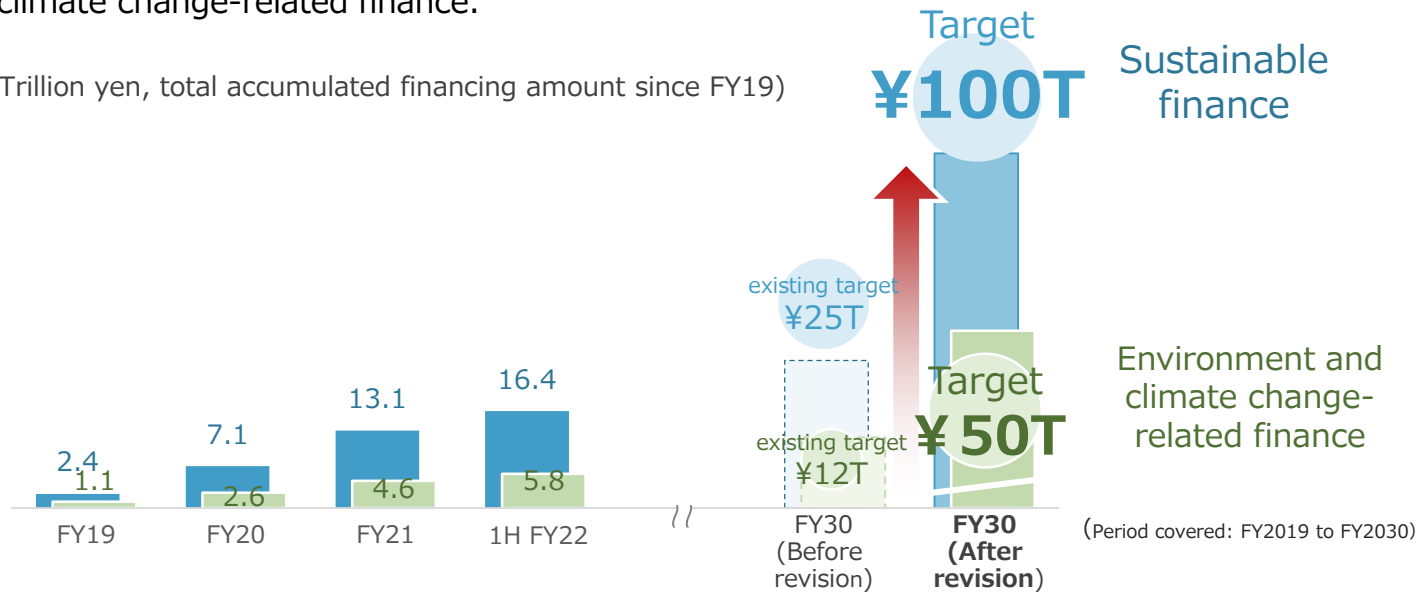




## Revising targets for sustainable finance and environment and climate change-related finance

- We demonstrate our intermediary financial functions to create money flow aimed at solving environmental and social issues by significantly increasing our sustainable finance target to JPY 100 trillion, which includes JPY 50 trillion in environment and climate change-related finance.

(Trillion yen, total accumulated financing amount since FY19)



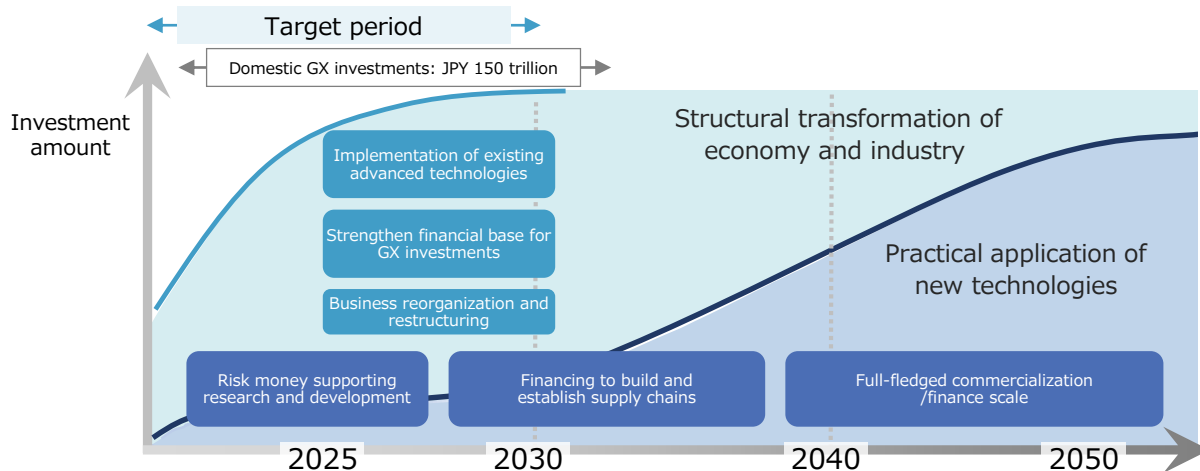
### The role of Mizuho

**Collaborate with various bodies to create money flow for the realization of a sustainable society**

- **Steadily provide financing to customers taking on the challenge of transition toward decarbonization together**

### Potential investment opportunities

- Supply of financing to support GX investments -

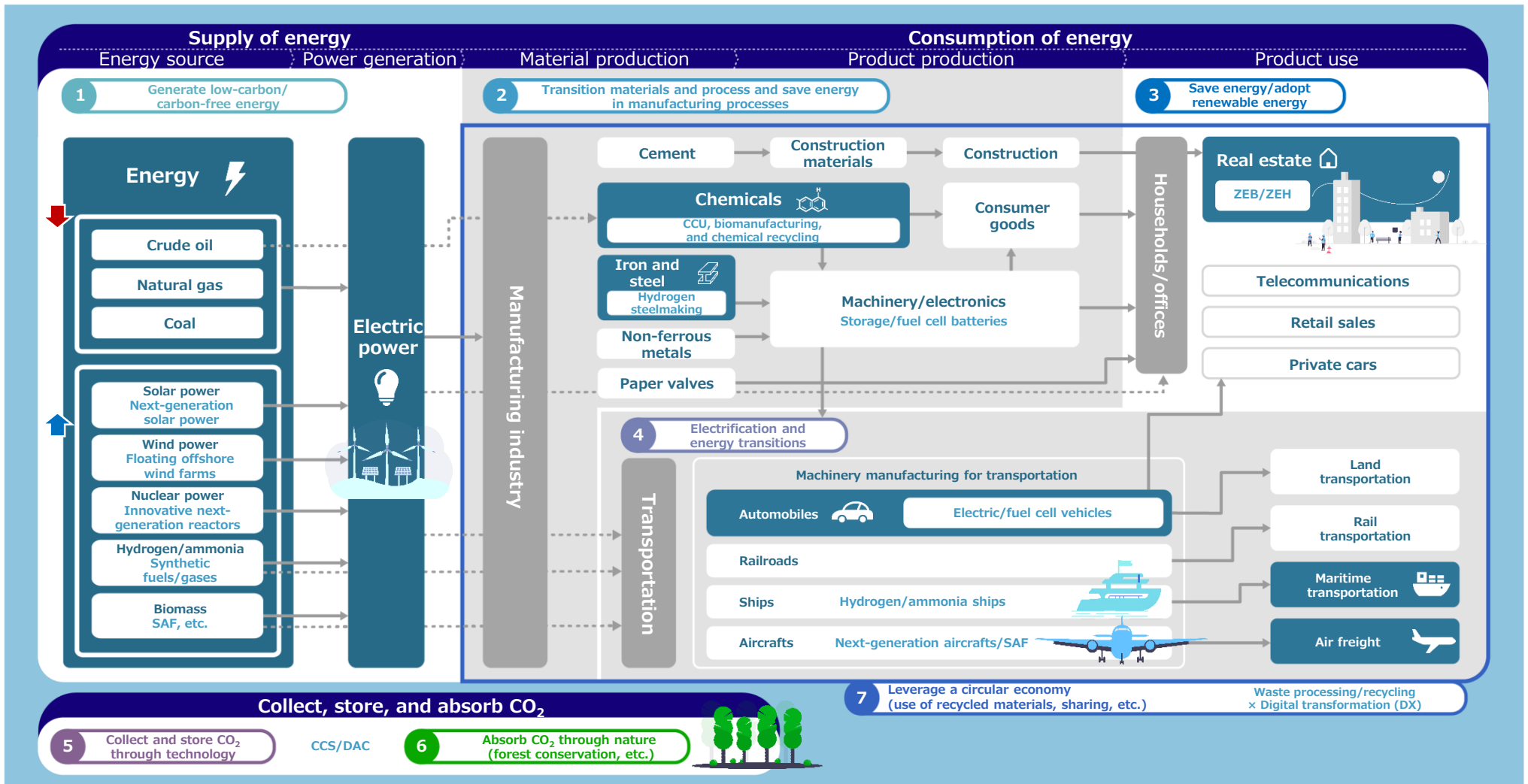


- Investments needed for decarbonization
  - Japan: JPY 150 trillion over the next decade\*1
  - Global: USD 4 trillion per year by 2030 \*2
- Mizuho's initiatives
  - Focus on providing green and transition financings and risk money for technology commercialization
  - Change the name of the target from "Environmental finance" to "Environment and Climate Change-related finance" and revise the scope of applicable finance (See the p. 36 for details on the applicable finance)

## Initiatives to realize a low-carbon society (structural transformation of economy and industry/ practical application of new technologies)

- Mizuho recognizes the necessity of initiatives that have an impact across sectors which not only include the energy supply but also the energy demand for a transition away from an economic and social structure dependent on fossil fuel. That is why we have organized seven factors driving toward the realization of a low-carbon society.
- Mizuho identifies sectors to focus on from the perspective of decarbonization while also promoting relevant next-generation technologies by taking into account emissions (impact on real economy), opportunities, risks, and the characteristics of Mizuho's portfolios and customer base.

Key: ↑ Increase supply toward 2050 according to the IEA's NZE scenario ↓ Supply reduction ■ Sectors to focus on Blue text: Next-generation technologies



## Opportunities and risks in the electric power sector

### Positioning of electric power sector toward decarbonization

- The electric power sector is a major GHG-intensive sector, which consists of approximately 40%<sup>\*1</sup> of all global GHG emissions. This sector also makes up 17%<sup>\*2</sup> of Mizuho's financed emissions.
- Electric power is the infrastructure of all industries and household life. In light of the promotion of electrification, the power demand is expected to dramatically increase by 2050. Mizuho believes that the decarbonization of the electric power sector is crucial for the decarbonization of society and industry as a whole.

### Electric power sector overview toward 2030/2050

- Mizuho is pursuing efforts to limit the global average temperature rise to 1.5°C and references the IEA's NZE scenario as one transition pathway to net zero by 2050 in the electric power sector.

#### Points of the IEA's NZE scenario

- The electric power demand worldwide will dramatically rise due to an increase in economic activities, the electrification of final applications and broader production of hydrogen through electrolysis by 2050 (about 270% by 2050 compared to 2020)
- Renewable energy contributes the most to the decarbonization of electric power. The share of renewable energy worldwide will rise to over 60% by 2030 and to more than 90% by 2050, while the ratio of power generated from fossil fuels including CCUS will drop to 2%.
- Coal-fired power generation plant without measures to reduce CO<sub>2</sub> emissions will be phased out by 2040.
- The practical application of technology currently in development is essential to realize net-zero emissions.
- The plant capacity for hydrogen and ammonia power generation will increase to 189 GW by 2030 and 573 GW by 2050

- On the other hand, there are numerous pathways to the decarbonization of the electric power sector depending on energy security as well as geographical and societal factors of each region and country. It is also necessary to promote an orderly transition suitable to the circumstances in each region and country. Therefore, we also reference the IEA's SDS/APS scenarios, government policies and roadmaps by country.
- A half of the Mizuho's portfolios for the electric power sector consist of companies and projects in Japan, which hinge on the cooperation and support of the GX and energy policies in Japan. Mizuho recognizes the issues Japan faces in decarbonizing its electric power sector and support initiatives to reach net-zero by 2050, while advocating GX and energy policies.

<Japan: Overview of roadmap based on the governmental policies\*3>

		Short term (through 2025)	Mid term (through 2030)	Long term (through 2050)
Carbon-free power sources	Renewable energy Nuclear power	<b>Maximum use of renewable energy and nuclear power</b>		
	Hydrogen power generation, CCUS, etc.	Expansion of solar and onshore wind farms	Adoption of large-scale offshore-wind farms	Next-generation solar Floating offshore wind farms Innovative next-generation reactors
		<b>Initiatives to decarbonize thermal power generation</b>		
		Mixed fuel proof-of-concept CC(U)S proof-of-concept	Mixed fuel implementation/single fuel proof-of-concept CC(U)S proof-of-concept	Single fuel implementation CC(U)S proof-of-concept
Suspension and abolition of thermal power sources		<b>Suspension and abolition of existing thermal power generation</b>		
Strengthening and advancement of power transmission and distribution networks		<b>Enhancements to power transmission and distribution networks</b>		

#### <Japan's realities and issues in decarbonizing the electric power sector>

- Dependency on imports for much of its energy supply due to a lack of domestic fossil fuel sources
- Limited flat land environment that creates major obstacles to expanding the adoption of renewable energy
- No international interconnection to the import and export of electric power to and from overseas

#### <Direction of decarbonization initiatives in Japan>

It is necessary to pursue all options, including the maximization of using renewal energy, nuclear power, and other carbon-free power sources, as well as the decarbonization of thermal power using hydrogen power generation and CCUS and enhance power transmission and distribution networks.

