

# Progress of Our Approach to Carbon Neutrality

Mar. 29, 2024

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# 1 Introduction

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# Road Map and Progress Toward Carbon Neutrality

- Climate change is one of the most serious environmental issues which threaten sustainability of the global economy and society, and we have confronted them as a prioritized social issue
- We announced the Carbon Neutral Commitment in Oct. 2021 and we will report our progress in various efforts toward carbon neutrality through joining Net-Zero Banking Alliance (NZBA)<sup>\*1</sup> and Net Zero Asset Managers initiative (NZAMI)<sup>\*2</sup>

HD SuMi TRUST HD Bank SuMi TRUST Bank AM SuMi Trust AM, Nikko AM

Item	Progress from the previous report in Oct. 2023 and future policy
① Our overall policy toward carbon neutrality	<ul style="list-style-type: none"> <li>Formulated the sectoral strategies for the “Real estate”, “Shipping” sectors based on the NZBA in Mar. 2024 (-&gt;P21-26) <span>Bank</span></li> </ul>
② Net zero GHGEs from investment and loan portfolio	<ul style="list-style-type: none"> <li>Set the 2030 Intermediate targets in Mar. 2024 <span>Bank</span></li> <li><span>Set</span> “Iron &amp; Steel” “Automotive” (-&gt;P6-14) <span>Rivised</span> “Shipping” (changed reference scenarios for targets) (-&gt;P19)</li> <li>Disclosed results for FY2022 of the sectors for which we had set targets, in Mar. 2024 (-&gt;P15-20) <span>Bank</span></li> <li>Established “ERM SuMi TRUST Consulting Ltd.” with ERM Japan Ltd., the Japanese subsidiary of the ERM Group, a consulting firm specializing in sustainability, released in Feb. 2024 (-&gt;P28) <span>Bank</span></li> </ul>
③ Net zero GHGEs from AUM portfolio	<ul style="list-style-type: none"> <li>Disclosed the results of reduction in GHGEs from AUM portfolios in Dec. 2023 <span>AM</span> (SuMi Trust AM: from Jun. 2023, Nikko AM: from Dec. 2022)</li> </ul>
⑥ Net zero GHGEs from OWN GROUP (Scope1, 2)	<ul style="list-style-type: none"> <li>Obtained third-party assurances for a portion of Scope 1 &amp; 2 for FY2022 on SMTB's non-consolidated basis in Dec. 2023 <span>Bank</span></li> <li>Measurement of Scope3, Category1 to 7 (except 4) in FY2022 for SMTB's branch offices in Japan in Dec. 2023 <span>Bank</span></li> </ul>
Process sophistication	<ul style="list-style-type: none"> <li>Expanded the scope of climate change scenario analysis as below in Dec. 2023 <span>Bank</span> Transition Risk: Overseas business corporations Physical Risk: Solar Power Project Finance in Japan</li> </ul>
Governance / Framework reinforcement	<ul style="list-style-type: none"> <li>Added progress in NZBA intermediate reduction targets for the “Real estate,” “Shipping,” “Iron &amp; Steel,” and “Automotive” sectors to be managed under the Risk Appetite Framework in Mar. 2024 <span>HD</span></li> </ul>

Please also refer to TCFD REPORT 2023/2024 for the information on initiatives as of December 2023 [link](#)

\*1: A banking industry's alliance established by UNEP FI with the aim to achieve net-zero greenhouse gas emissions (“GHG emissions” “GHGEs”) from investment and loan portfolios by 2050.

Sumitomo Mitsui Trust Holdings (SuMi TRUST HD) Joined NZBA

\*2: Asset managers' initiatives with the aim to achieve net-zero GHG emissions from AUM portfolios by 2050. Sumitomo Mitsui Trust Asset Management (SuMi Trust AM) and Nikko Asset Management (Nikko AM) joined NZAMI

\*3: See our HP about Risk Appetite Framework [link](#)

## Road Map and Progress Toward Carbon Neutrality (2)

		2019	2020	2021	2022	2023	>>	2030	2040
		CN Commitment			Transition Plan				
		: Newly announced    Red : Baseline    Green : Targets							
<b>① Policy toward carbon neutrality (CN) by 2050</b>		CN Commitment			Transition Plan				
<b>② Net zero GHGEs in inv. &amp; loan portfolio (NZBA)</b>		Joined							
Formulated Sectoral Strategy	Power generation (intensity, g-CO <sub>2</sub> e/kWh)		249	243	253	>>		138 – 173	
	Oil & Gas (reduction ratio, Mt - CO <sub>2</sub> e)		3.6	(4) %	+19%	>>		(13)% – (31) %	
	Real estate (intensity, kg-CO <sub>2</sub> e/m <sup>2</sup> ) <sup>*1</sup>			66	62	>>		34 – 41	
	Shipping (Portfolio Climate Alignment) <sup>*1</sup>		old(0.8) %	old(0.4) %	New(striving) (min)+21.2% +16.9% old(4.5) %	>>		≤ 0%	
	Iron & Steel (reduction ratio, Mt-CO <sub>2</sub> e)		4.3	(4) %	(15) %	(22) %	>>		(22)% – (27) %
Auto-motive	Production (reduction ratio, Kt-CO <sub>2</sub> e)		224	(19) %	(26) %	(30) %	>>		(47) %
	Products (intensity, g-CO <sub>2</sub> e/vkm )		202	203	196	>>		106 – 128	
<b>③ Net zero GHGEs in AUM portfolio (NZAMI)</b>		Joined							
Sumitomo Mitsui Trust Asset Management						(8.7)% from June, 2021 <sup>*2</sup>	>>	Halve intensity of 50% of AUM <sup>*3</sup> from 2019	
Nikko Asset Management						(22.8) % <sup>*4</sup>	>>	Halve intensity of 43% of AUM <sup>*4</sup> from 2019	
<b>④ Total amount of provided sustainable financing<sup>*5</sup></b>				¥0.83 trn	Approx. ¥2 trn	>>		¥15 trn	
<b>⑤ Loan balance for coal-burning power plants (¥ bn)</b>									
For projects		133.8	141.5	142.7	Approx. 140	>>		Halve from Mar. 31, 2020	Zero
For corporations (new / expansion)				20.1	Approx. 14	>>			Zero
<b>⑥ Net Zero GHGEs from OWN GROUP (Scope1, 2) (t-CO<sub>2</sub>e)</b>				23,763	9,997	>>		Net Zero	
SuMi TRUST Bank Group <sup>*6</sup> (branch offices in Japan)				22,228	6,952 <sup>*7</sup>		FY25: 7,224 <sup>*8</sup>		

\*1: Newly formulated sectoral strategy

\*2: Results in 2023 was compared with June 2021, though the target is set using the data of 2019 as the baseline. Because the emission data of 2019 was used to calculate the results of the 2021 portfolio

\*3: Targeting 43 trillion yen, 50% of 85 trillion yen of total AUM as of Jun. 30, 2021. Excluded sovereign bonds, etc., for which a calculation method has not been established yet, but will be successively added to the targets, when a method is established

\*4: Targeting about 13 trillion yen, 43% of 31 trillion yen of total AUM as of Dec. 31, 2021. Actual results for 2022 are based on December 2022

\*5: Sustainable finance is a general term for financial services (inc. Impact Equity) to businesses and clients who contribute to solving environmental / social issues based on international standards such as the Green Bond Principles and Social Bond Principles

\*6: On a consolidate basis of SuMi TRUST Bank as a top and other group companies including subsidiaries such as Sumitomo Mitsui Trust Panasonic Finance and Sumitomo Mitsui Trust Loan & Finance

\*7: Renewable energy was partially introduced into SMTB's branch offices in Japan in FY2022

\*8: Joined the GX League in FY2023 and set the intermediate targets, but GHGES from our internal commercial vehicles are excluded from the targets for FY2025

## 2 2030 Intermediate Target - Setting / SuMi TRUST Bank

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## Select Sectors

- SuMi TRUST Bank set targets for the “Iron & Steel” and “Automotive” sectors in addition to “Power generation” and “Oil & Gas” in FY2022 and “Real estate” and “Shipping” in FY2023. These sectors account for 78% of global CO<sub>2</sub> emissions by sector, 50% by fuel, and 94.7% of NZBA’s 9 sectors’ emissions as for its financed emissions

### Flow of setting Target

#### 9 sectors selected by NZBA to set target

- Power generation
- Real estate
- Iron & Steel
- Cement
- Agriculture
- Oil & Gas
- Transport\*1
- Coal
- Aluminum

Evaluate sectors by “degree of transition risk” x “size of exposure”

		Exposure rank		
		Small	Medium	Large
Sector heat map risk rank	Very High	Coal	Iron & Steel	Power generation Oil & Gas
	High	Cement	Chemistry Transport (Passenger Airplane)	Transport (Automotive, Components Shipping)
	Middle	Metal & Mining, Aluminum		Capital goods
	Low	Air cargo, Agric., Construction materials	Paper & Forest Products, Packed Food & Meat, Beverage, Transport (Trucking Services)	Real estate Transport (Railway)

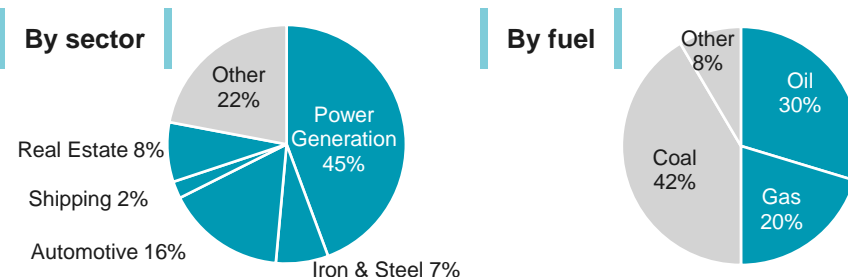
Select target sectors based on the climate change transition risk / sector heat map\*2

