Shifting Gears:

Key Asian Banks Can Accelerate The Energy Transition

August 2024

ARE
ASIA RESEARCH
& ENGAGEMENT

Asia Research & Engagement (ARE)

Creating change through investor-backed engagement.

ARE's pioneering approach fills an engagement gap by bringing leading investors into dialogue with Asian-listed companies to address sustainable development challenges and help companies align with investor priorities. With decades of Asia experience, our cross-cultural team understands the region's unique needs. Our high-quality independent research, robust investor network, and engagement expertise, provide corporate leaders and financial decision makers with insights leading to concrete action.

Our work focuses on thematic priorities to promote a sustainable and compassionate Asia.

Our current programmes and goals are:

- Energy Transition: Credible transition pathways in alignment with the Paris Agreement.
- Protein Transition: Transition pathways working towards our investor-aligned 2030 vision.

Founded in 2013, ARE is headquartered in Singapore with an additional office in Beijing and a presence in India and Japan.

The Energy Transition Platform

Launched in September 2021, The Energy Transition Platform, with 11 institutional investors representing over US$7 trillion in assets, aims to accelerate the region's alignment with the Paris Agreement. For power utilities and hard-to abate sectors, such as steel and cement, we look for solutions in transition finance for companies adopting low-carbon practices. We encourage funding to companies with credible transition strategies to support phasing out of fossil fuel power plant financing. We also provide research, analysis, and benchmarking to help carbon-intensive companies develop transition strategies.

Author
Peter Kiernan
Research
Isabelle Tong
Ho Khinwai
Editing and Comments
Kurt Metzger
Benjamin McCarron
Paige Okun
Manorama Singh
Monterey Indo-Pacific Ltd.
Design
Wondertabs; Cover photo by ESB Professional/Shutterstock.com

Content

Executive Summary

Asia's banks face increasing scrutiny over financing fossil fuels and mounting pressure to transition away from financing the oil, gas, and coal sectors to supporting clean energy activities.

This trend was reinforced when governments met at the 28th Conference of the Parties (COP28). The event concluded in December 2023 with the Dubai pledge to "transition away" from fossil fuels. The pledge stresses the role financial institutions play in facilitating the energy transition and managing its risks. The pledge also aims to triple renewable energy by 2030.

Our March 2022 report, Banking Asia's Future, reviewed 32 of Asia's leading banks finding they were not aligned with national climate change targets. Since then, there has been significant progress at banks in advanced Asian economies. Consequently, in this report, we narrow our focus to review three leading banks in each of the following markets: Japan, Singapore, and South Korea.

The interest from our collaborating investors is clear. Banks can lose out, either by failing to capture opportunities in clean energy markets, or by maintaining exposure to carbon-intensive industries that underperform in a world with diminishing demand for fossil fuels over the longer term.

While leading banks have shown strong progress in the last two years, our research shows that much work remains to ensure that financing plays a constructive role in a timely transition to a low-carbon economy.

Banks must align targets to 1.5°C to reduce regulatory risks and risks of physical climate change to the broader economy. To achieve this, they need strong medium- and long-term goals, boards with appropriate expertise, and detailed assessments of the transition-related risks faced by their clients.

Figure 1: Bank Status for Selected Questions

Bank Name	Name Used in Report	Market	Sectoral Targets Aligned with 1.5°C Scenario	Sectoral Targets Aligned with 1.5°C that are Both Medium- and Long-term	Board Member with Specific Climate Experience	Client-level Transition Risk Strategy
DBS Group Holdings	DBS	Singapore	Y	Y	Y	N
Oversea-Chinese Banking Corporation	OCBC	Singapore	Y	Y	N	N
United Overseas Bank	UOB	Singapore	Y	Y	Y	N
Mizuho Financial Group	Mizuho	Japan	N	N	Y	Y
Mitsubishi UFJ Financial Group	MUFG	Japan	N	N	N	Y
Sumitomo Mitsui Financial Group	SMFG	Japan	N	N	Y	N
Hana Financial Group	Hana	South Korea	N	N	N	N
KB Financial Group	KB	South Korea	N	N	N	N
Shinhan Financial Group	Shinhan	South Korea	N	N	N	N

Note: The complete list of questions used in this evaluation and the bank responses can be found in the appendix.