\*1 IEA's World Energy Outlook 2021: 2020 results, \*2 Ratio making up the measurement results of 19 sectors based on the TCFD recommendations (FY2020 results), \*3 Developed by Mizuho FG with reference to the GX Basic Policy and the Transition Roadmap for Power Sector (ANRE)



## Opportunities and risks in the electric power sector

### Opportunities and risks for Mizuho

- We support initiatives of clients for their transition while appropriately managing risks and creating business opportunities.

#### Opportunities

- **Capturing client needs driven by decarbonization initiatives as short, medium, and long-term business opportunities**

- Anticipated needs of clients -

##### Investments in renewable energy and nuclear power

- Continuous expansion of investments into renewable energy and nuclear power in Japan and overseas as the primary power sources to achieve net zero by 2050
- In Japan, renewable energy investments are expected at a scale of approx. JPY 20 trillion over the next decade

Short, medium, and long term

##### Investments in next-generation technology

- Investments in next-generation renewable energy tech such as solar and wind power
- Investments to decarbonize thermal power generation
  - Investments in mixed and single fuel combustion of hydrogen and ammonia as well as investments for construction of supply chain for hydrogen and ammonia as fuels

Medium and long term

##### Investments to strengthen and advance power transmission and distribution networks

- In Japan, investments in next-generation networks including power grid/power flow adjustment capabilities are expected at a scale of approximately JPY 11 trillion over the next decade to maximize the adoption of renewable energy

Short, medium, and long term

#### Risk management

- **Transition risk management**

We designated companies that have a primary business in coal, oil, and gas thermal power generation as “transition risk sectors,” recognizing these sectors as having a high potential of transition risks. Mizuho identifies and monitors the exposure to high-risk areas within the risk management system in carbon-related sectors (p. 31)

- **Setting and promoting mid-term targets for GHG emission reduction targets associated with financing and investment** (p. 13)

- **Reduction of environmental and social risks based on the ES Policy**

Target to reduce the outstanding exposure to coal-fired power generation plants (p. 15)

Prohibition on financing or investments for use in new construction or the expansion of coal-fired power generation plants

- **Stranded asset risks for financing and investment in next-generation technology**

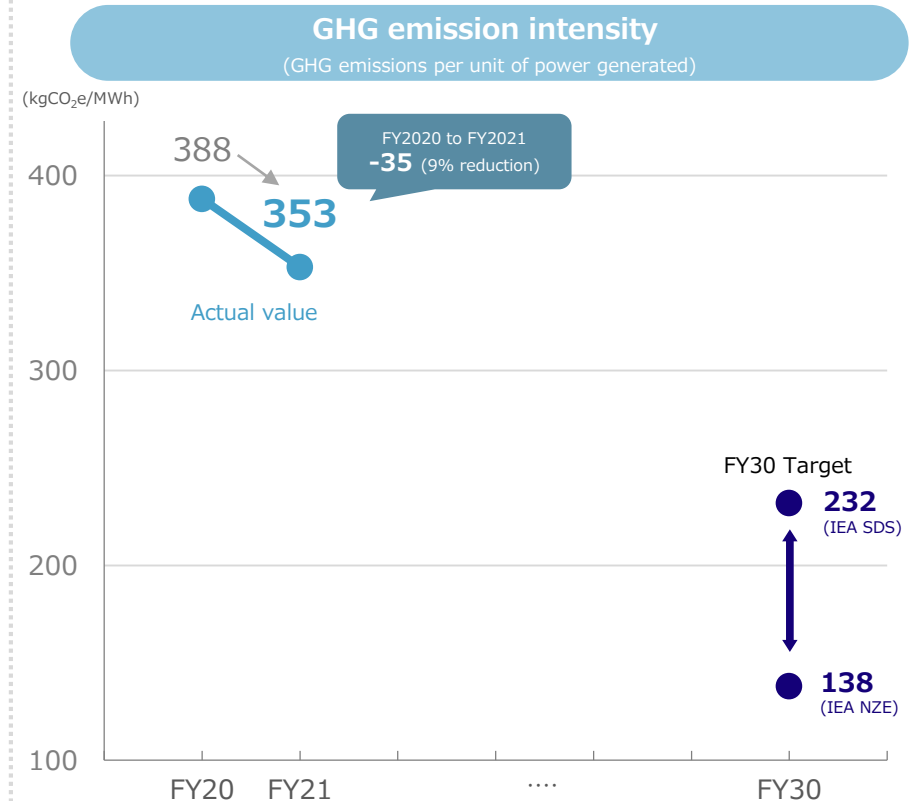
Mizuho decides whether or not finance or invest in next-generation technology based on the positioning of said business by the client, results validating the use of our industrial and technical knowledge within the group, and other such factors

# Setting and promoting GHG emission reduction targets associated with financing and investments (electric power sector)

## Targets set for the electric power sector

<b>Targeted value chain</b>	<b>Companies/projects (PJ) conducting businesses mainly in power generation</b>
<b>Metric</b> (Targeted emissions/production volume)	<b>GHG emission intensity</b> (kgCO <sub>2</sub> e/MWh) <small>*GHG emissions per unit of power generated</small> $\left( \frac{\text{GHG emissions (Scope 1) from power generation businesses}}{\text{Power generation}} \right)$
<b>Targeted assets</b>	<b>Loans</b> (Aggregate of corporate finance and project finance)*
<b>Formula for each portfolio</b>	$\sum \left[ \begin{array}{l} \text{GHG emission intensity of each company or project} \\ \times \\ \text{Mizuho's loan balance to each company or project} \end{array} \right] \div \text{Overall loan balance across target portfolio}$
<b>Numerical target</b> (Benchmark scenarios)	<b>FY2030</b> <b>138 to 232</b> kgCO <sub>2</sub> e/MWh (IEA NZE) (IEA SDS)

## FY2021 results (preliminary figures)



### Change in results from the previous fiscal year

The FY2021 result (preliminary figure) shows a reduction mainly due to decline in GHG emission intensity of companies in our targeted portfolios as well as an increase in the amount of loans to companies and projects with a low GHG emission intensity, including renewable energy. These factors have contributed to a 353 kgCO<sub>2</sub>e/MWh reduction, down 9%, compared to the FY2020 results.

(Reference) Trends of financed emission of the electric power sector (absolute GHG emissions FY20 result → FY21 result, preliminary figures)

Scope1: 50.8 → 45.3 MtCO<sub>2</sub>e

\* Total of BK/TB

## Major initiatives in the electric power sector – Engagement -

- Mizuho examines the status of clients' response to transition risks and has a common understanding with them about their business environments and challenges through engagement. These efforts strive to contribute to the promotion of clients' decarbonization initiatives.

### Engagement initiatives

#### Target clients

- Companies operating electric power businesses (excluding renewable energy) in Japan and overseas that have an outstanding credit balance as of July 2022

#### Major dialogue topics

- **Confirming response to transition risks** (see right)
- **Expectations and requests from Mizuho to clients for a response to transition risks**
  - Formulate transition strategies
  - Develop quantitative targets and KPI (mid to long term) to increase the effectiveness of transition strategies
  - Implement its initiatives and disclose the progress
  - Measure and disclose GHG emissions
  - Enhance disclosure following with TCFD or another equivalent framework
- **Initiatives to reduce GHG emissions/intensity**
  - Results and analysis for GHG emissions/intensity
  - Setting mid-term reduction targets
  - Estimates of 2030 GHG emission intensity
  - Issues for transition, expectations for Mizuho, etc.

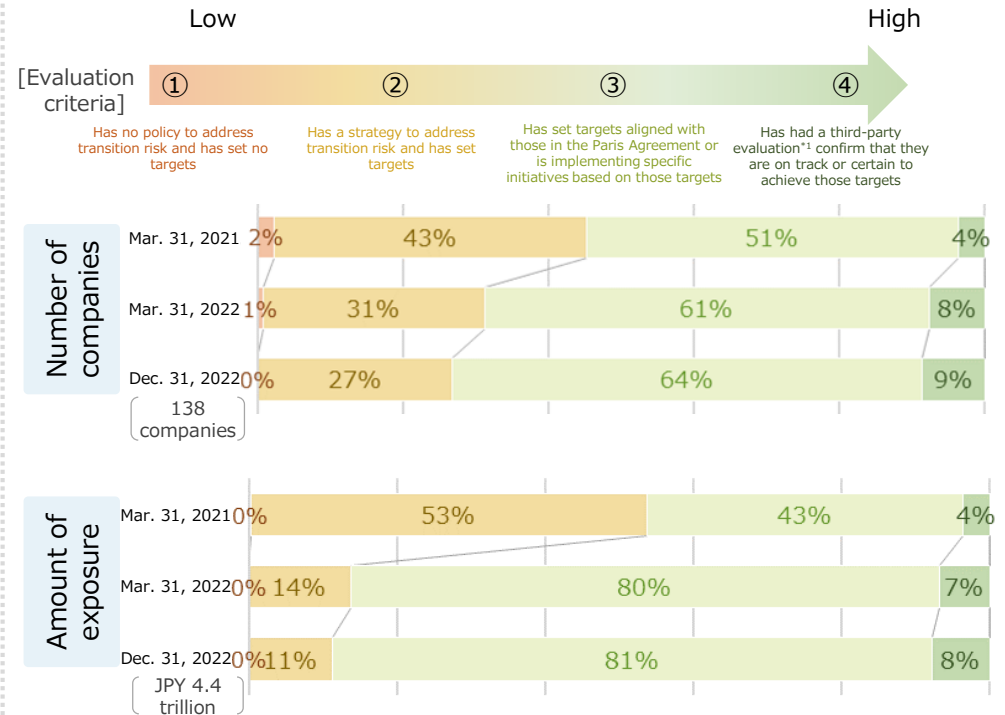
#### Discussions on the initiatives and challenges of reducing emissions with clients in the electric power sector in Japan

Case Example

- In FY2022, we have engaged with clients in the electric power sector in Japan to specifically discuss future capital-investment plans and energy mix to reach net-zero by 2050.
- The dialogue also touches on the roadmap, progress in setting goals to reduce GHG emissions/intensity, initiatives based on those targets, and the role Mizuho can play to contribute to these efforts.
- These engagement initiatives also strive to deepen a common understanding about the importance of advancing decarbonization while providing a stable power supply in light of the many elements uncertain in the future, such as power demand forecasts based on electrification advancements and greater energy savings. This includes discussions from a broad range of perspectives about strategies on alliances for the decarbonization of thermal power, strategies on renewable energy investments, and strategies to enhance power grids.

\*1 Science Based Targets etc.

### Clients' status of response to the transition risks



#### Steady progress in the response to the transition risks

- The response to transition risks in the electric power sector are steadily progressing. Based on the amount of exposure, more than 80% of clients are at level 3: "Has set targets aligned with those in the Paris Agreement or is implementing specific initiatives based on those targets."
- We examine customers' progress and offer our support to clients as it takes time to realize the decarbonization of thermal power generation and technological innovation and power grid enhancements to introduce a large volume of renewable energies, the operation of nuclear power plants, and the implementation of next-generation technology.



## Major initiatives in the electric power sector

### Renewable energy deals and transactions

We leverage our knowledge accumulated in electric power businesses and our track record in project finance to support renewable energy development and technological innovation worldwide.

#### Investment in the UK onshore wind power plant project (March 2023)

- BK invested in an onshore wind power plant project in Northern Scotland together with Mizuho Leasing Company and Daiwa Energy & Infrastructure



Project Image (Onshore wind project managed by Capital Dynamics)

#### Arrangement of project finance for the floating offshore wind power plant in France (June 2022)

- BK arranged project finance for a floating offshore wind power generation project (construction, operation, and maintenance; Eoliennes Flottantes du Golfe du Lion Project)
- Adopted an innovative non-recourse financing structure for a pre-commercial floating offshore wind power plant

#### Financial advisor for Marubeni and UK BP offshore wind power plant development (May 2022)

- Marubeni appoints SC as its financial advisor as it concludes a partnership agreement with a wholly owned subsidiary of BP in the United Kingdom for the joint development of offshore wind and other decarbonization projects, including hydrogen

#### Arrangement of project finance for the onshore wind farm project in the Abukuma region of Fukushima Prefecture (April 2022)

- BK supports initiatives that assist in regional revitalization and the stable supply of renewable energies from a financing standpoint

### Transition and financial base support

Companies in the electric power sector need to make continuous investments for transitions. Mizuho supports the financing so that these companies can work to have a stable transition over the medium to long term maintaining and strengthening their financial base.