Already	This time	Examining
<ul style="list-style-type: none"> <li>Power generation (Oct. 2022)</li> <li>Oil &amp; Gas (Feb. 2023)</li> </ul>	<ul style="list-style-type: none"> <li>Real estate (Oct. 2023)</li> <li>Shipping (Oct. 2023)</li> </ul>	<ul style="list-style-type: none"> <li>Transport (Air, Land)</li> <li>Coal</li> <li>Cement</li> <li>Aluminum</li> <li>Agriculture</li> </ul>

### Cover ratio

- Target has been set
- Target has not been set yet

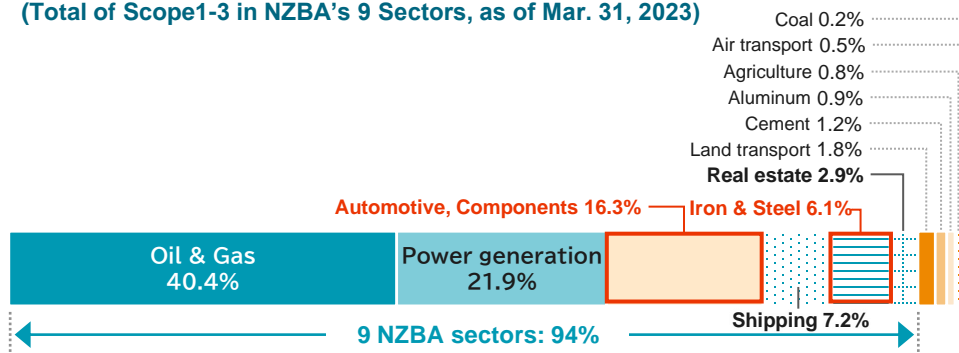
#### World CO<sub>2</sub> emissions (2022)



(Source) IEA World Energy Outlook 2023

#### Financed emissions of SuMi TRUST Bank

(Total of Scope1-3 in NZBA’s 9 Sectors, as of Mar. 31, 2023)



(Source) GHG emissions by sector in our “TCFD REPORT 2023/2024” (P73)

\*1: The transport sector is divided into “Automotive” “Shipping” “Land” “Air” subsectors and targets are being set based on GHG emissions, exposure, data availability in accordance with NZBA guidelines.

\*2: Set in FY2022 and updated in FY 2023 to identify important sectors for transition risk management associated with climate change. For more information, refer to our “TCFD REPORT 2023/2024” (P61)

# Iron & Steel Sector (1)

- Set intermediate reduction target reflecting the features of the Iron & steel sector in Japan

## Target Setting Process

### Step 1

#### Sector's feature

- [GHGEs] 7% of the world GHGEs,<sup>\*1</sup> according to the IEA
- [Major Emission Sources] Steel manufacturing (over 70% of emissions in the steel sector<sup>\*2</sup>)
- [Importance] +30% from 2022 to 2050.<sup>\*1</sup> Steel is expected to play a central role in a carbon neutral society, including electromagnetic steel sheets for automotives and monopiles for offshore wind turbines<sup>\*2</sup>
- [Steel industry in Japan] Already achieved high energy efficiency. In order to decarbonize while maintaining high quality, which is its strength, development and introduction of innovative technologies is necessary. So, it is a very important sector for financial institutions, as it requires a large amount of funds
- [Transition risk sector heat map] Risk rank is very high, and exposure rank is medium. Prioritized sector for response

### Step 2

#### Identify key driver

- [Key Driver] Improving CO<sub>2</sub> emission efficiency in the steel manufacturing process, considering the increasing demand for steel
- [Medium-term] Steady decarbonization efforts such as saving energy and improving efficiency, and renewable energy
- [Long-term] Innovative technologies such as high-grade steel manufacturing in large-sized EAFs,<sup>\*3</sup> hydrogen injection into BF<sup>\*4</sup> by COURSE50 (reduction utilizing on-site hydrogen) and Super COURSE50 (reduction utilizing external hydrogen), hydrogen use in direct reduction, and CCUS<sup>\*5</sup>

### Step 3

#### Set intermediate target

- [Scope, measuring indicator] Absolute emissions of Scope1 and 2 used by major Japanese steelmakers for 2030 target. It takes many years<sup>\*6</sup> to introduce innovative technologies and production methods that enable both high quality and decarbonization
- [Base year] The base year was set at FY2019 considering the decline in production caused by COVID19

Knowledge through examination for setting targets



Knowledge and understanding through engagement

## Engagement

- Provide our various solutions related to decarbonization in addition to financial support, through engagement with clients in the sector
- Not only achieve the intermediate target of the investment and loan portfolio, but also contribute to clients' transition toward carbon neutrality

\*1: (Source) IEA World Energy Outlook 2023 \*2: (Source) Ministry of Economy, Trade and Industry "Technology Roadmap for "Transition Finance" in the Iron and Steel Sector" \*3: Electric Arc Furnace

\*4: Blast Furnace \*5: Carbon dioxide Capture, Utilization and Storage

\*6: According to the roadmap in \*2, the introduction of COURSE50 and partial hydrogen use in direct reduction is scheduled for 2030 or later, and the introduction of Super COURSE50, CCUS, 100% hydrogen use in direct reduction, and large-sized EAFs for 2040 or later

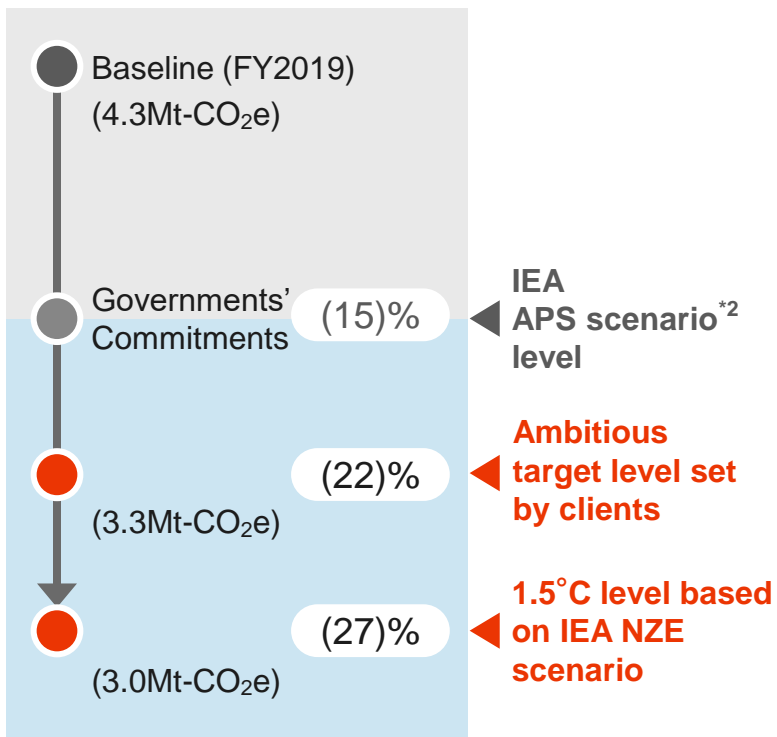


# Iron & Steel Sector (2)

- Set intermediate reduction targets in the range (-22% to -27%) between the IEA NZE scenario level<sup>\*1</sup> and the ambitious reduction target level set by clients toward carbon neutrality in 2050 to support the transition of the real economy

## Intermediate Target for 2030

% : reduction rate compared to the baseline



## Concept for Setting Target for 2030

<b>Target level set by clients</b>	<ul style="list-style-type: none"> <li>Levels in line with ambitious reduction targets set by clients to achieve carbon neutrality by 2050 (-22%)</li> </ul>
<b>1.5°C target</b>	<ul style="list-style-type: none"> <li>Reduction rate (-27%) aligned with the 1.5°C level based on the NZE scenario of the IEA</li> </ul>

## Major Premise of Calculating Emissions

<b>Target value chain</b>	<ul style="list-style-type: none"> <li>Steel manufacturing process, which accounts for the majority of emissions, of steel makers in the GICS<sup>*3</sup></li> </ul>
<b>Target scope</b>	<ul style="list-style-type: none"> <li>Scope1 and 2</li> </ul>
<b>Target investment &amp; loan</b>	<ul style="list-style-type: none"> <li>Lending, acceptance and guarantee, corporate bonds and strategic shareholdings (including unused pledged lending)</li> <li>Cover ratio: over 85%</li> </ul>
<b>Calculation method</b>	$\sum \left( \text{Emissions From a client} \times \frac{\text{Balance of inv. and loan to a client}^{*4}}{\text{Funds raised by a client}^{*4}} \right)$

\*1: A scenario to restrain the increase of the world mean temperature to 1.5 degrees Celsius with a probability of 50% or more announced by the IEA

\*2: Announced Pledges Scenario, assuming all announced government pledges (including those not yet implemented) are implemented (targeting approx. 1.7°C rise in temperature in 2100)

\*3: Global Industry Classification Standard, industry classification jointly developed by S&P, a rating agency, and MSCI, which provides analytical tools to investors

\*4: The amount of funding for the attribution factor is based on the amount of interest-bearing debt and net assets in the client's financial statements. Similarly, the balance of strategic shareholdings included in the balance of investments and loans is calculated based on the net asset value in the client's financial statements