Key Findings

- All the banks now provide decarbonisation pathways to guide financed emissions reductions in priority sectors, compared to none in March 2022.
- Singapore banks have aligned their emissions-reduction targets for key carbon-intensive sectors exclusively with a 1.5°C scenario.
- Singapore banks also have the most ambitious policies for oil and gas, pledging to either cease financing new projects, or committing to a 2050 target, or both.
- Japanese and South Korean banks have not yet set both medium- and long-term targets for carbon-intensive sectors, such as oil and gas and power generation, that align exclusively with a 1.5°C scenario.
- All three Japanese banks have set medium-term sectoral emissions reduction targets (2030) for oil and gas, power generation, steel and real estate (Mizuho, SMFG, and MUFG).
- Most banks have board-level structures to handle climate change related issues. However, few banks have board members with climate change-related expertise to guide necessary change management.
- Mizuho and MUFG have the most advanced disclosure of client-level engagement to support customers managing energy transition risks, especially those in carbon-intensive sectors.

Figure 2: Emissions Targets for Key Sectors

Bank	DBS	OCBC	UOB	Mizuho	MUFG	SMFG	Hana	KB	Shinhan
Power Generation									
Baseline	2020	2021	2021	2020	2019	2020	2020	2019	2020
2030 Target	-47%	-55%	-65%	-40 to 60%	-41 to 52%	-41 to 58%	-47%	-39.4%	-76%
2050 Target	-100%	-100%	-98%	-	-	-	-	-100%	-
Metric	Emissions intensity	Emissions intensity	Emissions intensity	Emissions intensity	Emissions intensity	Emissions intensity	Emissions intensity	Emissions intensity	Emissions intensity
Oil and Gas									
Baseline	2020	2021	-	2019	2019	2020	-	-	-
2030 Target	-28%	-35%	-	-12 to 29% (Scope 3), -36% (Scopes 1,2)	-15 to 28%	-12 to 29%	-	-	-
2050 Target	-92%	-95%	-	-	-	-	-	-	-
Metric	Absolute emissions	Absolute emissions	-	Absolute emissions (Scope 3), emissions intensity (Scopes 1,2)	Absolute emissions	Absolute emissions			

Steel									
Baseline	2020	2021	2021	2021	2019	2022	2020	2020	2020
2030	-27%	-13%	-20%	-17-23%	-22%	-10-40%	-26%	-44.3%	-43%
2050	-93%	-94%	-92%		-		-	-	-
Metric	Emissions intensity	Emissions intensity	Emissions intensity	Absolute emissions	Absolute emissions	Emissions intensity	Emissions intensity	Emissions intensity	Emissions intensity
Real estate									
Baseline	2020	2021	2021	2021	2020	2022	2020	-	2020
2030	-42%	-27%	-36%	-39-52%	-28 to 32% (commercial) - 15% (residential)	-47-59%	-51%	-	-52%
2050	-95%	-98%	-97%	-	-	-	-	-	-
Metric	Alignment delta	Alignment delta	Emissions intensity	Emissions intensity	Emissions intensity	Emissions intensity	Emissions intensity	-	Emissions intensity

Sources: Bank reports, ARE Analysis, SBTi (South Korean banks)

Policy Recommendations

- Broaden net-zero emissions targets to include more banking activities, including facilitated emissions.
- Set comprehensive interim and long-term sectoral targets for reducing emissions aligned with a 1.5°C pathway and clearly disclose the metrics and baseline year.
- Establish a policy on new upstream oil and gas projects as well as a long-term policy on oil and gas financing covering the entire supply chain.
- Set coal financing policies that ensure a total withdrawal of corporate and project financing to coal companies and eliminate loopholes allowing financing in certain circumstances.
- Accelerate growth in sustainable financing with the use of clear, short- and medium-term targets.

Governance Recommendations

- Include climate change performance in determining executive remuneration, including meeting banks' climate-related goals and targets.
- Ensure the board has specific climate-change expertise for setting strategy and policy and assessing risks and opportunities.
- Include climate change experience, specifically, as a criterion for board nominations.
- Disclose climate change-related matters discussed at the board level, such as policy, strategy, and approaches to governance and risk management.

Risk Management Recommendations

- Develop and disclose a transition risk matrix, or similar tool, to help clients navigate transition risks, especially those in carbon-intensive sectors.
- Disclose the results of research on the sectoral and client risks posed by climate change and energy transition.
- Disclose detailed reporting of financed emissions at the sectoral level, in terms of volume and share of total portfolio, covering both lending and investment.