#### Hybrid transition-linked loans for Chugoku Electric Power Company

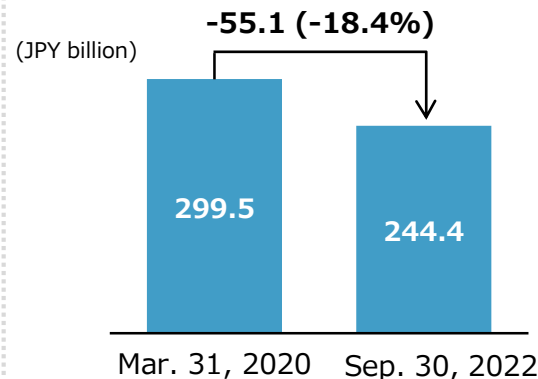
- Hybrid loans provided to support to maintain and strengthen the financial base for raising transition funds that has characteristics of both debt and equity (BK)

#### Transition-linked loans for Kyushu Electric Power Company

- Sets SPTs based on the GHG emission reduction targets for the supply chain of businesses in Japan
- Takes advantage of the performance-based interest subsidy system in accordance with the Industrial Competitiveness Enhancement Act (Japan's first/BK)

### Reduction of the outstanding credit balance of coal-fired power generation plants

We have set a target to have no outstanding credit balance with coal-fired power generation facilities by FY2040 in accordance with the ES Policy.



**Target to reduce the outstanding credit balance\***

**By FY2030 -50%**  
(Compared to Mar. 31, 2020)  
**By FY2040 Zero**  
**No outstanding balance**

\* The target is for credit to appropriate funds for new construction of the expansion of coal-fired power generation facilities prohibited by the ES Policy, regardless of whether corporate financing or project financing

## Opportunities and risks in the oil and gas sector

### Positioning of oil and gas sector toward decarbonization

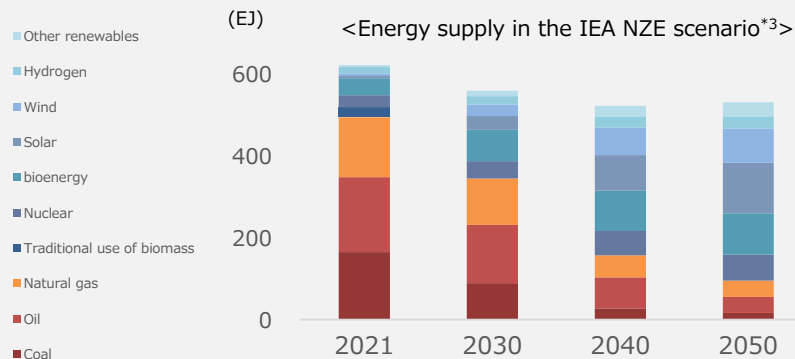
- The oil and gas sector consist of 51% of GHG emissions worldwide (oil: 30%; gas: 21%)\*<sup>1</sup>. This sector also consist of roughly 30%\*<sup>2</sup> of Mizuho's financed emissions. Mizuho recognizes that initiatives to phase out oil and gas and transition to decarbonized fuels are essential to reach net zero by 2050.
- In addition, oil and gas are also the energy sources currently supporting industry and household life. The recent energy crisis derived by the Russia-Ukraine conflict has globally reaffirmed the importance of securing a stable energy supply. Mizuho emphasizes orderly transitions because long-term decarbonization initiatives, securing a stable energy supply, and a balance between economics and stability in the price of energy is vital.

### Oil and gas sector overview toward 2030/2050

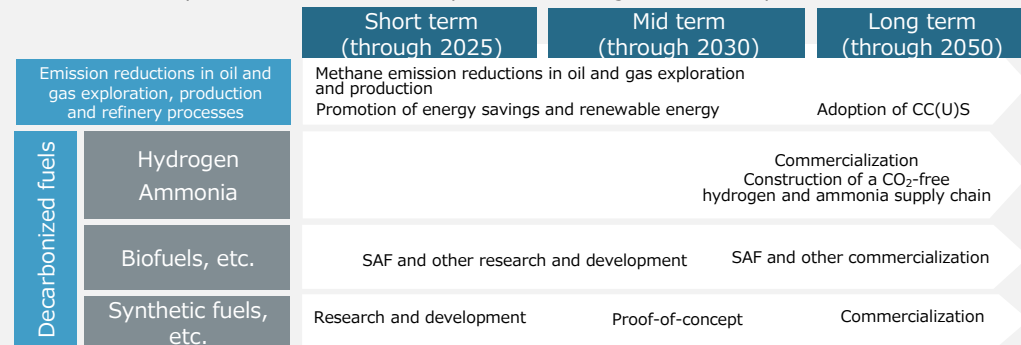
- Mizuho is pursuing efforts to limit the global average temperature rise to 1.5°C and references the IEA's NZE scenario as one transition pathway to net-zero by 2050 in the oil and gas sector.

#### Points of the IEA's NZE scenario

- The transition from oil & gas will accelerate after 2030. Its supply will decrease 68% from 2030 to 2050, and composition of oil falls to 8% and gas falls to 8% against the total energy supply
- Approx. 40 million tons of CO<sub>2</sub> collected annually now, approx. 7.6 billion tons of CO<sub>2</sub> will be collected annually in 2050, removing approx. 2.0 billion tons of CO<sub>2</sub> from the atmosphere each year
- Methane emissions from the production of fossil fuels will decline approx. 75% over the next decade
- The oil and gas supply is important for a stable supply of energy as well as for economics and stability in the price of energy as the infrastructure of all industries and household life. There are numerous challenges as well as geographical and social factors related to energy security varying by region and country. It is also necessary to promote an orderly transition suitable to the circumstances in each region and country. Therefore, we also reference the IEA's SDS/APS scenarios, government policies and roadmaps by country as transition pathways in the oil and gas sector.
- As part of global decarbonization, a shift to renewable energy and other carbon-free energy sources in the electric power sector, conversion in electrification in transportation sector, biofuels, and transition to biofuels, synthetic fuels and others should dramatically reduce the demand for oil in gas leading up to 2050.
- In light of this business environment, many companies in the oil and gas sector will push forward initiatives toward decarbonization and business structure transformations in addition to reductions in GHG emissions from oil and gas operations. This includes the business diversification from the development of decarbonized fuels to the supply of renewable energies. Mizuho will support clients with these initiatives.



#### <Japan: Overview of roadmap based on the governmental policies\*<sup>4</sup>>



\*<sup>1</sup> IEA's World Energy Outlook 2021:results in 2020 \*<sup>2</sup> Ratio making up the measurement results of 19 sectors based on the TCFD recommendations (Total of scope1,2,3 in FY2020 results) \*<sup>3</sup> Developed by Mizuho FG with reference to IEA World Energy Outlook 2022

\*<sup>4</sup> Developed by Mizuho FG with reference to the GX Basic Policy and Roadmap for Transition Finance in Oil Sector and Gas Sector, METI

## Opportunities and risks in the oil and gas sector

### Opportunities and risks for Mizuho

- We support initiatives of clients for their transition while appropriately managing risks and creating business opportunities.

#### Opportunities

- **Treating client needs driven by decarbonization and business structure transformation initiatives as short, medium, and long-term business opportunities**

- Anticipated client needs -

**Business strategies, initiatives to enhance management and diversification of business portfolio**

- Support of decarbonization in businesses, assistance in enhancing the corporate management structure toward transitions, and the formulation of financial and capital management strategies
- Initiatives to diversify businesses, such as the supply of renewable energies

Short, medium, and long term

**Investments in carbon-free fuels and others / establishment of a supply chain**

- Investment toward the research and development, demonstration, and commercialization of carbon-free fuels such as hydrogen and ammonia
- Finance for establishment of a decarbonized-fuel supply chain in the future

Short and medium term  
Medium and long term

**Initiatives to reduce the environmental degradation of existing businesses**

- Finance related to capital investments that contribute to a reduction in the environmental degradation of existing facilities and an energy transition such as investments for equipment upgrades, the adoption of CCUS and other decarbonization solutions

Short and medium term

**Business structure transformations**

- M&As related to business portfolio transformations, etc.

Medium and long term

#### Risk management

- **Transition risk management**

We designated companies that have a primary business in oil and gas as “transition risk sectors,” recognizing these sectors as having a high potential of transition risks. Mizuho identifies and monitors the exposure to high-risk areas within the risk management system in carbon-related sectors. (p. 31)

- **Setting and promoting mid-term GHG emission reduction targets associated with financing and investment (p 18,20)**
- **Environmental and social risk mitigation reduction based on the ES policy (p.32)**
- **Stranded asset risks for financing and investment in next-generation technology**

Mizuho decides whether or not to finance or invest in next-generation technology based on the positioning of said business by the client, results validating the use of the industrial and technical knowledge within the group, and other such factors



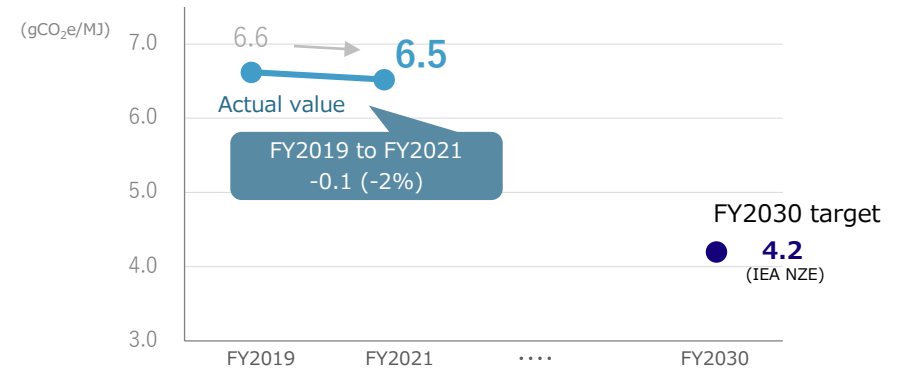
# Setting and promoting GHG emission reduction targets associated with financing and investment (oil and gas sector)

## Targets set for the oil and gas sector

<b>Targeted value chain</b>	<b>Companies/projects conducting businesses mainly in upstream production</b> (Including integrated oil and gas companies)
<b>Targeted assets</b>	<b>Loans</b> (Aggregation of corporate finance and project finance) <sup>*1</sup>
<b>Scope 1 and 2</b>	<b>Metric</b> (Targeted emissions/product on volume) <b>GHG emission intensity</b> (gCO <sub>2</sub> e/MJ) <small>*GHG emissions per unit of production</small> $\left( \frac{\text{Direct emission from oil and gas production operations (Scope 1 and 2)}}{\text{Upstream oil and gas production volume}} \right)$
	<b>Formula for each portfolio</b> $\sum \left( \text{GHG emission intensity of each company or project} \times \frac{\text{Mizuho's loan balance to each company or project}}{\text{Overall loan balance across target portfolio}} \right)$
<b>Numerical target</b> (Benchmark scenarios)	<b>FY2030</b> <b>4.2 gCO<sub>2</sub>e/MJ</b> (IEA NZE)
<b>Scope 3</b>	<b>Metric</b> (Targeted emissions) <b>Absolute GHG emissions</b> (MtCO <sub>2</sub> e) $\left( \text{Indirect emissions from oil and gas production operations (Scope 3 Category 11)}^{*2} \right)$
	<b>Formula for each portfolio</b> $\sum \left( \text{GHG emissions of each company or project} \times \frac{\text{Mizuho's loan balance to each company or project}}{\text{Corporate value of each company or project}^{*3}} \right)$
	<b>Numerical target</b> (Benchmark scenarios) <b>FY2030</b> compared to FY2019 <b>-12 to -29%</b> (IEA SDS) (IEA NZE)

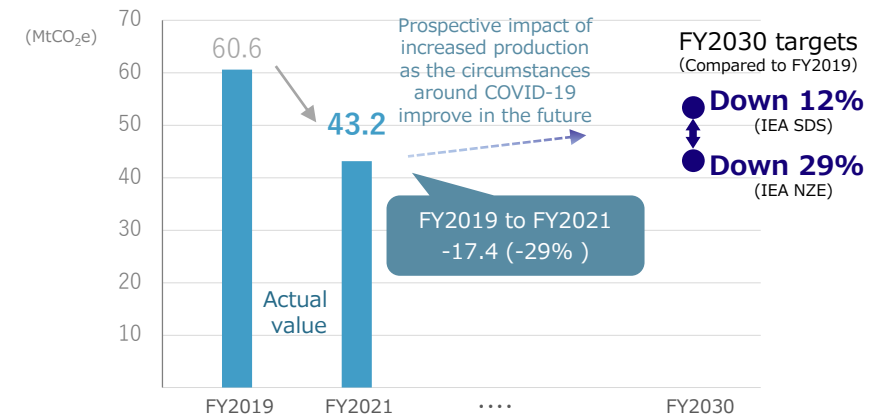
## FY2021 results (preliminary figures)

### Scope 1 and 2 GHG emission intensity



The FY2021 results (preliminary figures) were 6.5 gCO<sub>2</sub>e/MJ, down 2% compared to the FY2019 results.

### Scope 3 absolute emissions



GHG emissions decreased to 43.2 MtCO<sub>2</sub>e, down 29%, compared to the FY2019 results due to a reduction in Mizuho's loan share (attribution factor) following an increase in the sum of market capitalization of companies in its target portfolios centered on large enterprises as well as the large impact of a decline in production due to the COVID-19 pandemic and other such factors.