## Iron & steel sector (3)

Outline of premise to set target		Background and details of premise	Guideline
<b>Fiscal year</b>			
Base Year	<b>FY2019 (Mar. 31, 2020)</b>	<ul style="list-style-type: none"> <li>Generally, the base date needs to be set within 2 years before disclosure</li> <li>However, considering dropped production due to COVID-19, we set FY2019 as the base year</li> </ul>	NZBA
Target Year	<b>2030</b>	<ul style="list-style-type: none"> <li>The intermediate target needs to be set for 2030 or before</li> </ul>	NZBA
<b>Calculation target</b>			
Inv. & loan	<b>Lending, acceptance and guarantee, corporate bonds and strategic shareholdings (including unused pledged lending)</b>	<ul style="list-style-type: none"> <li>Targeted the exposure of credit businesses<sup>*1</sup></li> <li>Included unused pledged lending</li> </ul>	NZBA
Cover ratio of inv. & loan	<b>Over 85% of target investments &amp; loans</b>	<ul style="list-style-type: none"> <li>Selected corporations whose GHGEs and financial data are available</li> </ul>	PCAF, NZBA
Business / Scope	<b>Scope1 and 2 for steel production</b>	<ul style="list-style-type: none"> <li>Most of GHGEs are emitted directly or indirectly from the steel manufacturing process in a blast furnace, etc.</li> </ul>	NZBA, SBTi
<b>Calculation method</b>			
Measuring indicator	<b>Absolute emissions (Mt-CO<sub>2</sub>e)</b>	<ul style="list-style-type: none"> <li>Selected “absolute emissions” which were used as a target indicator by most clients, in order to directly grasp their progress in GHGEs reduction</li> </ul>	NZBA
Calculation formula of indicator	$\sum \left( \text{Emissions from a client} \times \frac{\text{Balance of inv. \& loan to a client}}{\text{Total funds raised by a client}} \right)$	<ul style="list-style-type: none"> <li>Applied the methodology of PCAF, which is a global standard</li> <li>Total funds consist of a client's interest-bearing debt and net assets amount. The balance of strategic shareholdings included in the balance of inv. &amp; loan was calculated based on the client's net assets amount</li> </ul>	PCAF (partially our methodology)
Reference scenario	<b>1.5°C target: IEA NZE In line with the ambitious reduction target level set by clients</b>	<ul style="list-style-type: none"> <li>Referred to the IEA scenario (globally approved and a global standard of the banking industry)</li> <li>Also referred to the ambitious reduction targets of our clients in order to reflect their challenges to decarbonization</li> </ul>	NZBA
Used data	<b>Disclosed information of an individual client</b>	<ul style="list-style-type: none"> <li>Adopted only highly reliable sources</li> </ul>	NZBA
Quality of used data	<b>PCAF score<sup>*2</sup> 1.1</b>	<ul style="list-style-type: none"> <li>Used only disclosed information (PCAF score 2 or higher)</li> </ul>	PCAF, NZBA

\*1: Targeting credit transactions of SuMi TRUST bank, SuMi TRUST Bank (Thai) and Sumitomo Mitsui TRUST Panasonic Finance

\*2: Original score of PCAF with 5 grades from 1 to 5, which shows the quality of the data. A score reflects the degree of estimation, the score1 being the highest in quality.

“1.1” is the sectoral average or the weighted average of the balance of investments and loans

# Automotive sector (1)

- Set intermediate reduction targets based on the features of the automotive sector and the differences in decarbonization efforts by value chain

## Target Setting Process

### Step 1 Sector's feature

- [GHGEs] 16% of the world GHGEs\*<sup>1</sup>, according to the IEA
- [Major Emission Sources] While driving (approx.80% of emissions in the automotive sector\*<sup>2</sup>)
- [Importance] Automotives will continue to be an important foundation for people's lives and economic activities in 2050, and the demand is expected to increase towards 2050.\*<sup>1</sup> Efforts towards decarbonization are essential for the sector
- [Transition risk sector heat map] Risk rank is high and exposure rank is large. Prioritized sector for response

### Step 2 Identify key driver

- [Key Driver] Improving emission efficiency in fuel consumption during driving, given the increasing demand for vehicles
- [Tank-to-Wheel\*<sup>3</sup>] Promoting development and sales of Zero Emission Vehicles (ZEV), including infrastructure development such as charging facilities. Reduction of emissions during driving by improving fuel efficiency of existing powertrain vehicles through using low-carbon fuels, etc
- [Well-to-Tank\*<sup>3</sup>] Reduction of emissions during energy production in the "Power generation" and "Oil & Gas" sectors

### Step 3 Set intermediate target

- [Design] Targeting automakers of finished vehicles in order to improve emission efficiency during the life cycle of the vehicles for sale. As the approach to decarbonization required for businesses at "production (Scope1, 2)" and "use of sold products" (Scope3 category11)" is different, absolute emissions (Kt-CO<sub>2</sub>e) were used for Scope1, 2 and emissions intensity (g-CO<sub>2</sub>e/vehicle-km (vkm)) was used for Scope3 Category11 based on Well-to-Wheel (WtW)\*<sup>3</sup>
- [Car model] Passenger vehicles and light commercial vehicles (gross vehicle weight < 6t) for data availability
- [Base year] The base year was set at FY2019 considering the decline in production caused by COVID19

Knowledge through examination for setting targets



Knowledge and understanding through engagement

## Engagement

- Provide our various solutions related to decarbonization in addition to financial support, through engagement with clients in the sectors
- Not only achieve the intermediate target of the investment and loan portfolio, but also contribute to clients' transition toward carbon neutrality

\*1: (Source) IEA World Energy Outlook 2023 \*2: (Source) Ministry of Economy, Trade and Industry "Technology Roadmap for "Transition Finance" in the Automobile Sector"

\*3: Tank-to-Wheel (TtW): CO<sub>2</sub> emissions generated by fuel consumption during driving, Well-to-Tank (WtT): CO<sub>2</sub> emissions from fuel production and transportation

Well-to-Wheel: Indicator of overall CO<sub>2</sub> emission efficiency of a vehicle (adding WtT to TtW)

# Automotive sector (2)

- In the automotive sector, we set targets for each scope, as the decarbonization efforts at “production” and at “use” are different
- For use of sold products (Scope3 Category11), the transition to the real economy requires efforts based on regional energy characteristics, so we have set targets in the range of 1.5°C and 2°C

Target Scope	[Production] Scope1, 2	[Use of products] Scope3 Category11 (WtW)
<b>Target Value Chain</b>	▪ Manufacturers of finished passenger vehicles and finished light commercial vehicles (gross vehicle weight < 6t)	
<b>Measuring indicator</b>	Absolute Emissions	Emissions Intensity (GHGEs per vehicle per km)
<b>Target for 2030</b> (%: the reduction rate compared to the base year)	<p>Baseline (FY2019) (224kt-CO<sub>2</sub>e)</p> <p>1.5°C Target (47)% (120 kt-CO<sub>2</sub>e) ← <b>SBTi 1.5°C level*1</b></p>	<p>Baseline (FY2019) (202g-CO<sub>2</sub>e/vkm)</p> <p>2°C Target (37)% (128 g-CO<sub>2</sub>e/vkm) ← <b>SBTi B2D scenario*2 level</b></p> <p>1.5°C Target (48)% (106 g-CO<sub>2</sub>e/vkm) ← <b>IEA NZE scenario*3 level</b></p>
<b>Concept for Setting Target for 2030</b>	<p><b>1.5°C Target</b></p> <ul style="list-style-type: none"> <li>▪ In order to limit temperature rise to 1.5°C, support clients in transitions through engagements and aim for the reduction rate (-47%) aligned with the 1.5°C level*1 through the SBTi’s total reduction approach</li> </ul>	<p><b>Well below 2°C level or “2°C Target”</b></p> <ul style="list-style-type: none"> <li>▪ Refer to reduction rate (-37%) aligned with B2D scenario*2 of SBTi, considering the energy characteristics of the region</li> </ul> <p><b>1.5°C Target</b></p> <ul style="list-style-type: none"> <li>▪ In order to limit temperature rise to 1.5°C, support clients in transitions through engagements and aim for the reduction rate (-48%) aligned with the IEA NZE scenario</li> </ul>

\*1: A methodology for target setting defined by the SBTi to reduce total GHGEs at the same rate for all companies, regardless of their initial emissions. Applicable to many sectors

\*2: A benchmark scenario for the target temperature set by the SBTi, abbreviation for Beyond 2°C Scenario, with which zero emissions will be achieved in 2060 and the temperature will not exceed 1.75°C with a 50% probability (as of December 2023)

## Automotive sector (3) Production (Scope1, 2)

Outline of premise to set target		Background and details of premise	Guideline
<b>Fiscal year</b>			
Base Year	<b>FY2019 (Mar. 31, 2020)</b>	<ul style="list-style-type: none"> <li>Generally, the base date needs to be set within 2 years before disclosure</li> <li>However, considering dropped production due to COVID-19, we set FY2019 as the base year</li> </ul>	NZBA
Target Year	<b>2030</b>	<ul style="list-style-type: none"> <li>The intermediate target needs to be set for 2030 or before</li> </ul>	NZBA
<b>Calculation target</b>			
Inv. & loan	<b>Lending, acceptance and guarantee, corporate bonds and strategic shareholdings (including unused pledged lending)</b>	<ul style="list-style-type: none"> <li>Targeted the exposure of credit businesses*1</li> <li>Included unused pledged lending</li> </ul>	NZBA
Cover ratio of inv. & loan	<b>Over 85% of target investments &amp; loans</b>	<ul style="list-style-type: none"> <li>Automakers of finished vehicles with a certain amount of inv. &amp; loan balances whose GHGEs and financial data are available</li> </ul>	PCAF, NZBA
Business / Scope	<b>Scope 1 and 2 for Automotive (finished vehicles) production</b>	<ul style="list-style-type: none"> <li>Targeted emissions from business activities such as production of finished vehicles</li> </ul>	NZBA, SBTi
<b>Calculation method</b>			
Measuring indicator	<b>Absolute emissions (kt-CO<sub>2</sub>e)</b>	<ul style="list-style-type: none"> <li>Based on SBT guidelines, etc., we aimed to grasp the total amount of GHGEs emitted through business activities to reduce the total amount through engagement</li> </ul>	NZBA, SBTi
Calculation formula of indicator	$\sum \left( \text{Emissions from a client} \times \frac{\text{Balance of inv. \& loan to a client}}{\text{Total funds raised by a client}} \right)$	<ul style="list-style-type: none"> <li>Applied the methodology of PCAF, which is a global standard</li> <li>Total funds consist of a client's interest-bearing debt and net assets amount. The balance of strategic shareholdings included in the balance of inv. &amp; loan was calculated based on the client's net assets amount</li> </ul>	PCAF (partially our methodology)
Reference scenario	<b>1.5°C level by SBTi's total reduction approach</b>	<ul style="list-style-type: none"> <li>Referred to the SBT scenario (globally approved and adopted for target setting by SBTi)</li> </ul>	NZBA, SBTi
Used data	<b>Disclosed information of an individual client</b>	<ul style="list-style-type: none"> <li>Adopted only highly reliable sources</li> </ul>	NZBA
Quality of used data	<b>PCAF score 1.7</b>	<ul style="list-style-type: none"> <li>Use only disclosed information (PCAF score 2 or higher)</li> </ul>	PCAF, NZBA