Conclusion

Advanced economy Asian banks can take the lead in the energy transition through embracing more ambitious climate policies. To navigate the transition successfully, they will also have to continue improving their commitments to climate governance and client-level risk management. As global expectations rise and demand for fossil fuels diminishes, the time is now for Asia's banks to further adjust their strategies.

Since the 2022 release of *Banking Asia's Future,* Asian developed economy banks have shown it is possible to set sectoral-level emissions targets, improve climate governance, and boost risk management procedures. There is still further to go. For financial institutions in Asia this report highlights pathways to improving climate policy, governance, and risk management.

Introduction

Asia's banks, especially those in advanced economies such as Japan, South Korea, and Singapore, face increasing scrutiny over their role in the energy transition. Investors and even regulators look for policies on fossil fuel financing, strategies to achieve net zero commitments, and effective climate governance and risk management strategies to ensure those commitments are met.

To help regional banks navigate this energy transition, Asia Research and Engagement (ARE) conducted a benchmarking assessment of nine leading financial institutions in three of East Asia's most advanced economies—Japan, Singapore, and South Korea.

Figure 3: Assessed Bank Data

Abbreviation	Market cap. (USD bn)	Total assets (USD bn)	Gross loans (USD bn)
MUFG	114.3	2,906	824.7
SMFG	68.9	2,031	854.6
Mizuho	45.7	1,910	686.7
DBS	61.5	554.4	358.2
OCBC	43.4	417.5	262.5
UOB	35.6	375.9	264.7
KB	16.8	557.1	356.5
Shinhan	16.1	534.5	339.6
Hana	10.2	449.9	282.8

Source: FactSet, as of January 2024

Opportunities and Challenges

COP28 called for transitioning away from fossil fuels.

The 28th Conference of the Parties (COP28) to the United Nations Framework Convention on Climate Change, held late last year in Dubai, concluded with a call to "transition away" from fossil fuels. COP28's pledge was part of an inaugural stocktake of the world's progress in reducing emissions of greenhouse gases (GHG) to net zero by 2050 to achieve the 2015 Paris Agreement's goal of limiting the increase in the mean global temperature to 1.5°C above pre-industrial levels.[1]

COP28 recognised that the world is not on track to achieve the Paris Agreement goal. The International Energy Agency (IEA) warned last October in its World Energy Outlook (WEO) that despite accelerating the adoption of low-carbon power sources such as solar and wind, the global average temperature has already climbed 1.2°C and is on track to rise by 1.9°C by 2050 and by 2.4°C by 2100, according to its Stated Policies (STEPS) Scenario.[2] This scenario provides an outlook based on the latest policy settings of governments, including energy, climate, and related industrial policies.[3]

Financial institutions need to reallocate capital from fossil fuels to clean energy.

Financial institutions play a key role in facilitating the flow of capital from carbon-intensive fossil fuels like coal, oil, and natural gas to clean sources of energy. COP28's stock take emphasised the need for them to better assess and manage climate-related financial risks and increase climate-related financing, putting a spotlight on how effectively banks enable this energy transition. Focus will increase on banks in Asia, where growing demand for energy makes the energy transition even more challenging.

Beyond reputation, the energy transition is an urgent business challenge.

More than a reputational issue, this poses an urgent business challenge to banks. COP28 avoided phrases such as a "phase-out" or "phase-down," but its commitment to "transition away" from fossil fuels sent an unmistakable message about the direction of policy—and finance—demonstrating the world is committed to achieving the transition.

123 states & the EU pledged to triple the world's installed renewable energy generation capacity by 2030.

Despite recent volatility in energy markets caused by the Covid-19 pandemic and Russia's invasion of Ukraine, global use of cleaner energy sources is accelerating. Underscoring this, 123 states and the European Union pledged at COP28 to triple "the world's installed renewable energy generation capacity to at least 11,000GW by 2030."[4]

Banks failing to map out a concrete strategy on energy financing quickly enough risk missing opportunities in clean energy. Based on its analysis of existing government climate, energy, and industrial policies—the STEPS—the IEA estimates that by 2030 the number of electric vehicles in use will rise tenfold, renewables will produce half of global electricity, and heat pumps and other electric heating will outsell fossil fuel boilers.[5]

Fossil fuel assets may underperform as demand declines.