(Reference) Oil and gas sector in the target portfolio by financed emissions trends (Absolute emissions FY2019 results → FY2021 preliminary figures)

Scope1 : 7.5 → 5.0 MtCO<sub>2</sub>e Scope2 : 0.7 → 0.6 MtCO<sub>2</sub>e Scope3 : 60.6 → 43.2 MtCO<sub>2</sub>e

\*1 Combined figures of Mizuho Bank and Mizuho Trust & Banking \*2 Emissions from the use (burning) of sold products \*3 Total equity + debt of each company and project as well as the enterprise value including cash (EVIC; market capitalization of ordinary shares + debt + market capitalization of preferred shares) for listed companies; depends on the PCAF standard<sup>\*4</sup>

\*4. "The Global GHG Accounting and Reporting Standard for the Financial Industry" developed by the Partnership for Carbon Accounting Financials

## Major initiatives in the oil and gas sector – Engagement -

- Mizuho examines the status of clients' response to transition risks and have a common understanding with them about their business environment and challenges through engagement. These efforts strive to contribute to the promotion of clients' decarbonization initiatives.

### Engagement initiatives

<b>Target clients</b>	<ul style="list-style-type: none"> <li>Companies operating oil and gas businesses in Japan and overseas that have an outstanding credit balance as of July 2022</li> </ul>
<b>Major dialogue topics</b>	<ul style="list-style-type: none"> <li><b>Confirming response to transition risks</b> (right table)</li> <li><b>Expectations and requests from Mizuho to clients for a response to transition risks</b> <ul style="list-style-type: none"> <li>Formulate transition strategies</li> <li>Develop quantitative targets and KPI (mid to long term) to increase the effectiveness of transition strategies</li> <li>Implement its initiatives and disclose the progress</li> <li>Measure and disclose GHG emissions</li> <li>Enhance disclosure following with TCFD or another equivalent framework</li> </ul> </li> <li><b>Initiatives to reduce GHG emissions/intensity</b> <ul style="list-style-type: none"> <li>Results and analysis for GHG emissions/intensity</li> <li>Set the mid-term reduction targets</li> <li>Initiatives to reduce Scope 1, 2 and 3 emissions and transform the business structure</li> <li>Issues for transition, expectations for Mizuho, etc.</li> </ul> </li> </ul>

#### Engagement round-table with North American energy companies

- We held a round-table with managements of the major energy companies in North America as ESG engagement, which is the second time following FY2021.
- In a business landscape that includes energy prices hike derived by the Russia-Ukraine conflict, the participants had a lively discussion about initiatives to realize a low-carbon society from the standpoint of a stable energy supply.

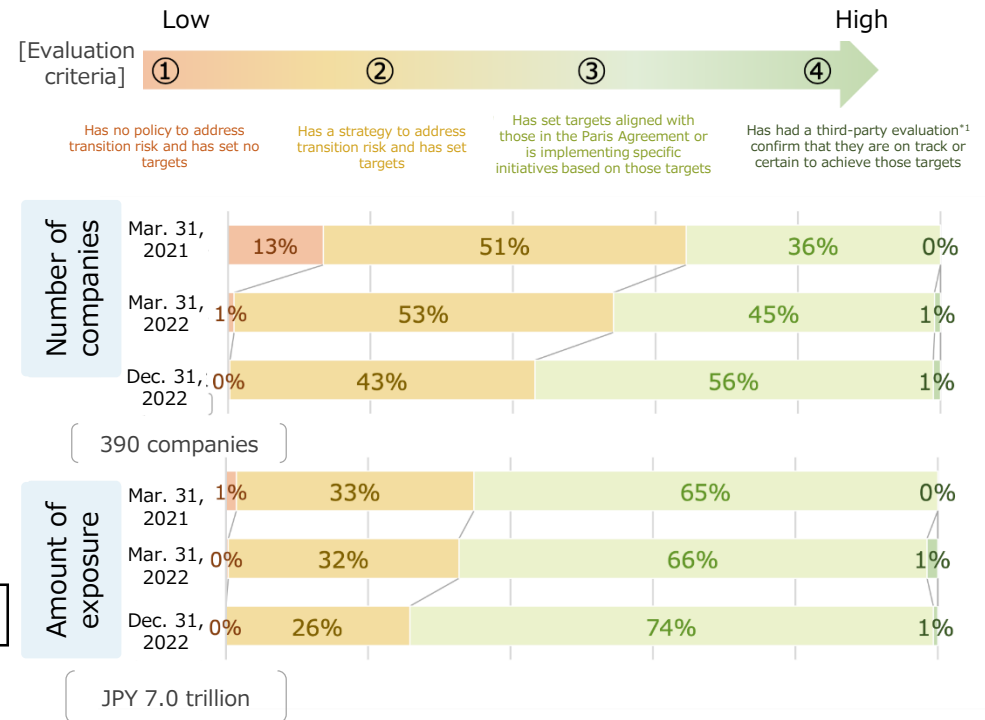
Case Example

#### Broadly made discussion about transition strategies with clients from the oil and gas sector in Japan

- Mizuho continually engages in discussions with clients in the oil and gas sector with the aim to fulfill its mission to achieve a stable supply of energy and transitions.
- We provide a wide-range of support which includes revision of business portfolios, regulatory compliance such as carbon pricing, and the formulation of transition strategies, such as organizing new technologies and businesses. This includes arranging financing, such as green loans for those initiatives, the development of new financing methods, and even the review of equity support (supply of risk money).

Case Example

### Client's status of response to the transition risks



#### Steady progress in the response to the transition risks

- The response to transition risks in the oil and gas sector is steadily progressing. Based on the amount of exposure, 70% or more of clients are at level 3: "Has set targets aligned with those in the Paris Agreement or is implementing specific initiatives based on those targets."
- We confirm the progress of initiatives to commercialize carbon-free energies including hydrogen and ammonia, adopt CCUS in oil and gas operations, diversify businesses, such as the supply of renewable energies, and other such efforts.

<sup>\*1</sup> Science Based Targets etc.

## Major initiatives in the oil and gas sector

### Decarbonized fuel-related initiatives

Arranging of project finance in the world's first green hydrogen and ammonia production facility

- Financing the world's largest green ammonia production facility located in Saudi Arabia (BK)

### Business diversification including renewable energy

Arranging of green loans in which the proceeds are used for solar power generation businesses

- Arranging of green loans for oil and gas company engaged in efforts to promote renewable energy to realize carbon neutrality (BK)

### Strengthening standards for verifying funds to be used for new oil & gas exploration

We will strengthen the management system to evaluate the financing projects in which the proceeds are used for new oil and gas exploration according to the criteria below, taking into account the mid-term GHG reduction targets associated with the financing and investment activities. This operations will be launched in July 2023.

#### Primary check

- Outlook of Scope 1 and 2 GHG emission intensity and existence of sufficient GHG reduction measures
- Outlook of Scope 3 emissions (production volume)

#### Secondary check

- Consistency with the policies of each government toward the stable supply of energy and decarbonization
- Transition strategies and progress made toward the transition by confirming that the client has made credibility transition strategies and progress toward these transitions or developed verifiable plans across the entire portfolio of that corporation.

# Setting and promoting GHG emission reduction targets associated with financing and investment (thermal coal mining sector)

## Targets set for the thermal coal mining sector

<b>Targeted value chain</b>	<b>Companies/projects (PJ) conducting businesses mainly in thermal coal mining</b>
<b>Metric</b> (Target GHG emissions)	<b>Absolute GHG emissions (Mt CO<sub>2</sub>e)</b>  ( Direct emissions from thermal coal mining businesses (Scope 1 and 2) and indirect emissions (Scope 3 Category 11) *1 )
<b>Target assets</b>	<b>Loans</b> (Aggregate of corporate finance and project finance)*2
<b>Formula for each portfolio</b>	$\left( \begin{array}{l} \text{GHG emissions} \\ \text{of each} \\ \text{company} \\ \text{or project} \end{array} \right) \times \left( \frac{\text{Mizuho's loan balance to each} \\ \text{company or project}}{\text{Corporate value of each company} \\ \text{or project}} \right) \times 3$
<b>Numerical target</b> (Benchmark scenarios)	OECD countries: <b>Zero balance by FY2030</b> Non-OECD countries: <b>Zero balance by FY2040</b> *4 (Following the IEA NZE approach)

## Initiatives to steadily reduce financing for thermal coal mining

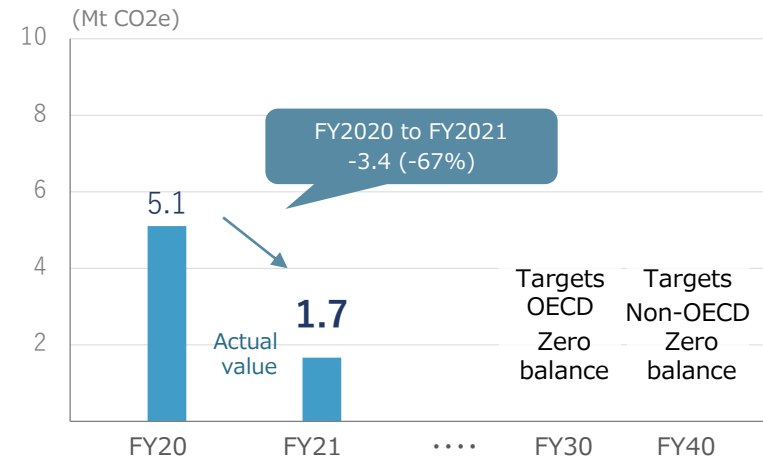
- Mizuho has established the following management policies on thermal coal mining in its Environmental and Social Management Policy for Financing and Investment Activity (ES policy):
  - Prohibit financing or investment for use in the new thermal coal mining and expansion of existing thermal coal.
  - Prohibit financing or investment to companies whose primary business is the mining of thermal coal, with which we have no current credit transactions.
- Further, Mizuho has made a new decision, same as above, to prohibit the financing and investment for infrastructure tied to the mining of thermal coal. (p.32)
- Target loans for the thermal coal mining sector has decreased from 56.5 billion yen on March 31, 2021 to 22.6 billion yen on March 31, 2022, and 11.8 billion yen on December 31, 2022. We will continue to steadily reduce loans (corporate financing and project financing) to companies and projects with a primary business in the mining of thermal coal to achieve our mid-term targets.

\*1 Emissions during use (combustion) of products sold \*2 Mizuho Bank・Mizuho Trust Bank total \*3 Net assets of each company's projects +favorable Sub Liabilities (Total equity + Debt) 。 Rely on PCAF Standard\*5

\*4 Phase-out of unabated coal in advanced economies (2030年) 、Phase-out of all unabated coal (2040年) \*5 Partnership for Carbon Accounting Financials [The Global GHG Accounting and Reporting Standard for the Financial Industry.]

## FY2021 results (preliminary figures)

### Scope 1, 2, and 3 absolute emissions



A reduction in the balance of loans to companies within the target portfolios was the primary factor for a reduction to 1.7 MtCO<sub>2</sub>e, down 67%, compared to the fiscal 2020 results.

Reference: Breakdown of Scope 1, 2 and 3

(MtCO <sub>2</sub> e)	FY2020	FY2021 (Preliminary figures)
Scope 1 emissions	0.4	0.2
Scope 2 emissions	0.009	0.003
Scope 3 emissions	4.7	1.4
(Total of Scope 1, 2, and 3)	5.1	1.7

## Approaches in other sectors

### Decarbonization in manufacturing sectors (steel/chemicals)

- A shift away from fuels and raw materials derived from fossil fuels and other such transitions are essential to decarbonize the steel and chemical sectors. The many technologies to realize these transitions are still in the research and development phase.
- Mizuho broadly make discussions with clients about business strategies toward decarbonization leveraging its knowledge on the environment and industry.

<b>Steel</b>	<ul style="list-style-type: none"> <li>● Direct reduced iron (natural gas and hydrogen)</li> <li>● Use and increasing size of electric furnace</li> <li>● Use of CCUS, reduced iron, and scrap</li> </ul>
<b>Chemicals</b>	<ul style="list-style-type: none"> <li>● Heat source conversion (utilizing hydrogen/ammonia)</li> <li>● Raw material conversion (bio-based raw and bio production)</li> <li>● Raw material circulation (recycling of chemicals/materials)</li> </ul>



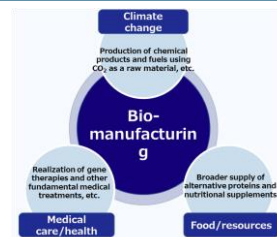
#### Steel | Engagement with clients in the iron and steel sector

- Mizuho added a steel sector as facing transition risks based on the result of qualitative evaluation of risks/opportunities and launched its implementation from FY2022.
- We broadly discuss with clients about business strategies toward decarbonization and its challenges as well as forecast of using next generation technologies.



#### Chemicals | Investments for growth of biomanufacturing

- Investment in Synpolgen as the first transition investment facility
- Contributions to the growth of biomanufacturing\*1



### Decarbonization in transportation sectors (automotive, maritime transportation, and aviation)

- We support our customers to shift to electrification in automotive sector and carbon-free fuels such as SAF from both finance and non-finance perspective.