\*1: Targeting credit transactions of SuMi TRUST bank, SuMi TRUST Bank (Thai) and Sumitomo Mitsui TRUST Panasonic Finance

# Automotive sector (3) Use of Sold Products (Scope3)

	Outline of premise to set target	Background and details of premise	Guideline
<b>Fiscal year</b>			
Base Year	<b>FY2019 (Mar. 31, 2020)</b>	<ul style="list-style-type: none"> <li>Generally, the base date needs to be set within 2 years before disclosure</li> <li>However, considering dropped production due to COVID-19, we set FY2019 as the base year</li> </ul>	NZBA
Target Year	<b>2030</b>	<ul style="list-style-type: none"> <li>The intermediate target needs to be set for 2030 or before</li> </ul>	NZBA
<b>Calculation target</b>			
Inv. & loan	<b>Lending, acceptance and guarantee, corporate bonds and strategic shareholdings (including unused pledged lending)</b>	<ul style="list-style-type: none"> <li>Targeted the exposure of credit businesses*1</li> <li>Included unused pledged lending</li> </ul>	NZBA
Cover ratio of inv. & loan	<b>Over 85% of target investments &amp; loans</b>	<ul style="list-style-type: none"> <li>Automakers of finished vehicles with a certain amount of inv. &amp; loan balances whose GHGEs and financial data are available</li> </ul>	PCAF, NZBA
Business / Scope	<b>Scope3 Category11 (WtW)</b>	<ul style="list-style-type: none"> <li>Scope 3 Category 11 (WtW) (life cycle emissions of vehicles for sale)</li> <li>For data availability, target vehicle types are limited to light vehicles*2</li> </ul>	NZBA, SBTi
<b>Calculation method</b>			
Measuring indicator	<b>Emission intensity (g-CO<sub>2</sub>e/vkm)</b>	<ul style="list-style-type: none"> <li>Aimed to improve emission efficiency throughout the life cycle of vehicles for sale through engagement</li> </ul>	NZBA, SBTi
Calculation formula of indicator	<div style="border: 1px solid black; padding: 2px; display: inline-block; margin-bottom: 5px;">Based on PACTA</div> <b>Portfolio emission intensity</b> = $\sum \left( \begin{array}{l} \text{Emission intensity of each client} \\ \times \frac{\text{Balance of inv. \& loan to a client}}{\text{Balance of inv. \& loan to the sector}} \end{array} \right)$ <b>Emission intensity for each client</b> = $\sum \left( \begin{array}{l} \text{Emission intensity by powertrain (WtT + TtW)} \\ \times \frac{\text{Sales volume by powertrain}}{\text{Total sales volume}} \end{array} \right)$		PACTA
Reference scenario	<b>1.5°C target: IEA NZE scenario</b> <b>2°C target: SBTi (IEA ETP) B2D scenario</b>	<ul style="list-style-type: none"> <li>Referred to the SBT scenario (globally approved and adopted for target setting by SBTi)</li> </ul>	NZBA, SBTi
Used data	<b>S&amp;P Global Mobility</b>	<ul style="list-style-type: none"> <li>Emission intensity by powertrain provided by S&amp;P Global Mobility</li> <li>Adopted only highly reliable sources</li> </ul>	NZBA
Quality of used data	<b>PCAF score 3</b>	<ul style="list-style-type: none"> <li>Estimated using the data of the amount of activity (PCAF score 3)</li> </ul>	PCAF, NZBA

\*1: Targeting credit transactions of SuMi TRUST bank, SuMi TRUST Bank (Thai) and Sumitomo Mitsui TRUST Panasonic Finance

\*2: Passenger vehicles, and light commercial vehicles with gross vehicle weight of less than 6 t

## 3 2030 Intermediate Target - Results / SuMi TRUST Bank

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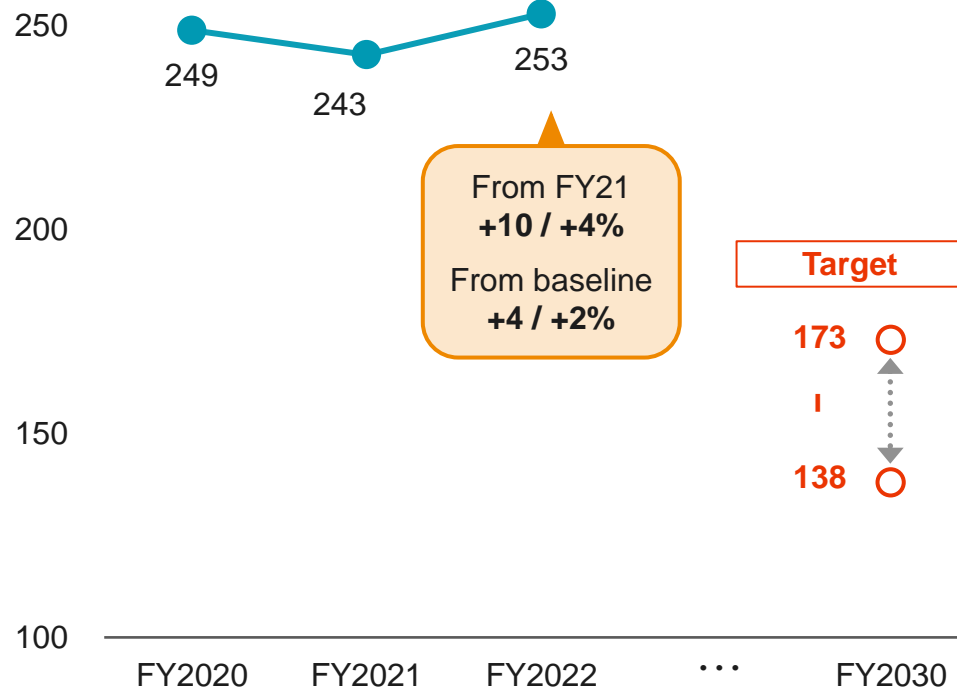
# Results of Power Generation Sector

- The emission intensity increased by 10g-CO<sub>2</sub>e/kWh or 4% from the previous year, mainly due to a rise in that of some clients
- As a result, the emission intensity increased by 4g-CO<sub>2</sub>e/kWh or 2% from the benchmark year

## Intermediate Target for 2030

<b>Benchmark year</b>	<ul style="list-style-type: none"> <li>▪ FY2020 (Mar. 31, 2021)</li> </ul>
<b>Inv. &amp; loan</b>	<ul style="list-style-type: none"> <li>▪ Lending, acceptance and guarantee, corporate bonds and strategic shareholdings (including unused pledged lending)</li> </ul>
<b>Value chain / scope</b>	<ul style="list-style-type: none"> <li>▪ Scope1 of power generating businesses</li> </ul>
<b>Measuring indicator</b>	<ul style="list-style-type: none"> <li>▪ Emission intensity (g-CO<sub>2</sub>e/kWh)</li> </ul>
<b>Calculation method</b>	$\sum \left[ \text{Emission intensity of a client} \times \frac{\text{Balance of inv. and loan to a client}}{\text{Balance of inv. and loan to the sector}} \right]$
<b>Target value (benchmark scenario)</b>	<ul style="list-style-type: none"> <li>▪ 2030</li> </ul> <p><b>138</b> – <b>173</b> g-CO<sub>2</sub>e/kWh  <small>(IEA NZE) (IEA SDS*1)</small></p>

## Results in FY2022 (g-CO<sub>2</sub>e/kWh)



\*1: A scenario which limits a rise in global mean temperature to less than 2 (or 1.8)°C with 66% or more probability, published by the IEA



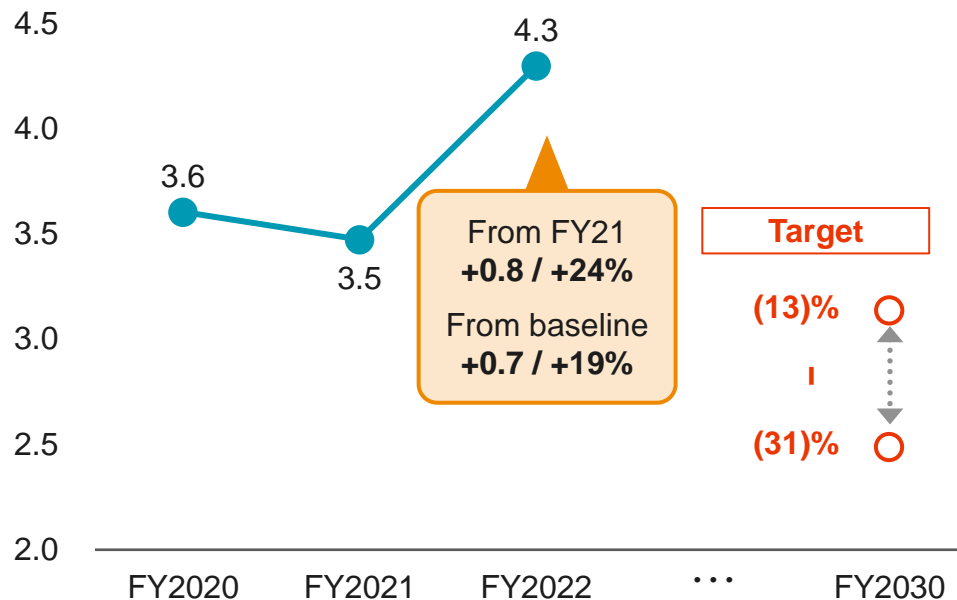
# Results of Oil & Gas Sector

- Emissions increased by 0.8Mt-CO<sub>2</sub>e or 24% from the previous year, mainly due to a temporary increase in outstanding loans to clients\*<sup>1</sup>
- As a result, emissions increased by 0.7Mt-CO<sub>2</sub>e or 19% from the benchmark year