Banks that fail to cut exposure to carbon-intensive industries may face increasing credit risks associated in a world of diminishing

demand for fossil fuels over the longer term. The IEA's STEPS projects that existing climate policies, though still inadequate to achieve the 1.5°C goal, will nonetheless cause demand for oil, gas, and coal to peak before 2030. If governments adopt more ambitious policies, demand for fossil fuels will fall rapidly after a near-term peak.

As a result, advanced economy Asian banks will need to continue to gear their climate policies, governance, and risk management efforts towards aligning with an energy transition that will gain momentum over the longer term. This involves continuous efforts to develop and refine targets (policy), structures to operationalise them (governance), and procedures to help clients navigate the risks (risk management).

There are some notable resources for banks to support their journey. These include the Principles for Responsible Banking (PRB) and its climate accelerator, the Net Zero Banking Alliance (NZBA). These are both parts of the United Nations Environment Programme Finance Initiative. All nine banks reviewed in this study are part of NZBA.

It is against this backdrop that ARE conducted its assessment of nine key banks in Asia from the region's most advanced economies, Japan, Singapore, and South Korea. The purpose of this research is to assess their approaches to the opportunities and challenges presented by the energy transition for the financial sector, with a focus on the three key themes of policy, governance, and risk management.

Methodology

ARE updates the 2022 assessment of banks' climate goals.

We aimed to ascertain the nine banks' progress in addressing climate change challenges to their operations and toward achieving a goal of net-zero emissions from their loan portfolios by 2050. This report details the results and updates ARE's 2022 report on regional banks, *Banking Asia's Future.*

We have introduced new assessment questions for this report as the nine advanced economy banks made significant progress since March 2022. In a subsequent report, we plan to assess banks in four of Southeast Asia's emerging economies—Indonesia, Malaysia, Philippines, and Thailand.

The survey has 29 questions split into three main areas. These broadly correspond to the 2017 Financial Stability Board's Task Force on Climate-Related Financial Disclosures (TCFD), which grouped recommendations under strategy, metrics and targets, governance, and risk management.[6] These actions are also aligned with the steps that banks must take when they join NZBA.

The review covers policy, governance & risk management.

The survey includes 16 policy questions, six on governance, and seven on risk management. These are Yes (Y) or No (N) questions determined by a series of options. For example, one question would have four potential answers (A, B, C, D), with answers A and B denoting a "Yes" answer, and C and D a "No." We shared the research with the banks and received feedback from most of them.

Rather than tabulate the scores and rank each bank we used the answers to develop a qualitative assessment and thematic analysis of their progress on climate-related policy, governance, and risk management issues.

Policy

Policy is the area where we see the biggest gap because banks must publish detailed sectoral decarbonisation pathways, with multiple policy aspects relating to each sector.

We designed our policy-related questions to assess each of the nine banks' commitments to achieving net-zero GHG emissions and to determine whether they have strengthened their commitments with detailed, sectoral-level plans that are backed up with clear metrics and targets. We also reviewed to what extent they disclose their facilitated emissions and include them in their net-zero targets; whether they have adopted policies to specifically phase out financing of fossil fuels; and the strength of their commitments to sustainable finance.

Net Zero Emissions Commitment

ARE assessed nine banks focusing on adherence to their net-zero commitments.

The assessment sought to determine whether banks committed to reach net zero emissions from their financing by 2050. This is a key commitment which sets the tone for banks to then develop emissions reduction targets for specific sectors that they lend to, especially carbon-intensive ones such as power, oil and gas, and steel. The industry group NZBA requires members to commit to achieving net-zero GHG emissions by 2050 in both their lending and investment portfolios. According to its Commitment Statement, members of the alliance must "transition all operational and attributable GHG emissions from our lending and investment portfolios to align with pathways to net-zero by mid-century, or sooner."

NZBA mandates commitments to net-zero emissions by 2050, with interim targets and annual progress reports.

Financial institutions therefore need to back up their net-zero goals with clear and detailed policies for reaching them. To maximise the impact of their efforts, the NZBA requires that members set an interim, 2030 target for reducing GHG emissions focusing on the most GHG-intensive areas of their portfolios. Members then must develop four intermediate reduction targets for every five-year period until 2050. Within a year of setting these targets, they need to publish an annual progress report that includes financed emissions.[7]

All nine banks have disclosed a commitment to reach net zero emissions from their financing by 2050 (see appendix). What varies,

however, is the level of detail disclosed about plans to meet their commitments. The three Singapore banks—DBS, OCBC, and UOB—have the most detailed plans, disclosing specific sectoral targets since the release of Banking Asia's Future in 2022.