#### Automotive | Green loans for zero emission mobility

- Arrangement of the largest green loan in Japan for research, development, and investment in zero-emission mobility to Nissan Motor (BK)



#### Automotive | Sustainability-linked loan (first of its kind in the Chinese auto financing industry)

- Arrangement of the first syndicated sustainability-linked loan in the Chinese auto financing industry for Genius Auto Finance



#### Maritime transport and aviation

Environmental and climate change response finance for maritime transportation and airline companies

- Provision of transition loans, transition-linked loans, Mizuho Eco Finance, and other broad financing to maritime transportation companies
- Arrangement of the first airline industry specific use of proceeds transition-linked loans in Japan for Japan Airlines (BK)



#### Aviation | Support SAF for governments and private sectors

- Practical application of sustainable aviation fuel (SAF) is vital to decarbonizing the aviation industry
- Mizuho leverages its knowledge from the upstream (biomass and other resources) to the downstream (aviation companies and aircraft equipment) of the supply chain
- We facilitate public-private partnerships to help evoke cross-industry initiatives



## Approaches in other sectors

### Decarbonization of real estate sector

Mizuho supports financing and investment to real estate with high energy efficiency and low GHG emissions in addition to the initiatives of real estate owners.

We also promote initiatives that contribute to decarbonization in the real estate investment market based on the broad perspectives of property owners.

#### Mizuho Green Real Estate Non-Recourse Loan Mizuho Sustainability Real Estate Non-Recourse Loan

- **Adoption of the first independent evaluation framework in the sustainability field as a major bank in Japan (BK)**
  - This product encourages financing and investments for lenders and investors by implementing assessment using the framework for real estate fund to provide information for making a decision.
  - These loans intend to create an impact on real estate fund markets exceeding JPY 20 trillion in assets

#### Launch of a service for purchasing FIT Non-Fossil Certificates to real estate investment trusts

- **Support of initiatives to decarbonize the real estate investment market (TB)**
  - As the trustee, TB purchases non-fossil certificates to enable the beneficiaries or tenants who are substantial owners to satisfy renewable energy adoption requirements

#### Eco-friendly office building development via a private placement real estate fund scheme

- **ESG investment model that balance economic and social standpoints (Mizuho Real Estate Management)**
  - Decarbonization through a hybrid wooden structure; use of local timber contributes to regional revitalization

### Forest conservation initiatives

Forests are a carbon sink, but logging, deforestation, agriculture, and other such land use activities produce roughly 20% of global emissions. That is why initiatives to preserve forests and stop deforestation are important for us to control the temperature rise.

Mizuho strives to prevent deforestation by continually enhancing and putting its Environmental and Social Management Policy for Financing and Investment Activity (ES Policy) into practice.

#### Implementation of ES Policy

- **We verify the progress of the client response at least once a year in the sectors below through engagement based on the ES Policy.**

#### Large-scale agriculture/ Palm oil /Lumber & pulp



#### Sector response policy

- Request to make a commitment to No Deforestation, No Peat, and No Exploitation (NDPE) and other policy development
- Request to make a commitment to acquire international certifications or form its plans with deadline
- Request to strengthen supply chain management and improve traceability etc.

## Promising SX domains: Initiatives for the practical application of new technologies

### Contributions to a low-carbon society

### Mizuho's initiatives

#### Hydrogen

##### Representative of clean energies in the medium to long term

The key to a business structure transformation in many different sectors is not simply energy sources for thermal power generation and fuel-cell vehicles as well as raw material for synthetic fuels, but also the generation, distribution, storage, and use of these energies

- February 2023: BK published a report on how Japan can win the global competition around hydrogen
- RT was contracted to execute various research including surveys on the technological and market trends of power to gas, the potential of low-carbon hydrogen manufacturing overseas, the development roadmap for fuel-cell battery technologies as well as a social benefit assessment and life-cycle evaluation of fuel-cell vehicles.

#### Offshore wind farms

##### Key to accelerating the adoption of renewable energy on the island nation of Japan

As an island nation with only a minimal amount of land suitable for wind power, Japan has highlighted floating offshore wind farms that can be installed anywhere regardless of water depth as a means to expand its renewable power supply in the future

- May 2022: SC entered into a partnership agreement for an offshore wind farm development with Marubeni and BP in the United Kingdom
- June 2022: BK was appointed as a lead arranger for the arrangement of the project finance for the floating offshore wind farm project in France

#### CCS

##### Essential to achieve carbon neutrality in sectors with hard-to-abate GHG emissions

CCS is a technology to capture GHG emissions from power plants and factories as a measure aiming to achieve net-zero emissions in businesses that cannot fully decarbonize. Direct Air Capture (DAC) is one such technology garnering a lot of attention for the future

- July 2016: RT conducted a project sponsored by the Ministry of the Environment to demonstrate the concept of environmentally friendly CCS with Toshiba Corporation and 11 other entities
- May 2022: FG joined the Global CCS Institute to further understanding about the technology and industry
- October 2022: RT was adopted by NEDO together with JX Nippon Oil & Gas and Electric Power Development to examine a business model that produces hydrogen by using biomass as a raw material to combine gasification and CCS technology
- December 2022: BK joined a panel discussion at the Japan CSS Forum to debate the expansion and commercialization of CCS, the role of finance, and other such topics

#### Biomass

##### Shift away from fossil fuels to alternative energies

Sustainable aviation fuel such as SAF and other such alternatives are gaining a lot of attention as next-generation fuels

- February 2022: BK participated in a symposium held by the Ministry of Land, Infrastructure, Transport and Tourism on decarbonizing aviation using SAF toward a carbon neutral sky. This sparked a lively debate as all Japan.
- We have capitalized on our knowledge about industry, biofuels, and emission credits to strengthen supports of SAF for public and private sectors.

## Sustainable business promotion

: wide involvement in decarbonization initiatives and enhancements of financial intermediary functions

### Contributions to just transitions in Asia

#### Participation in the Just Energy Transition Partnership (JETP\*1) in Viet Nam

Mizuho participates in the GFANZ Private Finance Working Group that supports the Viet Nam Just Energy Transition Partnership (JETP).

The partnership led by the United Kingdom and European Union works closely with various public and private stakeholders to support capital mobilization to realize the transition of Viet Nam.

### Start of comprehensive partnerships with major global asset management firms

#### Build strategic relationship with Decarbonization Partners

Mizuho entered into a strategic relationship with Decarbonization Partners, a private equity fund that invests in decarbonization projects, jointly established by BlackRock and Tamasek, to strengthen the support for creating new technology and business models worldwide

### Issuance of Green Bonds

FG issued an EUR 800 million green bond, which is the largest euro-denominated green bond issued by a Japanese financial institution

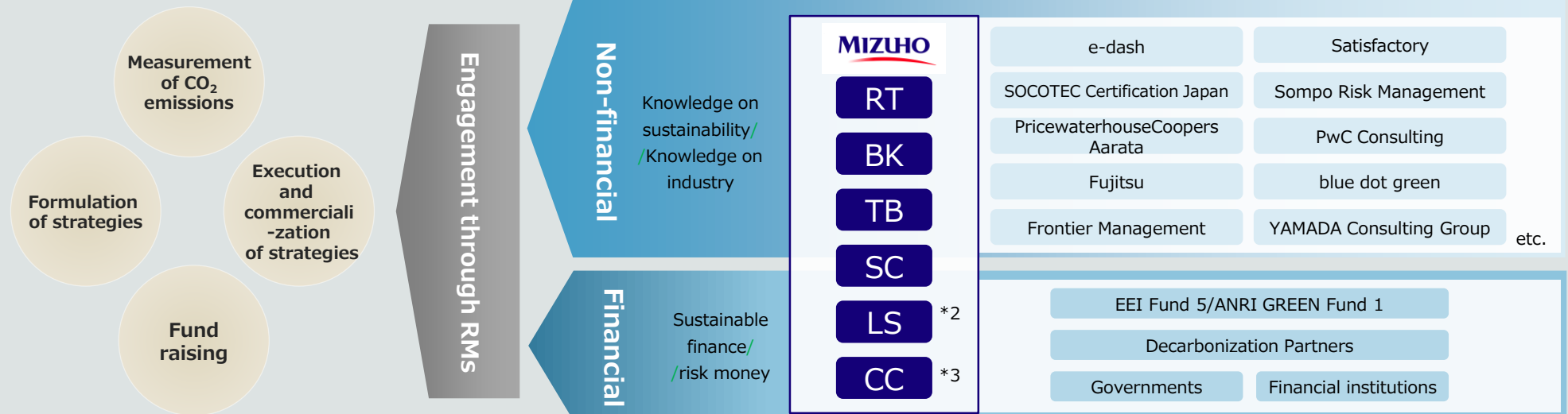
### Expansion of active support for the decarbonization of SMEs

#### Building solution networks in collaboration with external partners and broadly approaching customers from SMEs to large enterprises

Coordinate  
Strengthen

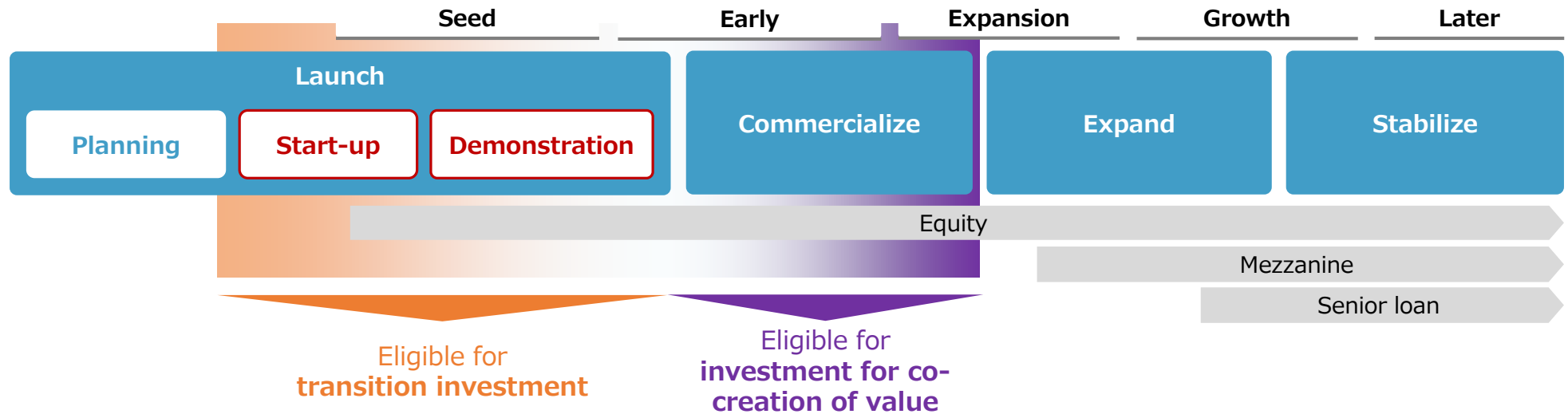
Customer needs/  
management challenges

Mizuho's solution network



## Equity support in transition areas

- Mizuho has set up equity investment facilities for each stage of client businesses, and is strengthening initiatives for co-creation of value.



Apr. 2022

We have set up a transition investment facility for decarbonization-related businesses at the seed stage. Intention to invest more than **JPY 50 billion** over a decade. Projects under consideration: Upwards or **190<sup>\*1</sup>** worldwide  
**First Japanese megabank to support innovation for transition**

Dec. 2022

**First investment project:** JPY 300 million investment in Synplogen, a DNA synthesis startup in the bio-manufacturing field which was spun out of Kobe University

Feb. 2023

We set up an investment facility for the co-creation of value which targets businesses in the commercialization stage (investment targets are not limited to companies involved in transition areas)

Mar. 2023

We expanded the scope of eligibility for transition investment facilities and redefined areas contributing to greater environmental and social sustainability as transition areas

**Second investment project:** Investment in Dual Move, a start-up working to develop cross-reality (XR) in cars

**Third investment project:** Investment of USD 5 million in MCI Carbon, an Australian startup working to develop carbon dioxide capture and utilization (CCU) technologies

## Rule-making and representation of Mizuho's views

- We recognize partnerships with governments, industrial organizations and initiatives as essential to realize a low-carbon society. Therefore, Mizuho is more broadly sharing its views through workshops and other events held by government agencies and research institutions while more actively participating in international rule-making.

### Representation of views on industrial policy

- Participated in discussions on energy policy at the METI

Host	Participating committee*1
METI	Study Group on the Introduction and Management of Renewable Energy Generation Facilities
METI	Working Group on Energy Structure Conversion, Committee on the Green Innovation Project, Industrial Structure Council
Organization for Cross-regional Coordination of Transmission Operators	Councilor
ANRE	Basic Policy Subcommittee on Electricity and Gas

### Representation of views on international initiatives

- Participation in international initiatives for decarbonization, such as GFANZ (NZBA/NZAM) and PCAF, and enhance representation of views and contribution for rulemaking

#### Chair of the PCAF Japan coalition

- After becoming the first Japanese financial institution to join PCAF in July 2021, Mizuho was appointed the chair of the PCAF Japan coalition in November
- The FY2022 work plan was released after discussions with participating institutions
- The PCAF Japan coalition organizes common issues in financed emission measurements and disclosures as well as shares and exchanges views with government agencies and PCAF Global

\*1 Target: Participation by FG/BK

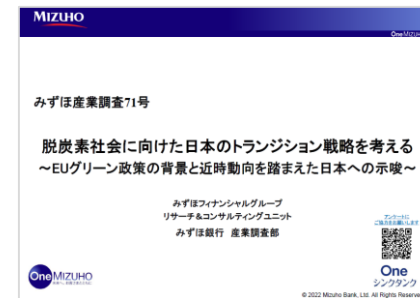
### Representation of views and contribution for rule-making on finance

- Participated in discussions on decarbonization financing

Host	Participating committee, etc.*1
Cabinet Office	The Public Private Partnership / Private Finance Initiative Promotion Committee
METI/FSA/MoE	Study Group on the Ideal Financing for a Green Transformation (GX) of Industry
FSA/METI/MoE	Study Group on Creating an Environment for Transition Financing
FSA/METI/MoE	Sub-Working Group on Financed Emissions for Promoting Public-Private Transition Finance

### Representation of views that take advantage of the Group's industry and environmental knowledge

- Mizuho publishes reports with insights based on our specialized knowledge in a timely manner.