## Intermediate Target for 2030

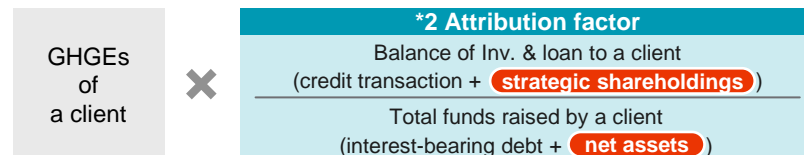
<b>Benchmark year</b>	<ul style="list-style-type: none"> <li>▪ FY2020 (Mar. 31, 2021)</li> </ul>
<b>Inv. &amp; loan</b>	<ul style="list-style-type: none"> <li>▪ Lending, acceptance and guarantee, corporate bonds and strategic shareholdings (including unused pledged lending)</li> </ul>
<b>Value chain / scope</b>	<ul style="list-style-type: none"> <li>▪ Scope1, 2, 3 of upstream production businesses</li> </ul>
<b>Measuring indicator</b>	<ul style="list-style-type: none"> <li>▪ Absolute emissions (Mt-CO<sub>2</sub>e)</li> </ul>
<b>Calculation method</b>	$\sum \left( \text{Emissions from a client} \times \frac{\text{Balance of inv. and loan to a client}}{\text{Total funds raised by a client}} \right)$
<b>Target value (benchmark scenario)</b>	<ul style="list-style-type: none"> <li>▪ 2030</li> </ul> <p style="text-align: center;"> <span style="color: red; font-weight: bold;">(13)</span> — <span style="color: red; font-weight: bold;">(31)</span> % from 2020  <small>(IEA SDS)                      (IEA NZE)</small> </p>

## Results in FY2022 (Mt-CO<sub>2</sub>e)



### Changes from Intermediate Target Setting

- In order to reflect clients' activities to reduce GHGEs and a change in their inv. and loan portfolios, regardless of a change in their stock prices, we modified the calculation method of the attribution factor\*<sup>2</sup> (net book value base). Thus the results of financed emissions in the benchmark year was changed to 3.6 Mt-CO<sub>2</sub>e from 5.8 Mt-CO<sub>2</sub>e. The net book value base will be also applied to subsequent sectors
- The PCAF standard generally applies market capitalization (market capitalization basis), and financed emissions in FY2022 by market capitalization increased by approx. 10% from 5.8 Mt-CO<sub>2</sub>e in the benchmark year



Change: Market capitalization >> **Net worth in financial statements**

\*1: The estimated value as of the end of September 2023 decreased by 13% to 3.2Mt-CO<sub>2</sub>e (tentative)

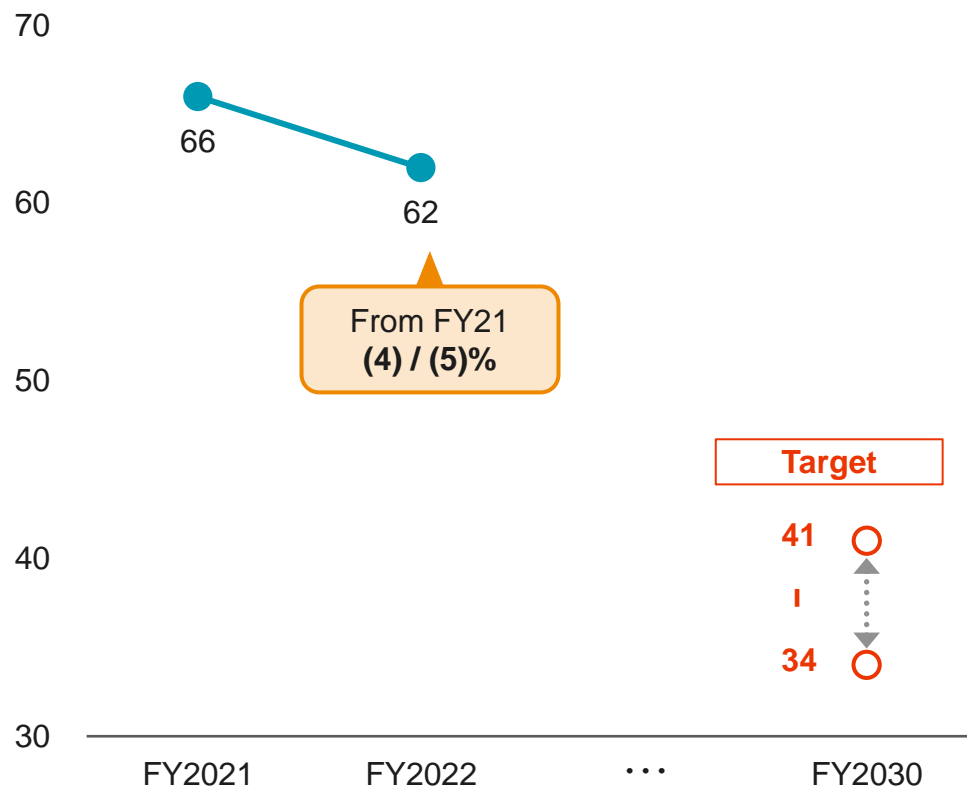
# Results of Real estate Sector

- Emission intensity reduced by 4kg-CO<sub>2</sub>e/m<sup>2</sup> or 5% from the benchmark year largely due to the clients' reduction efforts to decarbonization

## Intermediate Target for 2030

<b>Benchmark year</b>	<ul style="list-style-type: none"> <li>FY2021 (Mar. 31, 2022)</li> </ul>
<b>Inv. &amp; loan</b>	<ul style="list-style-type: none"> <li>Lending, acceptance and guarantee, corporate bonds and strategic shareholdings (including unused pledged lending)</li> </ul>
<b>Value chain / scope</b>	<ul style="list-style-type: none"> <li>Scope1, 2, 3 category13 (Leased Assets) for use of real property for commercial use including lease</li> </ul>
<b>Measuring indicator</b>	<ul style="list-style-type: none"> <li>Emission intensity (kg-CO<sub>2</sub>e/m<sup>2</sup>)</li> </ul>
<b>Calculation method</b>	$\sum \left( \text{Emission intensity of a client} \times \frac{\text{Balance of inv. and loan to a client}}{\text{Balance of inv. and loan to the sector}} \right)$
<b>Target value (benchmark scenario)</b>	<ul style="list-style-type: none"> <li>2030</li> </ul> <p style="text-align: center;"><b>34</b> – <b>41</b> kg-CO<sub>2</sub>e/m<sup>2</sup></p> <p style="text-align: center;">(CRREM*1.5°C)      (CRREM 2°C)</p>

## Results in FY2022 (kg-CO<sub>2</sub>e/m<sup>2</sup>) \*2



\*1: Carbon Risk Real Estate Monitor (CRREM) is a project set to support evaluation and management of climate change related risks in the real estate sector. It provides a pathway which aligns with 1.5 and 2°C targets of the Paris agreement with reference to future outlook, etc. of the IEA and IPCC\*3

\*2: By refining the measurement, the results in FY2021 (benchmark year) were revised from 64 kg-CO<sub>2</sub>e/m<sup>2</sup> to 66 kg-CO<sub>2</sub>e/m<sup>2</sup>

\*3: Intergovernmental Panel on Climate Change. Established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO). Conducts comprehensive assessments, analyses and recommendations on anthropogenic climate change, and its impacts, adaptation and mitigation measures from scientific, technical and socio-economic perspectives

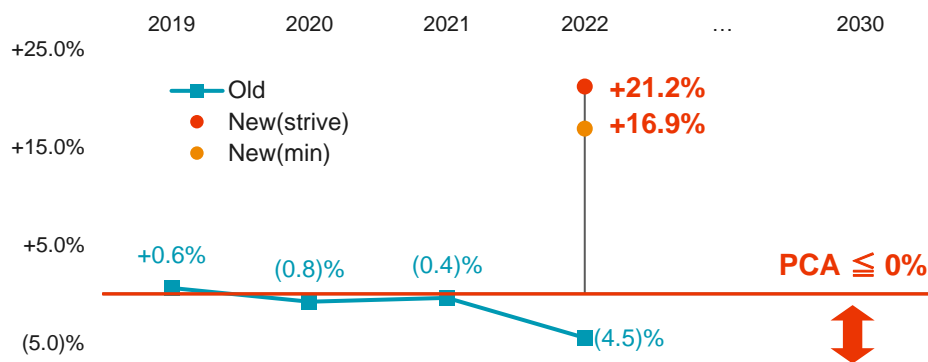
# Results of Shipping Sector

- The reference scenario for the target PCA \*1 has been changed with the revised target of the Poseidon Principles
- The more ambitious target increased PCA by 16.9% (min) to 21.2% (strive), which are above zero, from the previous - 4.5%

## Intermediate Target for 2030 (underlined changes from the last time)

<b>Inv. &amp; loan</b>	<ul style="list-style-type: none"> <li>▪ Loans secured with completed 5,000 t or heavier ships for overseas voyage under the IMO management</li> </ul>
<b>Value chain / scope</b>	<ul style="list-style-type: none"> <li>▪ Scope1, fuel consumption by ships during voyage (<u>WtW</u>*2)</li> </ul>
<b>Measuring indicator</b>	<ul style="list-style-type: none"> <li>▪ PCA based on <u>GHGE</u> efficiency per ship</li> </ul>
<b>Calculation method</b>	<b>PCA (Portfolio Climate Alignment)</b> $\sum \left( \text{Each ship's VCA (\%)} \times \frac{\text{Balance of loans to each ship}}{\text{Total balance of loans to target ships}} \right)$
	<b>VCA*3 (Vessel Climate Alignment)</b> $\frac{\text{Each year's result of GHGE efficiency per ship} - \text{Each year's baseline of GHGE efficiency per ship}}{\text{Each year's baseline of CO}_2 \text{ emission efficiency per ship}}$
<b>Target value (benchmark scenario)</b>	<ul style="list-style-type: none"> <li>▪ 2030 <b>PCA ≤ 0%</b>  <div style="border: 1px solid red; padding: 5px; display: inline-block; color: red;">                     Aligned with IMO scenario aiming for net zero total GHG emissions by around 2050                 </div> </li> </ul>