Figure 4: Details and Coverage of Bank Net Zero Emissions Targets

Evaluation	DBS	OCBC	UOB	Mizuho	MUFG	SMFG	Hana	KB	Shinhan
Facilitated emissions included net zero emissions by 2050 commitments	Y	Y	Y	N	N	N	N	N	N
Sectoral targets aligned with a reference pathway that is based exclusively on alignment with a 1.5°C scenario	Y	Y	Y	N	N	N	N	N	N
Sectoral targets include specific medium term and long-term target years that are aligned exclusively with 1.5°C	Y	Y	Y	N	N	N	N	N	N
Sectoral targets include a clear disclosure of the metrics used with a given baseline year	Y	Y	Y	Y	Y	Y	N	Y	N

Facilitated Emissions

In 2020 the Partnership for Carbon Accounting Financials (PCAF), an industry-led body promoting transparency and accountability in the financial industry to align with the Paris Climate Agreement, defined "financed emissions"[8] as the reduction of emissions financed directly through banks' lending and investment.

What the PCAF's original definition left out was a bank's "facilitated emissions"—GHG emissions that banks enable through financial services and transactions they handle that aren't on balance sheet assets—including capital markets activities.[9] NZBA also did not include "facilitated emissions" in their original 2022 guidelines for climate target-setting.[10]

Banks' net-zero commitments on financed emissions do not include those facilitated by underwriting and other transactions.

The financial sector is preparing to include facilitated emissions in its net-zero commitments. NZBA said in 2024 that "Banks are encouraged to include capital market activities in targets as soon as practicable. Banks shall have reviewed existing targets to include capital markets activities by 1 November 2025 and include capital markets activities in any new targets set after 1 November 2025."[11]

The banks in the PCAF Working Group on Capital Markets Activities reportedly began considering in May last year to disclose up to a third of their facilitated emissions.[12] And in December 2023, the PCAF published the first version of its new accounting and reporting standard for facilitated emissions.[13]

Only 3 banks include, to some extent, facilitated emissions in their net zero targets.

We found that only three banks, all from Singapore, include facilitated emissions to some extent in their net zero emissions targets, according to their recent disclosures. The six banks from Japan and South Korea include only financed emissions in their net zero goals.

DBS disclosed emissions facilitated by its equity and debt capital markets operations:

> Our emissions reduction targets for Scope 3 financed emissions have included those we finance via corporate financing, which includes lending of our IBG [institutional banking group] portfolio (i.e. loan and loan equivalent), equity capital markets (ECM) and debt capital markets (DCM) activities.[14]

OCBC disclosed that it began factoring facilitated emissions through underwriting stocks and bonds:

> The NZBA guidelines stipulate that we calculate our financed emissions for lending and investment activities when setting our targets. In addition, we have extended the scope of our target to also include facilitated emissions from our Debt Capital Markets (DCM) and Equity Capital Markets (ECM) activities.[15]

UOB disclosed that it includes its bond underwriting business in calculating its emissions exposure:

> We have focused on the most material scopes of emissions for each sector and the emissions within the control of the clients for which we are setting targets...When creating the weighted averages, we aggregate the emissions data at an overall sectoral level and include the following products in the calculation of exposure: business lending; specialised lending, including project finance; investment securities; and debt capital markets underwriting.[16]

The Japanese and South Korean banks, however, still include only financed emissions in their net zero targets. The scope of their emissions targets, however, may expand once NZBA and PCAF publish revised reporting standards that include facilitated emissions and provide improved methodologies for calculating them.

Sectoral Targets

For banks to meet their net zero emissions goals from financing, detailed targets for specific sectors need to be set, especially for carbon-intensive sectors that account for the bulk of financed emissions in a bank's portfolio. Without detailed strategies for how banks plan to reduce their Scope 3 financed emissions, it would be more difficult for banks to navigate their pathway to reach their stated net zero emissions.

All nine banks set targets for sectoral emissions, with Singapore banks providing the most detailed plans.