<June 2022>

Japan's transition strategy toward carbon neutral: suggestions for Japan from the EU green policy



<February 2023>

The stable procurement of hydrogen and policy for Japan to win international competition in hydrogen



## Strengthening of human resource development to support sustainability

- Mizuho strengthened climate change education and enlightenment opportunities for executives and employees to increase the effectiveness of initiatives, recognizing the importance for each and every employee to learn enough about sustainability to make the problem personal.
- We will work to heighten bilateral communication with our employees from here on out to actively capitalize on their ideas.

### Raising employee awareness about sustainability

#### Learning about trends worldwide and our own initiatives

- Sustainability training for all employees
- Messages from the Group CEO and CSuO
- Dissemination of information via the intranet and internal SNS



#### Considering what each person can do

- Dialogues with the CSuO (departmental exchange of ideas)
- Plans for events that invite outside instructors



Actions taken by each employee considering their environment and society  
is equal to **sustainability action**

### Human capital versed in sustainability

Specialized knowledge

Consultants in the environmental and energy fields

Approx. **130** people

Large corporations

Large corporate RM workshop  
(Industries, technologies, success stories, etc.)

Approx. **600** RMs<sup>\*1</sup> per session

SMEs

Sustainability management experts

Approx. **1,300** people

SMEs

SDGs promotion support finance sales certification

Approx. **2,000** people

Overseas

Global ESG champion

Approx. **30** people

World's first

SDG Impact Standards Training (United Nations Development Programme)

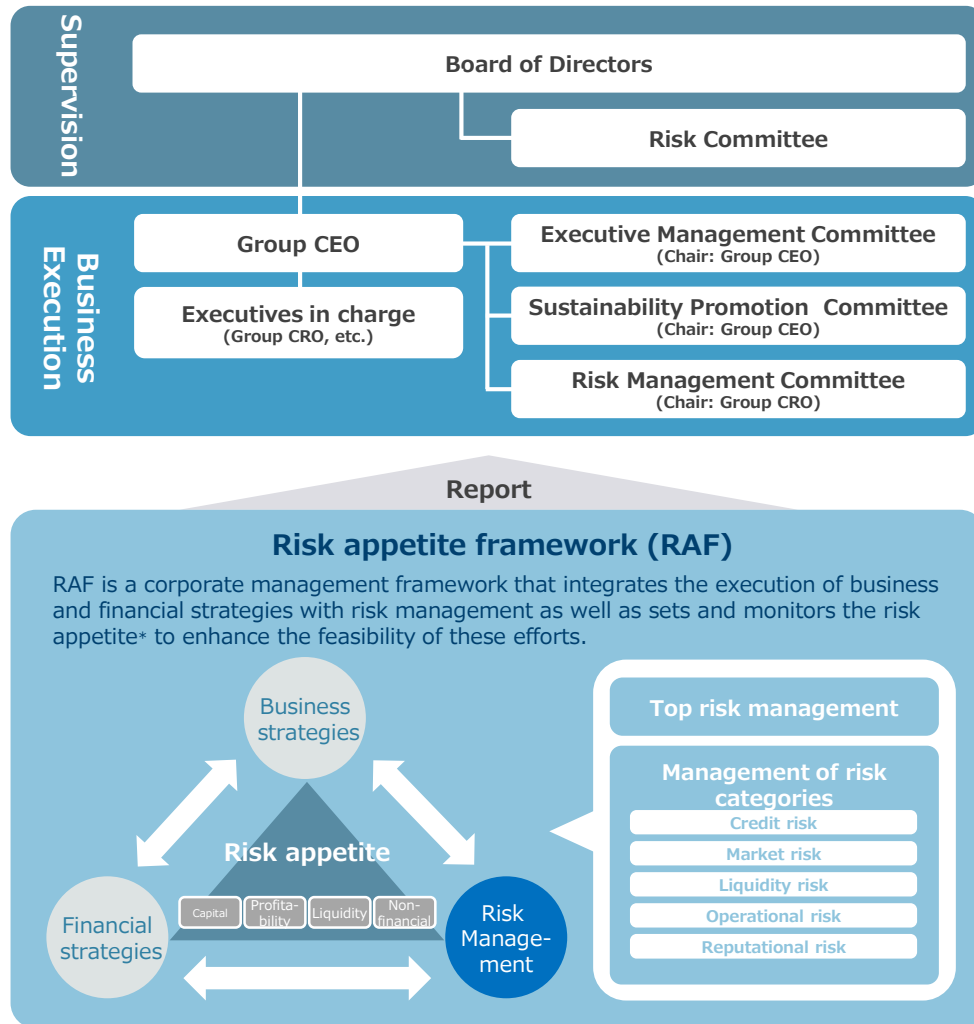
Approx. **30** people

(As of March 2023)

## Progress of initiatives for climate-related risk management

- Mizuho controls climate-related risks using its risk appetite framework. We have defined a policy on next step and would make gradual enhancements regarding climate-related risk management below.

### Risk management framework for climate-related risks



### FY2022 climate-related risk management and future action policy

	Items rolled out in FY2022	Future action policy
Risk appetite framework (RAF)	<ul style="list-style-type: none"> <li>● Enhancements to risk management system in carbon-related sectors [p. 31]</li> </ul>	<ul style="list-style-type: none"> <li>● We set the risk appetite based on the future risks brought by climate change to take appropriate risks</li> </ul>
Comprehensive risk management	<ul style="list-style-type: none"> <li>● Start of risk priority assessments (quantitative evaluations) [p. 30]</li> <li>● Enhancements to scenario analyses, including broader targets such as steel sector</li> </ul>	<ul style="list-style-type: none"> <li>● Control risks as management in a range that can be tolerated, consider the risk appetite, minimize loss, and enhance efficiency</li> <li>● Research external trends and examine methods to identify and evaluate climate-related risks on a short, medium, and long-term time axis</li> <li>● Improve existing risk management methods as necessary and consider establishing new methods based on the results of priority assessments</li> <li>● Refine forecasts of the volume of potential credit risks and reflect those risks in credit and portfolio management</li> </ul>
Climate-related risk management	<ul style="list-style-type: none"> <li>● Establishment of Sustainability Risk Management Office [p. 5]</li> <li>● Formulation of the Basic Policy on Climate-related Risk Management [p. 5]</li> </ul>	<ul style="list-style-type: none"> <li>● Establish appropriate governance based on the various guidances</li> </ul>
Management of risk categories		
Governance		

## Impact assessment on climate-related risk

- As Mizuho has a duty to comprehensively identify climate-related risks given the request of authorities in Japan and overseas, we have evaluated the importance of each risk category (quantitative evaluation).
- As a result, we have discovered credit risks (deterioration of client business performance) and market risks (decline in value of stockholdings) have a particularly high priority. We will identify and manage the quantitative impact of high-priority risks through scenario analysis and other.

### Impact assessment on climate-related risk

	Transition risks	Physical risks (acute)	Physical risks (chronic)
Credit risk	Deterioration in client financial performance due to changes in the business environment shifting toward decarbonization	Deterioration in client financial performance due to storm and flood disaster Damage to committed collateral assets due to storm and flood disaster	Deterioration in client financial performance due to changes in the business environment caused by temperature increase
Market risk	Decline in the value of stock holdings due to changes in the business and macro environments shifting toward decarbonization Decline in the value of bond held due to the macro environment shifting toward decarbonization	Decline in the value of stock holdings due to a deterioration in financial performance caused by storm and flood disaster Decline in the value of bond holdings due to changes in the financial environment caused by storm and flood disaster	Decline in the value of stock holdings due to changes in the business environment caused by temperature increase
Liquidity risk	Increase in the client demand for funds due to changes in the business environment toward decarbonization (higher deposit outflow and funding) Deterioration in the fundraising environment due to changes in investor awareness	Increase in the demand for funds due to wind and water damage (higher deposit outflow and funding) Deterioration in the fundraising environment due to wind and water damage	-
Operational risk	Lawsuits filed by stakeholders alleging Mizuho is not properly addressing governmental policies and regulations	Damage and costs to repair owned assets due to storm and flood disaster Interruption of Mizuho businesses due to storm and flood disaster	Lack of measures to address infectious diseases, such as malaria/dengue, caused by temperature increase
Reputational risk	Criticism about deficient, obsolete, or unfulfilled climate change-related strategies		

Priority risk evaluation results:

High

Medium

Low

We evaluate the priority of risks based on the potential impact and controllability along a time axis (short term: 1 to 3 years; medium to long-term: Up to 2050)

## Risk management system in carbon-related sectors

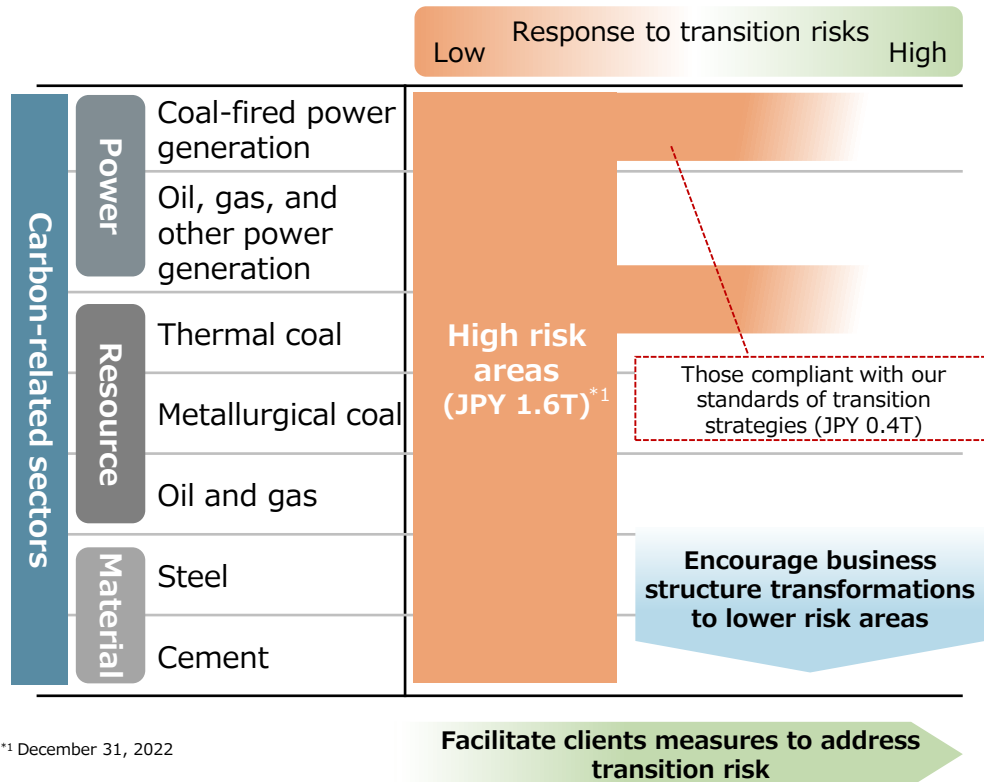
- We have established an exposure control policy and implement risk control in high risk areas of carbon-related sectors.
- With the aim of facilitating the business structure transformation of our clients, we have developed a framework to examine the credibility and transparency of client's transition strategies. When we can confirm that the client's transition strategy meets the standards of our internal verification process, we provide financing for their business.
- By assisting the formulation and implementation of transition strategies for our customers, we will properly manage and reduce medium to long-term transition risks.

### Risk management system in carbon-related sectors

Assess risks on two axes and determine clients' risk classifications

Customer sectors

Progress of response to transition risks  
(P.33)



\*1 December 31, 2022

### Response to high risk areas

- Strengthen engagement with clients to formulate response strategies to transition risks and transform business structures
- **Actively provide the financing necessary when the reliability and transparency of transition strategies has been verified with the aim of facilitating business structure transformation of the customers**
- Carefully consider whether or not to continue our business with a client in the event that the client is not willing to address transition risks and has not formulated a transition strategy even one year after the initial engagement

### Standards of confirming transition strategy

Developed in  
Oct. 2022

- Developed standards and a verification process to confirm the credibility and transparency of transition strategies with reference to the ICMA<sup>\*2</sup>'s "Climate Transition Finance Handbook."
- Confirmed that JPY 0.4 trillion out of JPY 1.6 trillion in high risk areas were compliant with our standards

Strategic materiality	Transition strategies, such as business strategies contributing to transitions
Disclosure	Confirmation of the transparency and progress of strategies and targets
Governance structure	Appropriate governance structure for setting strategies and targets
Scientific evidence	Science-based targets aligned with the Paris Agreement
Forecasts on the development and adoption of decarbonization technologies	Forecasts such as the adoption of technologies based on strategies

\*2 International Capital Markets Association

## Revising the Environmental and Social Management Policy for Financing and Investment Activity (ES Policy)

- Mizuho has established the ES Policy to mitigate and prevent adverse effects to the environment and society through its financing and investment activities. We have revised this policy as follows from a standpoint of strengthening our response to climate change and environmental conservation.