## Results in FY2022 (PCA, end of December each year)



## Revised Target of the Poseidon Principles (Sep. 2023)

- The Principles will follow the IMO's revised target (July 2023)
- PCA based on the new standard generally deteriorate than before due to the new targets and the expanded scope of measurement

	Measurement	Targets		FY2022
		Long term	2030	
Old	CO <sub>2</sub> (TtW)	2050 (50%)	CO <sub>2</sub> emissions per unit transport (40%)	-
Revised	CO <sub>2</sub> , methane, nitrous oxide (WtW)	Around 2050	Strive (30%)	Strive (80%)
		Net Zero	Min (20%)	Min (70%)
				PCA (4.5)%
				PCA +21.2%
				PCA +16.9%

\*1: Weighted average based on the outstanding loan balance of the deviation between the actual value and the reference value of GHGE efficiency per ship (VCA)\*3

\*2: The Poseidon Principles specify a reference value of annual GHGE efficiency per unit transport for each type and size of a ship based on the IMO reference scenario. The deviation rate (%) between the reference value and the actual annual emission efficiency of each financed ship. The reference value has been changed with the reference scenario

\*3: Well-to-Wake. Life-cycle emissions including those from the fuel manufacturing and distribution, in addition to conventional tank-to-wake emissions (from ships in operation)

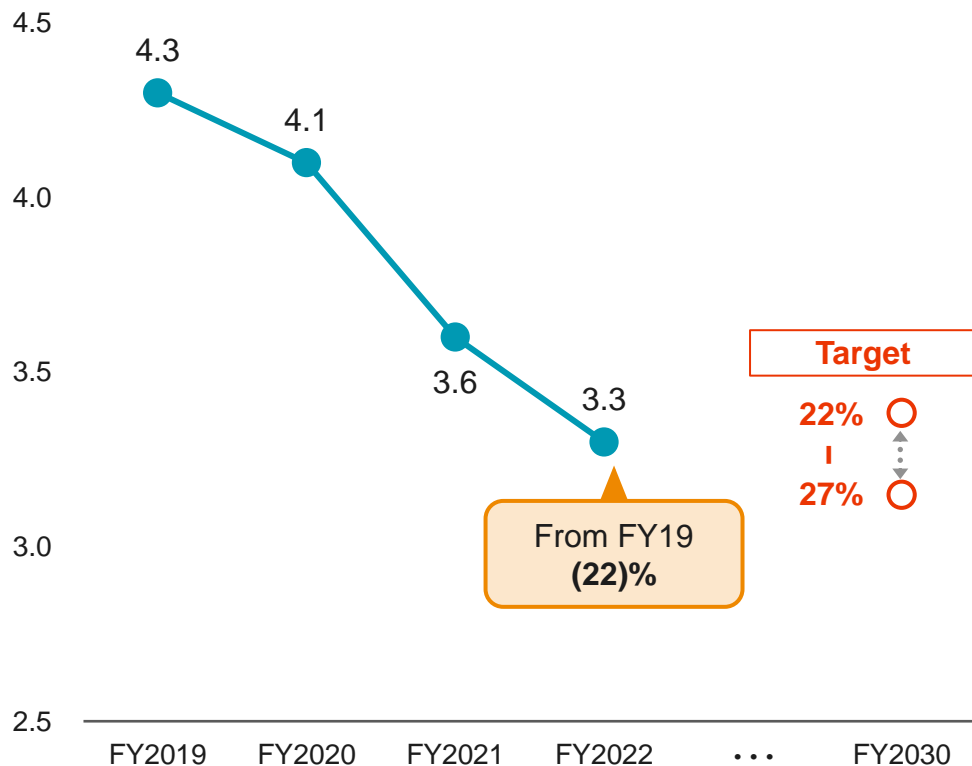
# Results of Iron & Steel Sector and Automotive Sector

- Results of Iron & Steel sector and Automotive sector are as follows

## Iron & Steel Sector

### Results (Mt-CO<sub>2</sub>e) \*1

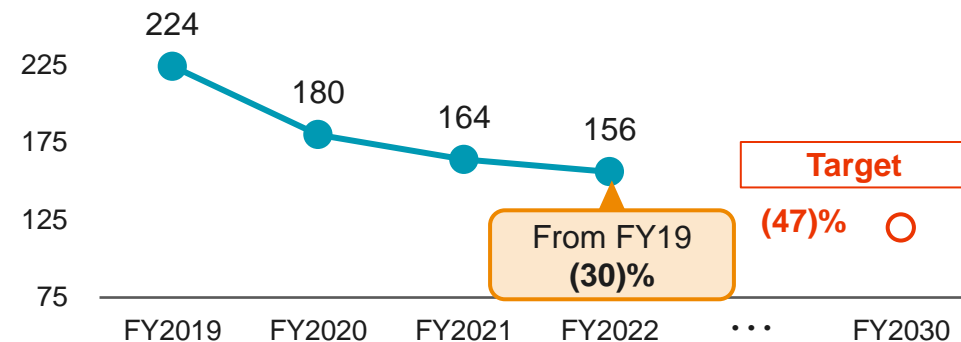
Absolute emissions  
(book value of net worth \*2)



## Automotive Sector

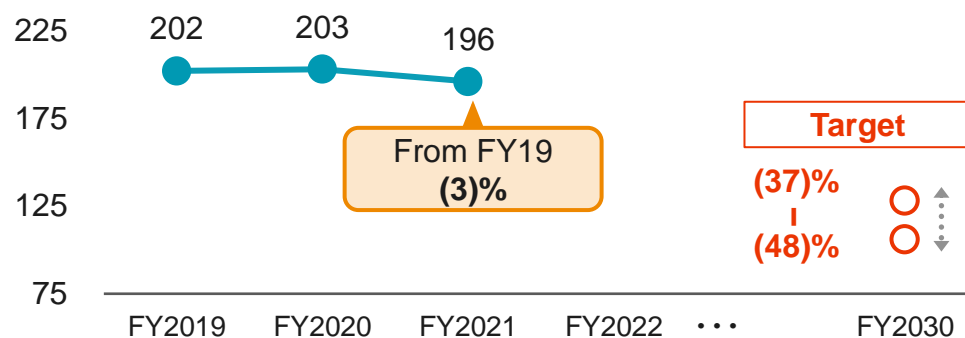
### Results of Production (kt-CO<sub>2</sub>e)

Absolute emissions  
(book value of net worth \*2)



### Results of use of Products (g-CO<sub>2</sub>e/vkm)\*3

Emission intensity



\*1: (For reference) Emission intensity for major clients in the investment portfolio (t-CO<sub>2</sub>e/t-Steel, weighted average by transaction balance) : 2.0 (FY2019) >>2.1 (FY2020) >> 2.0 (FY2021) >>2.0 (FY2022)

\*2: Reduction of financed emissions based on the total market value (FY2019>>reduction by FY2022): [Iron & Steel] 6.3Mt-CO<sub>2</sub>e >> approx. 31%, [Automotive] 284kt-CO<sub>2</sub>e >> approx. 33%

\*3: Use of product is shown until FY2021 from the viewpoint of data availability

## 4 Transition Plan toward Carbon Neutrality

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# Transition Plan toward Carbon Neutrality

- SuMi Trust Bank formulated “sectoral strategies” for the “Real Estate” and “Shipping” sectors, following the intermediate reduction targets set for these sectors in October 2023
- Established “ERM SuMi TRUST Consulting Ltd.” with ERM Group, a consulting firm specializing in sustainability. We will support decarbonization of our corporate clients by leveraging our expertise in the decarbonization area

## Transition plan toward carbon neutrality\*1

Segment	Bank (NZBA)	AM (NZAMI)	Segment	Trust
Entity*2	SuMi TRUST Bank	SuMi TRUST AM Nikko AM	Entity	SuMi TRUST Bank
Timing	Now – 2050	Now – 2050	Timing	Now – 2050
Engagement	Formulate & implement engagement strategies by stakeholder	<ul style="list-style-type: none"> <li>■ Stewardship activity</li> </ul>	Strategy	Strengthen Investor & Real estate business
Strategy Initiatives	<b>Decarbonization Business</b> <ul style="list-style-type: none"> <li>■ Sustainable finance</li> <li>■ “Tech × Policy × Fin.” by TBF*3</li> <li>■ Utilize Impact Equity</li> <li>■ Sectoral strategy</li> <li>■ ERM SuMi TRUST Consulting</li> </ul> <b>Process sophistication</b> <ul style="list-style-type: none"> <li>■ Processes</li> <li>■ Scenario analysis</li> </ul>	<ul style="list-style-type: none"> <li>■ Engagement</li> <li>■ Monitor and exercise voting rights</li> <li>■ Providing ESG products</li> </ul>	Segment	<b>OWN GROUP</b>
Indicators & targets	GHG targets (2030 by sector, 2050 net zero), monetary targets (sustainable finance, financing coal-fired power plant)	GHG targets (2030, 2050)	Entity	SuMi TRUST HD
Governance Foundation	(1) reinforcement of governance system and executive compensation, (2) setting risk appetite indicators, (3) human resource development and awareness-raising activities		Timing	Now – 2030
			Strategy	<ul style="list-style-type: none"> <li>■ RE and energy saving</li> <li>■ Improve the measurement</li> <li>■ Utilization of carbon credits</li> </ul>
			Targets	GHG targets (2025, 2030)

**New additions**

**1 Decarbonization Business**

- Sectoral strategy “Real estate” “Shipping” **NEW** (→P23-26)
- Decarbonization Support by **ERM SuMi TRUST Consulting** **NEW** (→P28)

**2 GHG reduction targets for 2030 by sector**

“Iron & Steel” “Automotive” **NEW** (→P6-14)

**3 Managed under the Risk Appetite Framework**

“Real estate” “Shipping” “Iron & Steel” “Automotive” **NEW**

\*1: For the details of the carbon neutral transition plan, please refer to “Progress of Our Approach to Carbon Neutrality” in October 31, 2023 [link](#)