NZBA members' commitments to reach net zero emissions are based on the original guidelines issued in April 2021 by the United Nations Environment Programme Finance Initiative. Those guidelines required that banks establish targets for reducing financed emissions from most—if not all— carbon-intensive sectors, including agriculture, aluminium, cement, coal, commercial and residential real estate, iron and steel, oil and gas, power generation, and transport. Within one year of setting those targets, they must also publish a "high-level transition plan" describing what actions they will take to meet their targets and when.[17]

All nine banks published targets for reducing sectoral emissions in their portfolios, either for all or some carbon-intensive industries, although these vary in detail and scope (see appendix).

The three Singapore banks published the most detailed sectoral emissions reduction plans, demonstrating the most progress since the publication of *Banking Asia's Future.* DBS did so in its September 2022 report *Our Path to Net Zero,* with UOB following in October that year in its *Forging Our Net Zero Future*, and OCBC in May 2023 in *Partnering Clients towards a Net Zero ASEAN and Greater China.*

All three banks' reports detail plans to reduce emissions from financing power generation. DBS and OCBC also included plans to reduce emissions from clients in oil and gas. We assessed these plans in greater detail in our August 2023 report *Singapore Banks Raise the Bar in Asia for Decarbonisation Targets.*[18] The Singapore banks' plans represent the most comprehensive plans among Asian banks to align financing of carbon-intensive industries with global benchmarks such as the IEA's NZE Scenario (Figure 7).

Japan & South Korea banks set less comprehensive sectoral targets compared to Singapore banks.

The other six banks we assessed outlined sectoral targets narrower in scope and less detailed than the Singapore banks. The Japanese and South Korean banks disclosed targets for reducing financed emissions in the power sector. The Japanese banks also set targets for oil and gas, with MUFG adding targets for real estate, shipping, and steel, automotive, and aviation, and Mizuho for automotive, steel, shipping, and real estate. The three South Korean banks disclosed broad targets for steel and other additional sectors (see below).

Figure 5: Sectoral Targets of Assessed Banks

Sector	DBS	OCBC	UOB	Mizuho	MUFG	SMFG	Hana	KB	Shinhan
Power generation	●	●	●	●	●	●	●	●	●
Oil and gas	●	●		●	●	●			
Automotive	●		●	●	●	●			
Steel	●	●	●	●	●	●	●	●	●
Aviation	●	●			●				
Shipping	●	●		●	●				
Real estate	●	●	●	●	●	●	●	●	●
Construction			●						
Cement							●	●	●
Aluminium							●	●	●
Paper and pulp							●	●	●
Transportation									●

**Yellow indicates that the bank has targets set for 2030 only; Blue indicates that there are mid- and long-term targets for 2030 and 2050.*

Sources: Bank reports, ARE analysis

Figure 6: Sectoral Targets for Carbon-intensive Industries, by Bank

Sector	DBS	OCBC	UOB	Mizuho	MUFG	SMFG	Hana	KB	Shinhan
Power generation									
Baseline	2020	2021	2021	2020	2019	2020	2020	2019	2020
2030 Target	-47%	-55%	-65%	-40 to 60%	-41 to 52%	-41 to 58%	-47%	-39.4%	-76%
2050 Target	-100%	-100%	-98%	-	-	-	-	-100%	NA
Metric	Emissions intensity	Emissions intensity	Emissions intensity	Emissions intensity	Emissions intensity	Emissions intensity	Emissions intensity	Emissions intensity	Emissions intensity
Oil and gas									
Baseline	2020	2021	-	2019	2019	2020	-	-	-
2030	-28%	-35%	-	-12 to 29% (Scope 3), -36% (Scopes 1,2)	-15 to 28%	-12 to 29%	-	-	-
2050	-92%	-95%	-	-	-	-	-	-	-
Metric	Absolute emissions	Absolute emissions	-	Absolute emissions (Scope 3), emissions intensity (Scopes 1,2)	Absolute emissions	Absolute emissions	-	-	-
Steel									
Baseline	2020	2021	2021	2021	2019	2022	2020	2020	2020
2030	-27%	-13%	-20%	-17-23%	-22%	-10-40%	26%	-44.3%	-43%
2050	-93%	-94%	-92%	-	-	-	-	-	-
Metric	Emissions intensity	Emissions intensity	Emissions intensity	Absolute emissions	Absolute emissions	Emissions intensity	Emissions intensity	Emissions intensity	Emissions intensity
Real estate									
Baseline	2020	2021	2021	2021	2020	2022	2020	-	2020
2030	-42%	-27%	-36%	-39-52%	-28 to 32% (commercial) - 15% (residential)	-47-59%	-51%	-	-52%
2050	-95%	-98%	-97%	-	-	-	-	-	-
Metric	Alignment delta	Alignment delta	Emissions intensity	Emissions intensity	Emissions intensity	Emissions intensity	Emissions intensity	-	Emission intensity
Shipping									
Baseline	2020	2021	-	2021	2021	-	-	-	-
2030	0	0	-	0	0	-	-	-	-
2050	0	0	-	-	-	-	-	-	-
Metric	Alignment delta	Alignment delta	-	Portfolio alignment	Alignment delta	-	-	-	-
Aviation									
Baseline	2019	2021	-	-	2021	-	-	-	-
2030	-16%	-66%	-	-	-45%	-	-	-	-
2050	-100%	-100%	-	-	-	-	-	-	-
Metric	Emissions intensity	Emissions intensity	-	-	Emissions intensity	-	-	-	-