Policy	Major revisions (application date: July 1, 2023)
Thermal coal mining	<ul style="list-style-type: none"> <li>■ <b>Addition of prohibited target for financing and investment</b> <ul style="list-style-type: none"> <li>• Financing and investment which is used for any new development or expansion of infrastructure linked with the thermal coal mining</li> <li>• Financing or investment to companies with no existing financing and investment transactions with us and whose primary business is infrastructure linked with the thermal coal mining</li> </ul> </li> </ul>
Oil and gas	<ul style="list-style-type: none"> <li>■ <b>Strengthening environmental and social risk verification</b> <ul style="list-style-type: none"> <li>• Assessing whether sufficient measures to reduce GHG emissions are being taken or not when making any new financing and investment which is used for oil and gas exploration project</li> <li>• Clarifying due diligence items such as impacts on water resource/subsoil and soil/water contamination for financing and investment which is used for shale oil, shale gas, or oil sands exploration</li> </ul> </li> </ul>

### Internal discussions on the revisions to the ES Policy

Mizuho has been discussing regarding the financing and investment policy on fossil fuel related business such as thermal coal mining and new oil & gas development at the Sustainability Promotion Committee in February 2023 as well as at the Risk Management Committee, Executive Management Committee, Risk Committee, and the Board of Directors in March in the management and supervision level.

Mizuho fully understand that the burning of fossil fuels is the main source of GHG emissions and initiatives for a phased transition from fossil fuels is essential to realizing net-zero by 2050. The management at Mizuho not only recognizes that energy is the infrastructure to all industries and personal life and the stable supply of energy at a consistent price is indispensable to sound economic activities and civic life, but also acknowledges that energy accessibility is a serious social issue in emerging countries. We have decided to revise the Environmental and Social Management Policy given this shared understanding and recognition based on the progress of international agreements, the energy supply and demand, and the decarbonization and energy policies in each country.

As for the thermal coal mining businesses, Mizuho has set GHG emissions reduction targets for its financing and investment activities (absolute GHG emissions: zero balance by FY2030 for OECD countries and by FY2040 for non-OECD countries) in light of the COP26/COP27 international agreements to phase out coal-fired power generation. The Environmental and Social Management Policy had already restricted financing and investment activities to these businesses, but the new revisions put in place an even stricter policy by restricting financing and investments for new development or expansion of infrastructure tied to mining of thermal coal. In the future, our financing and investment in these businesses will steadily reduce both corporate financing as well as project financing.

Mizuho recognizes that it is necessary to transit the demand of oil and gas in the medium to long-term in order to realize net zero by 2050; however, it is decided not to introduce the reduction or restriction clause for new financing and investment to oil and gas exploration businesses due to the immediate urgency of LNG and other energy supplies and drastic hike in energy price, the inability for COP and other global assemblies to reach international agreements to phase out oil and gas, and the growing importance of LNG during this transition period as an energy with minimal emissions. Given this decision, we have strengthened our screening process when providing new financing or investment to oil and gas exploration businesses in order to achieve the mid-term GHG emission reduction targets. The new process verifies whether a business conforms to government policies on a stable energy supply and decarbonization as well as the transition strategies and progress of a business to evaluate the suitability of financing on a case-by-case basis. (p. 20)

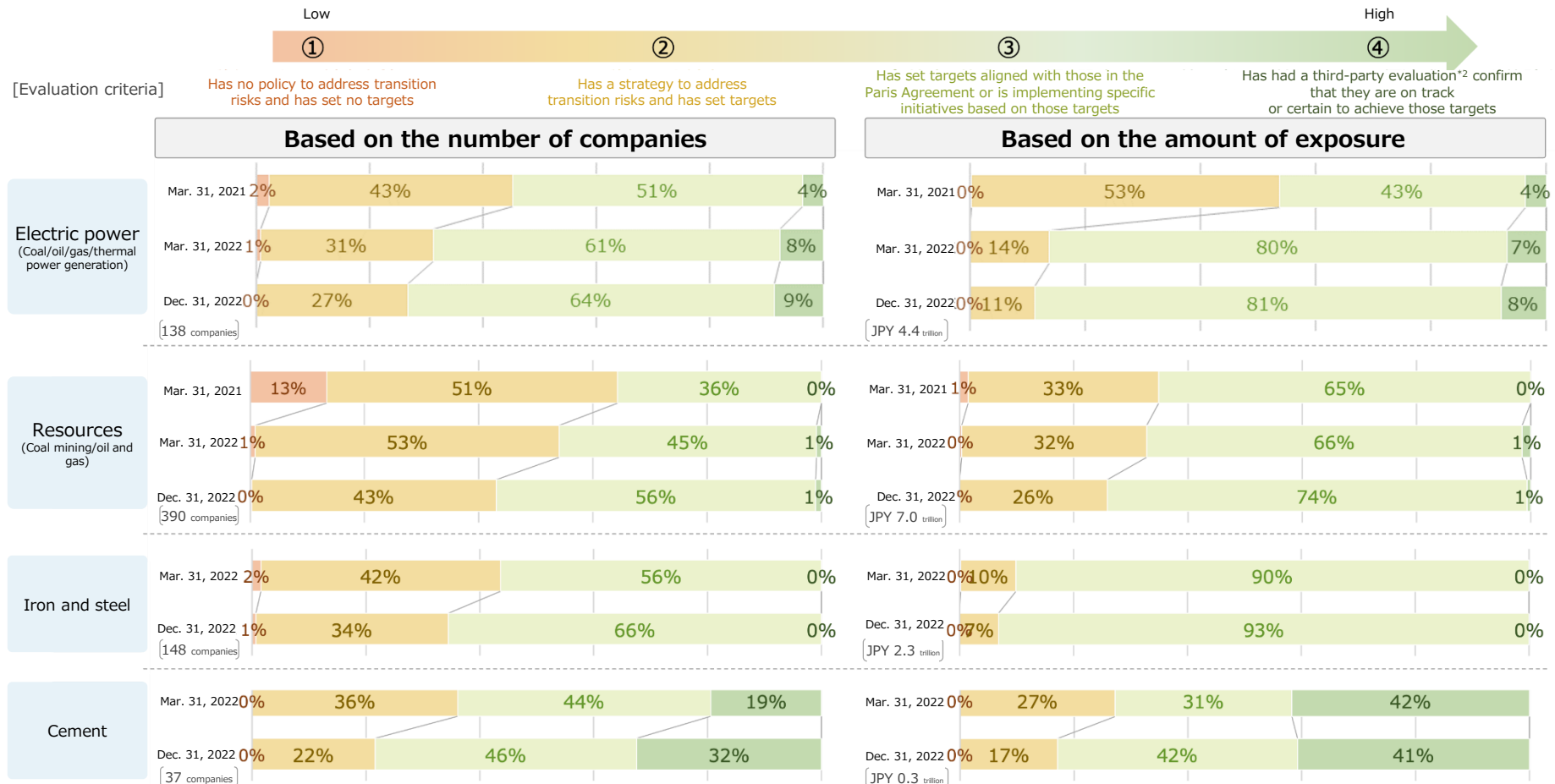
To realize a withdrawal and orderly transition from depending on fossil fuels, it is vital to encourage steady cutbacks in the fossil fuel demand by supporting a transformation of social infrastructure at large rather than divesting as a financial institution ahead of the transition in real economic activities. Mizuho has also taken this chance to further strengthen its other efforts, such as revising its Net Zero Transition Plan and its targets for sustainable finance and environment and climate change related finance. We will take an approach that transitions economic and industrial structures and broadens the practical use of new technologies in an earnest effort to decarbonize society at large.



## Developments in the client's status to response to the transition risks

- Mizuho confirms the progress of response to the transition risks of clients through engagement and supports the development of efforts toward transitions in stages
- The progress of response to the transition risks of clients has been advanced in each sector compared to previous fiscal years
- We will continue to monitor the progress of the response as one metric while working to enhance transparent classification methods

### Progress in the client's status to response to the transition risks<sup>\*1</sup>

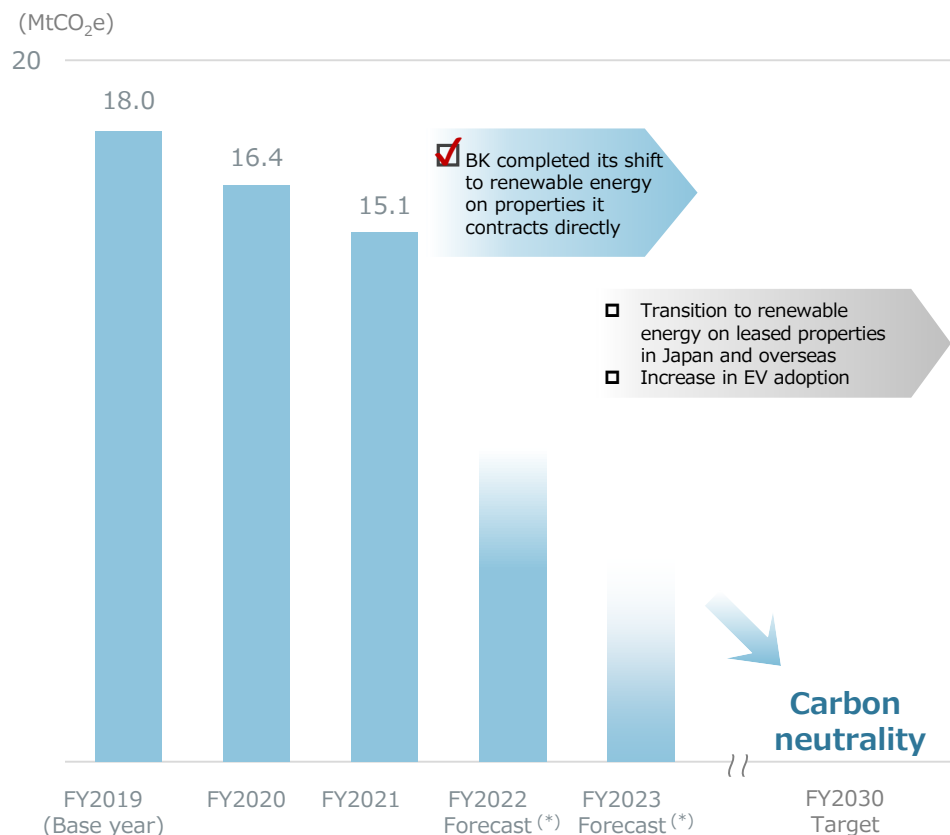


\*1 Target: Corporate credit for electric power (coal, oil and gas, and thermal energy generation; excluding renewable energy, nuclear power, and power transmission), resources (coal, oil and gas), iron and steel, and cement \*2 Science-Based Targets, etc.

## Mizuho's initiatives to reduce GHG emissions (Scope 1 and 2)

- In order to achieve carbon neutral by 2030, we have completed shifting approx. 70% of our electricity consumption to renewable energy in Scope 2 (domestic), which accounts for approx. 80% of our own GHG emissions.
- Hereafter, we will consider shifting to renewable energy for leased properties in and outside Japan that require coordination among related parties, and orderly introduction of electric vehicles (EVs) as well.

### GHG emissions results and targets (Scope 1 and 2)



### Initiatives to realize carbon neutrality

- We are prioritizing the reduction of domestic Scope 2 (emissions from electricity usage), which accounts for approx. 80% of our total emissions.
- We will also promote Scope 2 (outside Japan) and Scope 1 (emissions from usage of vehicles and others).

	Percentage of total (FY2019)	Initiatives up to FY2022	Future initiatives
Scope 2 (Electricity consumption in Japan)	79%	<p><b>Completed shifting approx. 70% of our electricity consumption to renewable energy</b> (Based on electricity usage)</p> <ul style="list-style-type: none"> <li>■ Shift to renewable energy at approx. 200 offices               <ul style="list-style-type: none"> <li>- Completed shifting to renewable energy of direct BK contracts, including large-scale properties</li> <li>■ Implementing the corporate power purchase agreements</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Promote shift to renewable energy at leased properties</li> </ul>
Scope 2 (Electricity consumption outside Japan)	7%	<p><b>Promote shifting to renewable energy at multiple offices</b></p> <ul style="list-style-type: none"> <li>■ Shift to renewable energy at some offices in Europe and Asia</li> </ul>	<ul style="list-style-type: none"> <li>■ Expand promotion to shift to renewables at each office</li> </ul>
Scope 1 (In and outside Japan)	8%	<p><b>Introduction of EV at trial</b></p> <ul style="list-style-type: none"> <li>■ EV was introduced on a trial basis at the BK branch to coincide with the shift to renewable energy</li> </ul>	<ul style="list-style-type: none"> <li>■ Consider increase in introduction of EVs based on trial results</li> </ul>

Data for seven group companies: Mizuho Financial Group, Mizuho Bank, Mizuho Trust & Banking, Mizuho Securities, Mizuho Research & Technologies, Asset Management One, and Mizuho Americas  
 \*Estimates reflect only the shift to renewable energy based on electricity consumption in FY2021

## Natural capital initiatives

- Mizuho recognizes natural capital initiatives as an important issue extremely relevant to climate change. We are working to reduce negative impacts on natural capital and support our clients' initiatives to transition to a nature-positive economy.

