

TCFD Scenario Analysis

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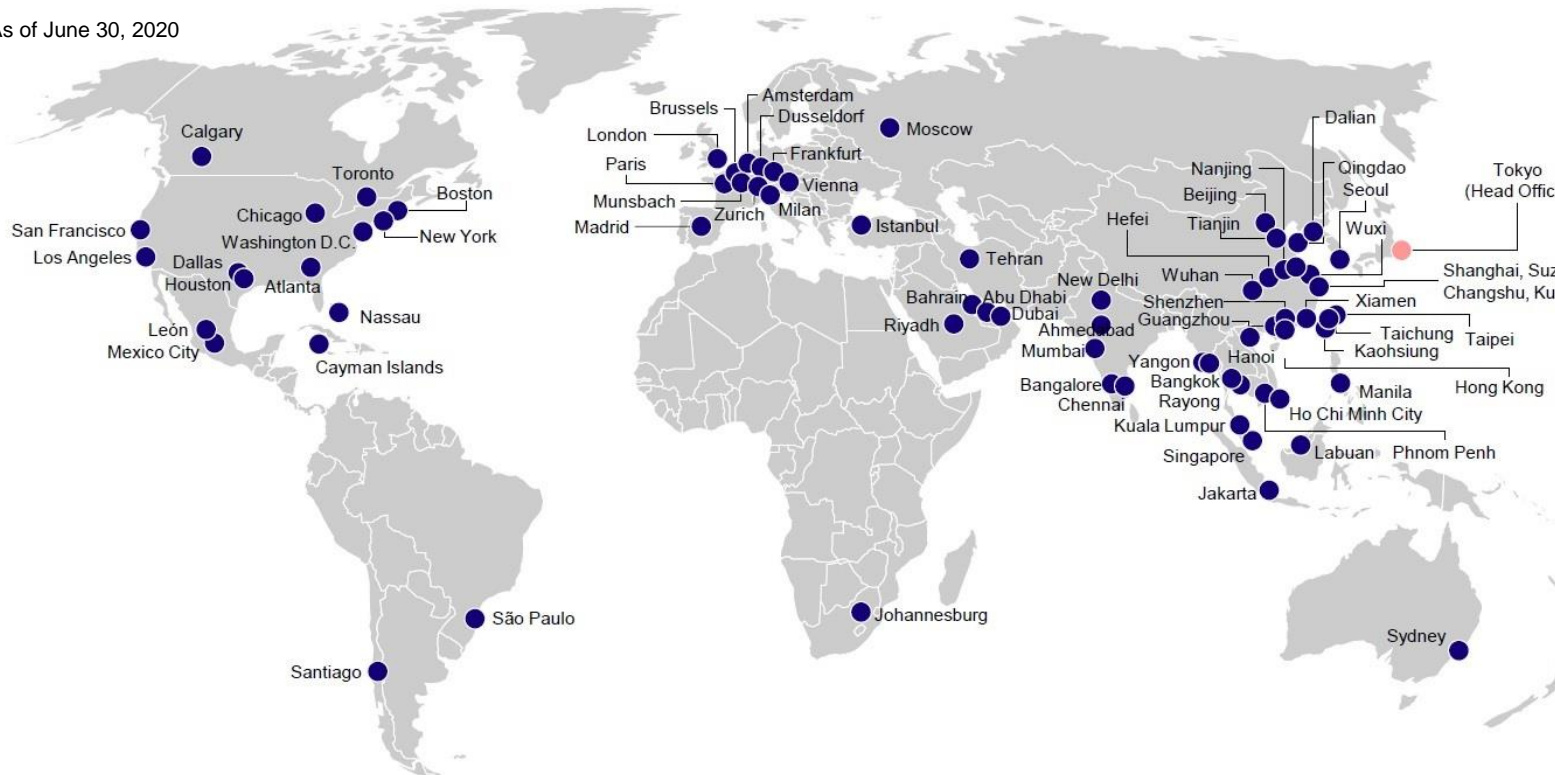
Mizuho Financial Group

MIZUHO

Mizuho Financial Group -Overview-

Mizuho is one of the largest full-service financial institutions in Japan, with a global footprint in 39 countries. Mizuho has the longest banking history among Japanese peers.

As of June 30, 2020



80% coverage
Forbes Global 200*¹

*¹Top 200 corporations from Forbes Global 2000 (excluding financial institutions)

70% coverage
listed companies
in Japan

Green and Sustainability MLA

Asia Pacific

1 Apr 2019 - 31 Mar 2020

by volume (Source: Refinitiv)



Renewable Project Finance

Asia Pacific

1 Jan 2019 - 31 Dec 2019

by volume (Source: IG Global)



Recent Initiatives regarding Climate Change

Governance

- Established our Environmental Policy
 - Clarified our stance on climate change
 - Clarified oversight by the Board of Directors

Strategy

- **Scenario analysis**
 - Qualitative & quantitative evaluation
- Group-wide sustainable business promotion
 - Sustainability strategic meeting

Risk Management

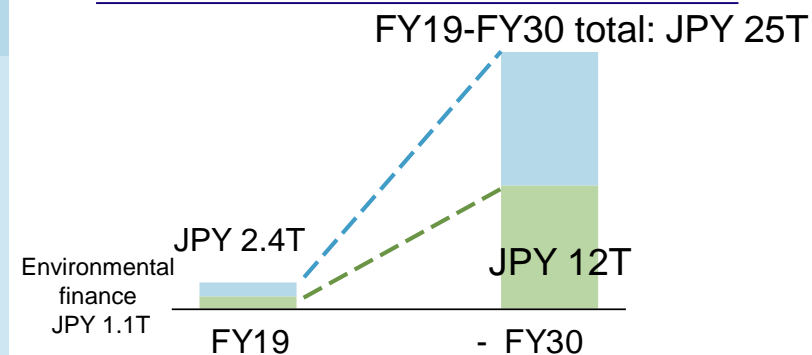
- Positioned climate change risk as “emerging risks” under the Top Risk management
- Strengthened policy for financing & investments
 - No more financing for new coal-fired power generation projects
 - New policy for coal mining sector
 - New policies for ESG related matters