\*2: The consolidated basis with the company at the top

\*3: Technology Based Finance team. Established in the Sustainability Management Department with experts from various fields to support social implementation of technology strategically and financially

# Decarbonization Business / Strategy of Real Estate Sector

- The real estate sector accounts for 1/3<sup>\*1</sup> of global GHG emissions in the entire supply chain, which means it is a key sector for achieving net zero emissions by 2050
- SuMi TRUST Bank will contribute to decarbonization of the real estate sector by leveraging its network and strength in the sector

## Real estate sector

<b>Impact</b>	<ul style="list-style-type: none"> <li>▪ GHGEs: 8% GHGEs<sup>*2</sup> but 1/3 (entire supply chain) globally</li> <li>▪ Impact: sectors which promote low-carbon materials including steel and cement</li> <li>▪ Climate change transition risk / sector heat map: risk rank is low and EXP rank is large (-&gt;P7)</li> </ul>
<b>Current Situation</b>	<ul style="list-style-type: none"> <li>▪ Tightening regulations (enhanced energy saving standards at home and abroad, GHGEs reports and limits, etc.)</li> </ul>

## Future trend / worldview on decarbonization

<b>Future Trend</b>	<ul style="list-style-type: none"> <li>▪ [Trend] Up 75% of global total floor area from 2020 to 2050.<sup>*3</sup> Need to improve emissions intensity besides total emissions.</li> <li>▪ [Regulations in Japan] Enhanced energy saving levels in line with ZEB/ZEH<sup>*4</sup> (new houses / buildings by 2030, existing houses/buildings by 2050)</li> <li>▪ [Efforts] Accelerated reduction of embodied carbon<sup>*5</sup> (use of wood, decarbonized steel / concrete), energy saving, renewable energy</li> </ul>
<b>IEA NZE Scenario</b>	<ul style="list-style-type: none"> <li>▪ [1.5°C Target] Zero carbon-ready level<sup>*6</sup> is required (all new buildings by 2030, 50% of existing buildings by 2040)</li> <li>▪ [GHGEs from property use] Approx. 40% reduction by 2030 and approx. 98% reduction by 2050 from 2020</li> </ul>

\*1: (Source) SBTi \*2: (Source) IEA World Energy Outlook 2023 \*3: (Source) IEA Net Zero by 2050: a Roadmap for the Global Energy Sector

\*4: Net Zero Emission Building / House: buildings with net zero primary energy consumption

\*5: GHGEs from building construction (from procurement of building materials to transportation, construction, maintenance, repair, disposal and recycling)

\*6: Energy-efficient buildings that use energy sources that do not emit CO<sub>2</sub> including direct use of renewable energy

## Sector's position and our stance

- Set the 2030 target for GHGEs from property use, considering the importance of the real estate sector (->P18) (Targets for embodied carbon will be discussed)

Year / Scenario	kg-CO <sub>2</sub> e/m <sup>2</sup>	Reduction Rate (%)
Baseline	66	0%
Mar.31, 2022	62	(3)%
2°C Target (CRREM 2°C Scenario Level)	41	(36)%
1.5°C Target (CRREM 1.5°C Scenario Level)	34	(47)%

**Target Setting**

**For Clients**

- Real estate sector is closely associated with trust banks. Aim at “collaborative engagement” through dialogues with clients

**Risk & Opportunity**

- Based on clients’ risks and opportunities, create their business opportunities, while properly managing risks (->Next page)

# Decarbonization Business / Strategy of Real Estate Sector (2)

- Based on clients' risk and opportunity, create their business opportunity, while properly managing the risk


## Conceivable risk for clients

Transition Risk	Policy	<ul style="list-style-type: none"> <li>Costs of energy saving and decarbonization (tighter energy saving standards and embodied carbon reg.)</li> <li>Costs of construction and operation due to carbon tax</li> </ul>
	Technology	<ul style="list-style-type: none"> <li>Costs of developing and introducing energy saving and renewable energy technologies</li> </ul>
	Market	<ul style="list-style-type: none"> <li>Demand for low environmental performance buildings</li> <li>Demand for environmental actions from Investors</li> </ul>
	Reputation	<ul style="list-style-type: none"> <li>Value of companies and real estate due to delayed response to decarbonization</li> </ul>
Physical Risk	Acute	<ul style="list-style-type: none"> <li>Damage and repair costs due to typhoons and floods</li> <li>Occupancy and lease income due to disasters</li> </ul>
	Chronic	<ul style="list-style-type: none"> <li>Costs of preventing flooding due to sea level rise</li> <li>Costs of air conditioning due to increased temperature</li> </ul>

## SuMi TRUST Bank's risk management

Intermediate Target	<ul style="list-style-type: none"> <li>Set the Intermediate Target for 2030</li> <li>Managed under the risk appetite framework</li> </ul>
Risk Analysis	<ul style="list-style-type: none"> <li>Scenario analysis of physical risks (flooding, storm surge, etc.) in the sector (non-recourse loans, J-REITs) in FY2022 (2022/2023 TCFD REPORT) <a href="#">link (P10)</a></li> </ul>

## Conceivable opportunity for clients

Resource Efficiency	<ul style="list-style-type: none"> <li>Utility costs due to energy saving and in-house renewable energy generation</li> </ul>
Service / Market	<ul style="list-style-type: none"> <li>Lease income (  demand for lease) by decarbonization</li> <li>New business (energy saving, RE, embodied carbon)</li> </ul>

## SuMi TRUST Bank's business opportunity \*1

Finance	<ul style="list-style-type: none"> <li>Expansion of sustainable finance</li> </ul>
Survey	<ul style="list-style-type: none"> <li>Awareness-raising activities for the industry                             <ul style="list-style-type: none"> <li>Survey of real estate ESG, Study on economic incentives of acquiring environmental certification</li> </ul> </li> </ul>
Consulting / Support	<ul style="list-style-type: none"> <li>Evaluation of building environmental performance <a href="#">CASBEE-Real Estate support 39% (as of Sep.23) link (P31)</a></li> <li>Support for eco-friendly buildings and energy saving Energy saving, ZEB, maintenance, longevity of buildings</li> <li>Decarbonization support                             <ul style="list-style-type: none"> <li>Introducing renewable energy and purchasing non-fossil certificates</li> <li>GHGs calculation tools for real estate in trust</li> <li>Support by ERM SUMi TRUST Consulting</li> </ul> </li> <li>Provision of carbon credit (under consideration)</li> </ul>
	Utilization of New Tech. (embodied carbon, real estate tech.)

\*1: Blue texts indicate the results of our efforts

\*2: A US venture capital for real estate tech founded in 2015. SuMi TRUST Bank invested in Fund III in 2019 and Fund IV in 2023



# Decarbonization Business / Strategy of Shipping Sector

- Shipping sector is a key sector with expectation for major role in global trade also in the future, despite its large GHGEs
- SuMi TRUST Bank will contribute to the decarbonization of the sector by leveraging its knowledge and networks cultivated for years

## Shipping Sector

<b>Impact</b>	<ul style="list-style-type: none"> <li>GHGEs: 2%*1 of the world GHGEs</li> <li>Financed Emission in SuMi TRUST Bank: approx. 6%</li> </ul>				
<b>Current Situation</b>	<table border="0"> <tr> <td>[Main Progress]</td> <td>[Main Issues]</td> </tr> <tr> <td> <ul style="list-style-type: none"> <li>Revised IMO targets and tighter regulations (EEDI,<sup>2</sup> EEEXI<sup>2</sup> and EU-ETS<sup>3</sup>)</li> <li>Increased construction of next-generation fuel vessels</li> <li>Installation of fuel-efficient devices, use of carbon credits</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>Production and supply system for next-generation fuels</li> <li>Development of ammonia and hydrogen ship technology</li> </ul> </td> </tr> </table>	[Main Progress]	[Main Issues]	<ul style="list-style-type: none"> <li>Revised IMO targets and tighter regulations (EEDI,<sup>2</sup> EEEXI<sup>2</sup> and EU-ETS<sup>3</sup>)</li> <li>Increased construction of next-generation fuel vessels</li> <li>Installation of fuel-efficient devices, use of carbon credits</li> </ul>	<ul style="list-style-type: none"> <li>Production and supply system for next-generation fuels</li> <li>Development of ammonia and hydrogen ship technology</li> </ul>
[Main Progress]	[Main Issues]				
<ul style="list-style-type: none"> <li>Revised IMO targets and tighter regulations (EEDI,<sup>2</sup> EEEXI<sup>2</sup> and EU-ETS<sup>3</sup>)</li> <li>Increased construction of next-generation fuel vessels</li> <li>Installation of fuel-efficient devices, use of carbon credits</li> </ul>	<ul style="list-style-type: none"> <li>Production and supply system for next-generation fuels</li> <li>Development of ammonia and hydrogen ship technology</li> </ul>				

## Future trend / worldview on decarbonization

<b>Future Trend</b>	<ul style="list-style-type: none"> <li>[Trend] The best GHG efficiency per ton-mile among the various transportation. Expected to be the main method in world trade</li> <li>[Efforts ] (1) Eco-friendly Carrier (LNG, methanol carriers, etc.), Clean fuel carriers (ammonia, hydrogen carriers, etc.), (2) Stable supply system for next-generation fuels, (3) Managing operations such as slow navigation to improve fuel efficiency. (4) Carbon credits for some remaining conventional fuel vessels</li> <li>[Next-generation fuels] Need to cooperate with other sectors, including infrastructure building for supply of the next-gen fuels</li> </ul>
<b>IMO</b>	<ul style="list-style-type: none"> <li>Adopted the IMO GHG Reduction Strategy (revised) target or “Net-zero GHG emissions by around 2050” at MEPC<sup>4</sup> 80</li> </ul>

\*1: (Source) IEA World Energy Outlook 2023

\*2: Regulations concerning the Energy Efficiency Existing Ship Index (EEXI) adopted by the IMO MEPC76 in June 2021. Vessels that do not meet the standards are required to limit engine power or to install eco-friendly equipment, etc.