### Environmental consciousness

- In December 2022, the United Nations Biodiversity Conference (COP15) adopted the Kunming-Montreal Global Biodiversity Framework to clarify its objectives to encourage large multinational enterprises to disclose information and promote private investment in biodiversity. We recognize the potential acceleration of disclosures related to natural capital and private company initiatives toward a transition to a nature-positive economy, such as the formation of the Taskforce on Nature-related Financial Disclosures (TNFD) and the considerations underway about legally mandatory disclosure.
- Even as a financial institution, there is greater demand to disclose information relating to nature-related risks and opportunities and support our clients' initiatives to transition to a nature-positive economy.

### Mizuho's financing portfolio analysis

- Initial analysis of the relationship between Mizuho's financing portfolios and natural capital conducted by using ENCORE\*

Important natural capital	Water/Biodiversity (habitats and species)
Sectors with a large dependency and impacts on water and biodiversity	Processed foods and meat, oil and gas exploration, and forest products stand out Chemical, automotive, real estate, wholesale, and oil and gas exploration sectors stand out when considering the size of Mizuho's exposure
Opportunities	Many business opportunities in sectors with a high dependency/impacts and those that have technologies which contribute to the transition to nature-positive

- Even though the financing portfolios have been able to identify important natural capital and sectors, this is only our initial analysis. We see areas with room to further enhance these portfolios as the TNFD framework and analysis tools are updated.
- We also see huge room to advance client disclosure about locations, which are a vital factor in identifying risks related to natural capital. Mizuho will support initiatives to address client disclosure and a transition to a nature-positive economy.

### Mizuho's initiatives related to natural capital

Expansion of active support for the decarbonization of small and medium-sized enterprises (SMEs)

#### Japan's first blue bond/blue sustainability loan (SC/BK)

Water × Food

- Provision of financial solutions limiting funds to environmentally sustainable fisheries and aquaculture businesses

#### Support client's initiatives by positive impact finance (BK)

Biodiversity × Food

- Support of initiatives through positive impact finance that sets the sustainable procurement rate (paper, palm oil, planting soy, coffee beans, and beef) as one KPI

#### Support client's initiatives to visualize and disclose nature-related risks and opportunities (RT)

Biodiversity/Water × Food/chemicals

- Strengthening knowledge through participation in the TNFD Forum, and support for initiatives such as sustainable procurement of raw material and ensure traceability through satellite-based consulting

Financing and investment initiatives that reduce or mitigate negative impacts

#### Formulation and adoption of ES Policy

Biodiversity × Oil and gas, forestry

- Identification of businesses and sectors with a high potential of encouraging negative impacts in terms of biodiversity and established response policy. The policy is reviewed periodically.

\*Exploring Natural Capital Opportunities, Risks, and Exposure (ENCORE) is a tool to visualize the impact of environmental changes on the economy created in partnership with UNEP-FI, UNEP-WCMC, and Global Canopy

## Definition of sustainable finance/environment and climate change related finance

- The scope of sustainable finance is defined as follow.
- In light of the importance of finance that contributes to addressing climate change, we have revised the name of environmental finance to environment and climate change related finance as well as the scope of applicable finance.

### Applicable finance

- ✓ Finance for environmental and social businesses
- ✓ Finance that supports and promotes ESG/SDGs, including assessment, evaluation, or requirement to address ESG/SDGs

Type	Classification	Main applicable finance	Applicable business
Environment and climate change related finance	Green	Arranging of green loans/Underwriting of green bonds	Loans/underwriting
		Arranging of loans to competent green projects and businesses* <sup>1</sup>	Loans
	Mizuho's original products	Arranging of Mizuho Eco Finance	Loans
		Arranging of Mizuho Sustainability Real Estate Non-Recourse Loan	Loans
	Other	Investing green bonds/others	Financing and Investment
	Transition	Arranging of transition loans/transition-linked loans	Loans
		Underwriting of transition bonds/transition-linked bonds	Underwriting
	Sustainability* <sup>2</sup>	Arranging of sustainability loans/sustainability-linked loans	Loans/underwriting
	Mizuho's original products* <sup>2</sup>	Arranging of Sustainability-Linked Loan Pro/Sustainability-Linked Private Placement Bond Pro	Loans
		Arranging of Mizuho Positive Impact Finance	Loans
Arranging of Mizuho Positive Impact Finance PRO		Loans	
Infrastructure project finance	Investments through funds for transition/co-creation of value	Investment	
	Arranging of project financing for public transportation and facilities	Loans	
Mizuho's original products	SDGs promotion support loans/private placement bonds	Loans	
	Arranging of sustainable supply chain finance	Loans	
Social	Arranging of social loans/underwriting of social bonds	Loans/underwriting	
Other	Net increase in ESG/SDG investment products under management	Asset Management	
	Other financing and Investment	Financing and Investment	

### Review of applicable finance

These were previously included in sustainable finance and excluded from environment finance, but have been reclassified as environment and climate change related finance\*<sup>2</sup>

\*1 Eligible green projects under Mizuho's green bond framework

\*2 Only those contributing to addressing climate change are calculated as environment and climate change related finance

## Environmental and Social Management Policy for Financing and Investment Activity (Revision March 2023)

Sector	Before revision	After revision	*revised point stated in red
Coal mining (thermal coal)	<p>Summary of risks that Mizuho should recognize</p> <ul style="list-style-type: none"> <li>The mining of thermal coal, when not managed properly, entails the 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.</li> </ul> <p>Policy</p> <ul style="list-style-type: none"> <li>Our decisions regarding financing and investment for thermal coal mining companies involve a thorough examination of due care to the status of responses to the above risks.</li> <li>We do not provide financing or investment to companies with which we have no current credit transactions if the primary business of these companies is the mining of thermal coal.</li> <li>We do not provide financing or investment which will be used for new thermal coal mining projects or for expansion of existing thermal coal mines.</li> <li>For cases where it will be used for acquiring an interest in existing thermal coal mines, we may provide financing or investment for the project, based on careful consideration, only when it is vital to the stable energy supply of a country which has announced a target of net zero greenhouse gas emissions by 2050.</li> </ul>	<p>Scope of application</p> <ul style="list-style-type: none"> <li>Companies which run coal mining (thermal coal) operations</li> <li><b>Companies which run infrastructure operations linked with coal mining (thermal coal)</b></li> </ul> <p>Summary of risks that Mizuho should recognize</p> <ul style="list-style-type: none"> <li>Coal mining has a risk of enormous adverse impacts on the environment including those on ecosystems resulting from hazardous waste produced from coal mines and removed soil in the development process.</li> <li>Coal mining has risks as follows in the absence of proper management of the mining sites: casualties in mining accident, forced labor of mineworkers, and human rights abuse such as involuntary resettlement of indigenous peoples and local communities caused by development project.</li> <li>Produced coals have a risk of increasing greenhouse gas emissions when they will be burned for power generation.</li> </ul> <p>Policy</p> <p><u>Prohibitions</u></p> <ul style="list-style-type: none"> <li>Mizuho will not provide financing and investment to: <ul style="list-style-type: none"> <li>Companies with no existing financing and investment transactions and whose primary business is coal mining (thermal coal)</li> <li><b>Companies with no existing financing and investment transactions with us and whose primary business is infrastructure operations linked with coal mining (thermal coal)</b></li> </ul> </li> <li>Mizuho will not provide financing and investment which will be used for: <ul style="list-style-type: none"> <li>Development of new coal mine (thermal coal)</li> <li>Expansion of existing coal mine (thermal coal)</li> <li>Acquiring an interest in existing coal mine (thermal coal), unless it is critical to stable supply of energy of a country which set a target to achieve net zero greenhouse gas emissions by 2050 .</li> <li><b>Development of new infrastructure linked with coal mining (thermal coal)</b></li> <li><b>Expansion of existing infrastructure linked with coal mining (thermal coal)</b></li> </ul> </li> </ul> <p><u>Other policy</u></p> <ul style="list-style-type: none"> <li>When financing and investing in companies which run coal mining (thermal coal), statues of response to above risks would be carefully considered to make transactional decision</li> </ul>	



## Environmental and Social Management Policy for Financing and Investment Activity (Revision March 2023)

Sector	Before revision	After revision	*revised point stated in red
Oil/Gas	<p>Summary of risks that Mizuho should recognize</p> <ul style="list-style-type: none"> <li>Oil and gas extraction and pipeline entail the risk of adverse environmental and social impacts, which may include the pollution of oceans and waterways from oil spills or gas leaks, as well as violations of the human rights of indigenous peoples.</li> <li>In addition, pipeline projects have the risks of environmental degradation such as oil leaks not just during construction but in operation, deforestation, and violating the human rights of indigenous peoples.</li> <li>We recognize that the Arctic Circle (the region north of 66°33' latitude) requires consideration for the conservation of endangered species and for 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.</li> </ul> <p>Policy</p> <ul style="list-style-type: none"> <li>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.</li> <li>When providing financing or investment that will be used for oil or gas extraction in the Arctic, oil sands, shale oil, and shale gas extraction, and pipeline, we carry out appropriate environmental and social risk assessments.</li> </ul>	<p>Scope of application</p> <ul style="list-style-type: none"> <li>Companies which run oil and gas extraction business</li> <li>Companies which run pipeline operation</li> </ul> <p>Summary of risks that Mizuho should recognize</p> <ul style="list-style-type: none"> <li><b>Depending on production and development method, oil and gas extraction business has a risk of emitting more greenhouse gas because of methane gas leaks, flaring, the energy used in extraction process.</b></li> <li>Oil and gas extraction has a risk of enormous adverse impacts on the environment including marine and river pollution in the event of oil and gas spills.</li> <li>At both construction and operation, oil and gas pipelines have risks as follows: adverse impacts on the environment due to deforestation or oil spills; human rights abuse such as involuntary resettlement of indigenous peoples and local communities.</li> <li>The projects indicated below particularly impose enormous burden on the environment due to oil and gas extraction. They also have risks as follows: impacts on ecosystem, damages to biodiversity, and human rights abuse such as involuntary resettlement of indigenous peoples and local communities. <ul style="list-style-type: none"> <li>The Arctic (66° 33' N and beyond) is the region which requires special consideration for preservation of rare species as well as the lives of indigenous peoples.</li> <li><b>A large volume of greenhouse gas is emitted from oil sands because the production requires heat treatment. It also has such risks as: deforestation due to oil sands deposits development; creating an impact on water resources by using a large volume of water; soil and water pollution resulting from wastewater.</b></li> <li><b>Shale oil and gas extraction with fracking has such risks as: creating an impact on water resources by using a large volume of water; soil and water pollution resulting from wastewater; triggering earthquakes.</b></li> </ul> </li> </ul> <p>Policy</p> <p><u>Other policy</u></p> <ul style="list-style-type: none"> <li>When financing and investing in companies which run oil and gas, impacts on environment as well as trouble with indigenous people and local communities would be carefully considered to make transactional decision</li> <li><b>For new financing and investment which is used for oil and gas extraction, Mizuho will assess if sufficient measures are taken by the client to reduce greenhouse gas emissions.</b></li> <li>Mizuho will carry out an appropriate environmental and social risk assessment based on operation-specific risks, for financing and investment which will be used for: <ul style="list-style-type: none"> <li>Oil and gas extraction in the Arctic</li> <li>Oil sands extraction</li> <li>Shale oil and gas extraction</li> <li>Pipelines</li> </ul> </li> </ul>	

## Abbreviations

<b>FG</b>	: Mizuho Financial Group, Inc.	<b>RBC</b>	: Retail & Business Banking Company
<b>BK</b>	: Mizuho Bank, Ltd.	<b>CIBC</b>	: Corporate & Investment Banking Company
<b>TB</b>	: Mizuho Trust & Banking Co., Ltd.	<b>GCIBC</b>	: Global Corporate & Investment Banking Company
<b>SC</b>	: Mizuho Securities Co., Ltd.	<b>GMC</b>	: Global Markets Company
<b>AM-One</b>	: Asset Management One Co., Ltd	<b>AMC</b>	: Asset Management Company
<b>RT</b>	: Mizuho Research & Technologies, Ltd.	<b>GTU</b>	: Global Transaction Unit
<b>FT</b>	: Mizuho-DL Financial Technology Co., Ltd.	<b>RCU</b>	: Research & Consulting Unit
<b>LS</b>	: Mizuho Leasing Company, Limited		

### Forward-looking Statements

Financial information in this presentation uses figures under Japanese GAAP unless otherwise stated (including management accounting basis).

This presentation contains statements that constitute forward-looking statements including estimates, forecasts, targets and plans.

These statements reflect our current views with respect to future events and are subject to risks, uncertainties and assumptions.

Such forward-looking statements do not represent any guarantee of future performance by management.

Further information regarding factors that could affect our financial condition and results of operations is included in our most recent Form 20-F and our report on Form 6-K.

We do not intend to update our forward-looking statements. 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, except as may be required by the rules of the Tokyo Stock Exchange.

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