Policy

Automotive									
Baseline	2022	-	2021	2021	2021	2021	-	-	-
2030	-57%	-	-58%	-38% (Scope 1 and 2) -31-43% (Scope 3)	-23-46%	-21-41%	-	-	-
2050	-100%	-	-100%	-	-	-	-	-	-
Metric	Emissions intensity	-	Emissions intensity	Emissions intensity	Emissions intensity	Emissions intensity	-	-	-

Sources: Bank reports, ARE analysis, SBTi (South Korean banks)

1.5°C Scenario

We evaluated whether banks' sectoral strategies align with the 1.5°C goal in the IEA's NZE Scenario.

We examined whether the banks' sectoral targets for emissions intensity are aligned with a recognised pathway for achieving net zero, assessing to what extent a bank's industry targets put it on track to achieve net-zero emissions by 2050.

NZBA members commit to align with pathways to net zero by mid-century, consistent with a maximum temperature increase of no more than 1.5°C above pre-industrial levels by 2100.[19] We sought to determine whether their sectoral strategies were aligned with the Paris Agreement's 1.5°C goal. As a yardstick, we used the IEA's NZE Scenario. The IEA's first Net Zero Roadmap, published in 2021 and updated last September, sets out a scenario to limit global warming to 1.5°C. While the IEA warned in its update that the pathway to reaching net zero by 2050 had narrowed, it was still achievable.

Only the three Singapore banks have medium- and long-term sectoral targets aligned with the IEA NZE Scenario's trajectory for achieving both the 1.5°C goal and reaching net-zero by 2050.

Japanese banks use a range between two IEA scenarios to determine their targets.

The three Japanese banks set medium-term sectoral targets for 2030, but not for 2050. Furthermore, their medium-term sectoral targets aren't based on a strict 1.5°C limit but aim instead for a more flexible range based on two scenarios. For the most ambitious end of their range, they use the pathway identified in the IEA's 1.5°C scenario, while the least ambitious end of the range they use the pathway identified with the IEA's Sustainable Development Scenario, which is based on keeping global average temperature increases to "well below 2°C" (Figure 7).

Hana obtained verification in 2022 for its 2030 sectoral targets.

Among the three South Korean banks, Hana obtained verification in 2022 for its 2030 sectoral targets from the Science Based Targets Initiative (SBTi), a partnership between the CDP (formerly the Carbon Disclosure Project), the United Nations Global Compact, World Resources Institute, and the World Wide Fund for Nature. The SBTi bases its verification on its Sectoral Decarbonization Approach (SDA), and the SDA applies conditions for limiting global warming to 1.5°C only to the power sector. For other industries, it applies the less stringent conditions the IEA outlines for keeping global warming "well below 2°C."[20]

KB, likewise, used the SBTi's SDA to set sectoral targets for 2030, 2040 and 2050.[21] But the SBTi verified only KB's 2030 sectoral targets. Shinhan also reported sectoral targets for 2030, 2040 and 2050, but only its 2030 targets were verified by SBTi. The bank's most recent TCFD report, moreover, referenced a range of pathways for its sectoral targets, between the 1.5°C goal and the "well below 2°C" scenario.

Disclosure of Metrics

The NZBA's guidelines, published in 2022 for climate target-setting for banks, outlined that members should calculate and disclose annually the financed emissions profile of the bank's portfolio. Those disclosures, it said, should also include targets set in terms of either i) absolute emissions or ii) portfolio-wide or sector-specific emissions intensity.