\*3: EU Emissions Trading Scheme is a measure under the Comprehensive Climate Change Policy Package (FIT-55) for the EU to achieve the GHG emission reduction targets. Coverage was expanded to the shipping sector in Jan. 2024. FuelEU Maritime, which encourages the use of low-carbon fuels under FIT55 will be introduced from Jan. 2025

\*4: Marine Environment Protection Committee of the IMO encourages matters about the prevention of and regulation against pollution from ships

## Sector’s position and our stance

<b>Target Setting</b>	<ul style="list-style-type: none"> <li>Set the 2030 target, considering the importance of the Shipping sector and our position there</li> <li>Changed the reference scenario based on the revised targets of the Poseidon Principles (-&gt;P19)</li> </ul> <table border="1"> <caption>GHG Emissions Data (2019-2030)</caption> <thead> <tr> <th>Year</th> <th>Old (%)</th> <th>New(strive) (%)</th> <th>New(min) (%)</th> </tr> </thead> <tbody> <tr> <td>2019</td> <td>+0.6%</td> <td></td> <td></td> </tr> <tr> <td>2020</td> <td>(0.8)%</td> <td></td> <td></td> </tr> <tr> <td>2021</td> <td>(0.4)%</td> <td></td> <td></td> </tr> <tr> <td>2022</td> <td>(4.5)%</td> <td>+21.2%</td> <td>+16.9%</td> </tr> <tr> <td>2030</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Year	Old (%)	New(strive) (%)	New(min) (%)	2019	+0.6%			2020	(0.8)%			2021	(0.4)%			2022	(4.5)%	+21.2%	+16.9%	2030			
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<b>For Clients</b>	<ul style="list-style-type: none"> <li>The Group has strengths in the shipping sector and will strengthen its efforts. Aim at “collaborative engagement” through dialogues with clients</li> </ul>																								
<b>Risk &amp; Opportunity</b>	<ul style="list-style-type: none"> <li>Based on clients’ risks and opportunities, create their business opportunities, while properly managing the risks (-&gt;Next page)</li> </ul>																								

# Decarbonization Business / Strategy of Shipping Sector (2)

- Based on clients' risk and opportunity, create their business opportunity, while properly managing the risk

## Conceivable risk for clients

Transition Risk	<b>Policy</b>	<ul style="list-style-type: none"> <li>Costs associated with emissions trading (carbon tax, EU-ETS, etc.) and emission control (EEDI, EEXI)</li> </ul>
	<b>Technology</b>	<ul style="list-style-type: none"> <li>Verification of next-generation fuel ships</li> <li>Securing highly skilled crew for LNG-fueled vessels and next-generation fuel vessels</li> </ul>
	<b>Market</b>	<ul style="list-style-type: none"> <li><b>change</b> Transportation demand for cargo based on increased demand for renewable energy</li> <li>Costs of shipbuilding due to tight supply of alternative fuel vessels resulting from increased demand</li> <li>Income, and existing fuel vessels becoming stranded assets, due to advanced decarbonization technology</li> </ul>
	<b>Reputation</b>	<ul style="list-style-type: none"> <li>Transactions and sales due to delayed decarbonization</li> </ul>
Physical Risk	<b>Acute</b>	<ul style="list-style-type: none"> <li>Additional costs and operating days resulting from more frequent and severer extreme weather</li> </ul>
	<b>Chronic</b>	<ul style="list-style-type: none"> <li>Risks unable to use port facilities at low level areas due to increased sea level caused by climate change</li> </ul>

## SuMi TRUST Bank's risk management

<b>Intermediate Target</b>	<ul style="list-style-type: none"> <li>Set the Intermediate Target for 2030</li> <li>Managed under the risk appetite framework</li> </ul>
<b>Poseidon Principles</b>	<ul style="list-style-type: none"> <li>Signed the Poseidon Principles in March 2020</li> </ul>
<b>Risk Analysis</b>	<ul style="list-style-type: none"> <li>Scenario analysis of transition risks in the shipping sector in FY2021 (2021/2022 TCFD REPORT) <a href="#">link (P15)</a></li> </ul>

## Conceivable opportunity for clients

<b>Energy Source</b>	<ul style="list-style-type: none"> <li>New business related to new clean energy supply chains (offshore wind power, ammonia / hydrogen transportation, etc.)</li> </ul>
<b>Service / Market</b>	<ul style="list-style-type: none"> <li>Efficient operating tech. and energy saving equipment</li> <li>Shipping demand (higher emission efficiency than others)</li> </ul>

## SuMi TRUST Bank's business opportunity <sup>\*1</sup>

<b>Finance</b>	<ul style="list-style-type: none"> <li><b>Expansion of ship finance</b> <ul style="list-style-type: none"> <li>Support for introduction of eco-friendly carriers, next-generation fuel carriers, vessels related to offshore wind power construction and operation, liquefied CO<sub>2</sub> carriers</li> </ul> </li> <li><b>Expansion of sustainable finance</b>  <a href="#">Mitsui O.S.K. Lines: transition loan (Sep. 2021)</a>  <a href="#">Kawasaki Kisen Kaisha: transition linked loan (Sep. 2021)</a> </li> </ul>
<b>Expertise / Network</b>	<ul style="list-style-type: none"> <li><b>Support using our Group's expertise and network</b> <ul style="list-style-type: none"> <li>Knowledge and network cultivated in ship finance</li> <li>Expertise in decarbonization and technology of ERM SuMi TRUST Consulting and the TBF team</li> </ul> </li> </ul>
<b>Equity</b>	<ul style="list-style-type: none"> <li><b>Social implementation of innovative green tech / matching with clients</b> <ul style="list-style-type: none"> <li>Investment in funds related to next-generation fuel vessels and next-generation fuel  <a href="#">Joined Breakthrough Energy Catalyst in the US</a> </li> </ul> </li> <li><b>Supply of risk money (hydrogen, ammonia, infrastructure construction, etc.)</b>  <a href="#">Formed comprehensive domestic infrastructure fund</a> </li> <li><b>Providing carbon credit (under consideration)</b></li> </ul>

\*1: Blue texts indicate the results of our efforts

# Appendix

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# Establishment of ERM SuMi TRUST Consulting (released in February 2024)

- Established “ERM SuMi TRUST Consulting Ltd.” with “ERM Group”, a global consultancy firm
- We will leverage ERM Group’s global knowledge and technology to help corporate clients to solve management issues about decarbonization and transition by providing high-quality research, analysis, and consulting

## About ERM Group

### ERM Group Strengths



Leading independent consultancy firm over **50** years globally over **20** years in Japan



Extensive global network with **150** locations in **40** countries



Globally approx. **8,000** scientists and engineers with sustainability-related advanced expertise

## Service Lineup of ERM SuMi TRUST Consulting (Planned)

### Disclosure

- GHGEs calculation (Scope 1, 2, 3)  
Climate change information disclosure based on TCFD/ISSB S2

### Support for Efforts

- Quantify financial impacts of climate change
- Propose climate change actions and business strategies

### Support for Strategies

- Formulate GHGEs reduction scenarios and roadmaps
- Develop decarbonization / transition plans

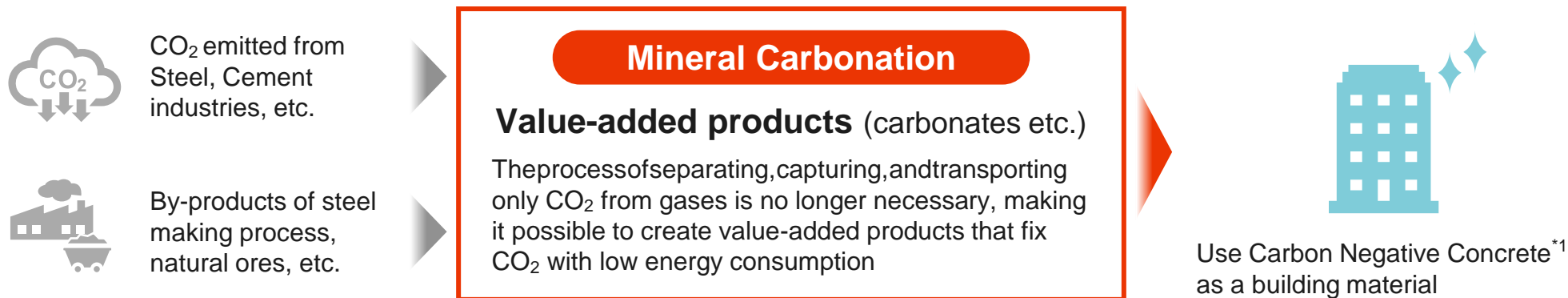
### Carbon offset

- Advisory services on carbon credits

# Investment in MCI Carbon Pty Ltd. (released in March 2024)

- SuMi TRUST Bank made an Impact Equity investment in MCI Carbon Pty Ltd. (Australia), which engages in the development and provision of technologies to produce carbonates, etc. as materials of carbon negative concrete, <sup>\*1</sup> using the mineral carbonation technology
- Through the provision of risk money by Impact Equity Investment, SuMi TRUST Bank contributes to decarbonation of hard-to-abate sectors<sup>\*2</sup> such as steel and cement industries

## MCI Carbon Pty Ltd. - Mineral Carbonation Technology



## MCI Carbon Pty Ltd. – Vision & Mission

### Vision

Combine decarbonization with economy by converting emitted CO<sub>2</sub> into value-added products

### Mission

1 bil tonnes

CO<sub>2</sub> locked away by 2040

\*1: Carbon Negative describes the situation where the amount of CO<sub>2</sub> absorbed or fixed surpasses the amount of CO<sub>2</sub> emissions. Carbon Negative Concrete is a type of concrete which realizes carbon negative by using CO<sub>2</sub>-fixed carbonates, directly embedding CO<sub>2</sub> into concrete, etc.

\*2: Sectors difficult to reduce CO<sub>2</sub> emissions due to lack of implementable decarbonization technology or a high bar to switching to clean energy. Examples of hard-to-abate sectors are steel and cement industries