Metrics & Targets

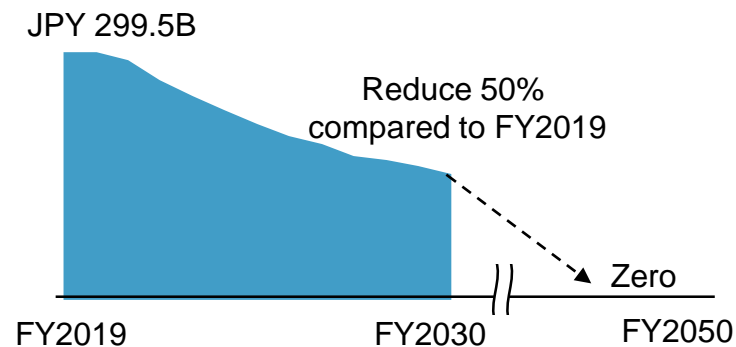
- Set targets to support sustainable & environmental finance, and to reduce our exposure to coal-fired power generation projects



Sustainable & environmental finance



Exposure to coal-fired power generation



TCFD Scenario Analysis – Our Approach

■ Qualitative evaluation

Sector	Transition risk	Physical risk	Opportunity
Electric utilities	High	Medium	Large
Oil & gas	High	Medium	Medium
Coal	High	Medium	Small
Logistics	Medium	Medium	Medium
Automobiles	Medium	Medium	Large
Metals & mining	Medium	Medium	Medium
Chemical	Medium	Medium	Medium
Agriculture, food & forestry	Medium	High	Medium
Steelmaking	Medium	Medium	Small

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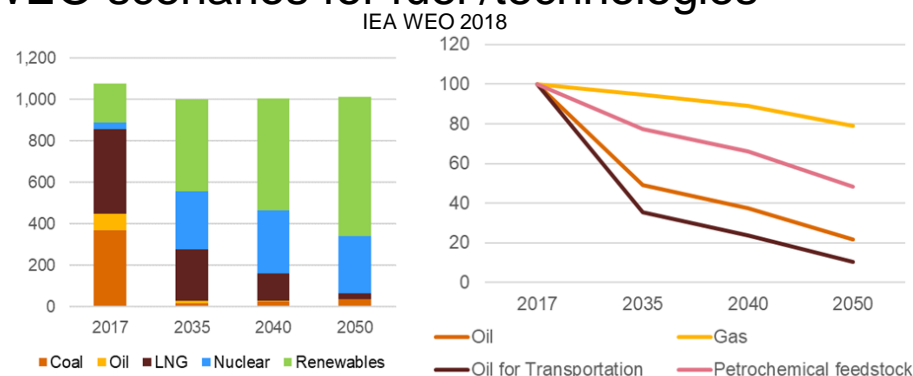
* In this qualitative evaluation, “real estate” does not indicate impacts on the real estate business but rather on real estate property, broadly speaking (for example, risk of wind or water-related damage to buildings, risk of rising sea levels submerging land, etc.).

■ Transition risk analysis

Scope: Electric utilities / oil, gas & coal
Scenario: IEA WEO 2018 SDS & NPS

SDS
NPS

- Each firm in the sectors follows WEO scenarios for fuel /technologies



- Then firms write off capacities/reserves which exceed the expected demands
- Assessed internal credit rating changes

■ Physical risk analysis

Scope: Real estate properties in Japan
Scenario: IPCC 5AR (RCP2.6 & RCP8.5)

- Calculated typhoon & heavy rain impact on properties with Monte Carlo simulation
- Estimated credit costs by damage on collaterals and indirect impacts on business operations (supply-chain, etc.)

TCFD Scenario Analysis – Transition Risk Analysis with Business Structure Change

■ Scenario design:

We employed **2** Climate Scenarios **×** **2** Business Structure Scenarios

SDS	NPS	Dynamic	Static
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■ With this design, we identified...

– **Dynamic** scenario

- Assumption: Firms will **invest in new assets** of which capacity is less than the demand, and **transform their business structure**.
- Result: In the short term, they would experience negative effects due to more CapEx for business transformation, whereas in the mid-to-long term, they would perform financially well under each climate scenario.

– **Static** scenario

- Assumption: Firms will **NOT invest for opportunities**, and NOT be able to transform their business structure.
- Result: With no business transformation, some would experience serious financial impacts on their business in the mid-to-long term.

– **Credit cost under the Dynamic scenario is less than Static scenario**

– **It is important for Mizuho to engage with clients; de-carbonization, and positive financial impact for both clients & Mizuho**

Climate Scenario Analysis – Key Lessons

■ Internal Discussions

- Raised awareness on climate change risks and opportunities for board members and top management
- HOWEVER enlightening the front office is still on-going
 - ✓ Quantitative assessment of client's transformation leads to **better business for both clients and Mizuho in the mid-to-long term; conversely, no transformation benefits no one.**
- Not all TCFD's carbon-related sector exposure are bad assets.
- Not just divestment, but engagement leads to better future

■ Expectation to TCFD reports

- Firms who have action plans for climate-related risks will capture opportunities for growth; **TCFD report with scenario analyses by our clients will help us understand risks and opportunities.**
- We can support clients to transform their business structure towards de-carbonization.

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