Seven of the nine banks clearly disclosed the metrics they use for their sectoral targets, whether absolute emissions or emissions intensity, and the baseline year they use as a starting point.

Seven banks disclosed their metrics for sectoral targets.

DBS, OCBC, and the three Japanese banks target absolute emissions reductions in oil and gas but use emissions intensity to measure targeted reductions from the power sector. UOB, however, chose to use emissions intensity for all its sectoral targets. Instead of absolute emissions in volumetric terms, KB discloses specific percentage reductions in absolute emissions for its sectoral targets.

The two exceptions are South Korea's Hana and Shinhan. Both committed to reaching net-zero emissions by 2050, but don't clearly disclose what metrics they use to set their targets and gauge progress. Without more specific disclosure, it isn't possible to assess how either bank will reach its long-term sectoral targets.

Oil and Gas

We examined banks' policies to phase out exposure to fossil fuels as demand for them declines in a net zero by 2050 scenario—not just for coal but also for oil and natural gas.

Focusing on which banks plan to stop financing new investments in upstream oil and gas production, we looked at policies to phase out long-term financing of both upstream and downstream oil and gas businesses, from exploration to pipelines and refineries, as well as to gas-fired power plants.

IEA's NZE Scenario requires no new, long-term oil and gas projects or coal mines.

The IEA's updated Net Zero Roadmap reiterated in its original scenario that achieving the NZE Scenario requires no new, long-term oil and gas projects or coal mines. Continued investment will be needed in oil and gas projects already approved or existing to avoid price spikes or supply gluts as the world shifts from fossil fuels to clean, sustainable sources of energy.[22]

In its NZE scenario, the IEA projects that global demand for fossil fuels will fall 25% by 2030 and 80% by 2050. In this scenario, not only are new fossil fuel projects not needed, the IEA projects, but "the pace of decline in oil and gas demand in the 2030s may also mean that a number of high-cost projects come to an end before they reach the end of their technical lifetimes."

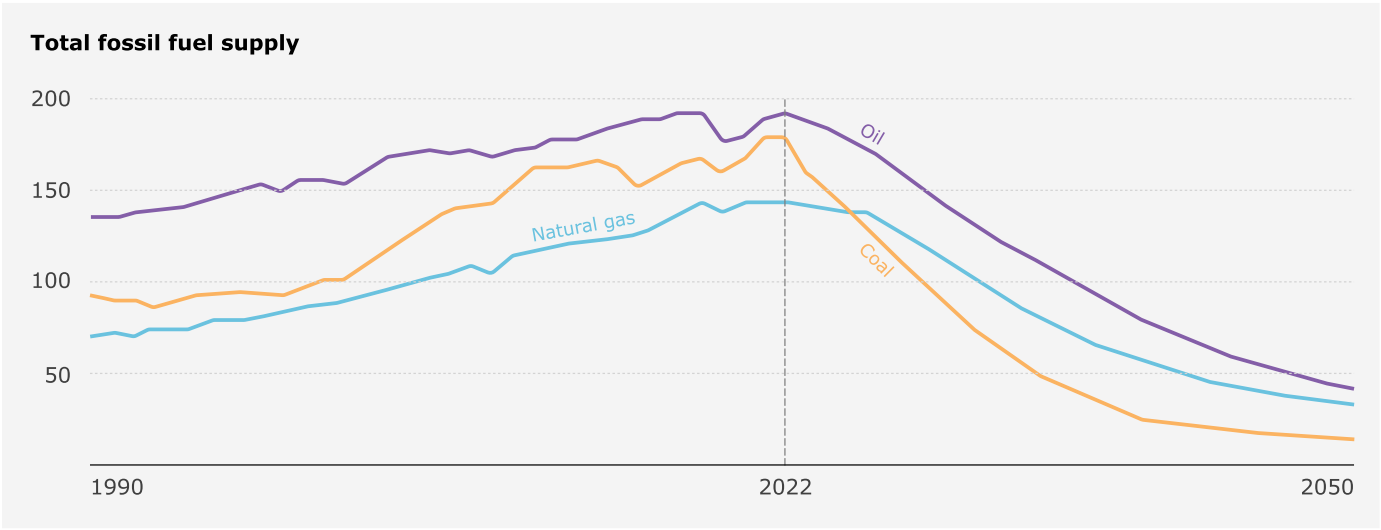
As illustrated in the chart below, the IEA projects that in its NZE Scenario oil and gas supply will fall by 77% between 2022 and 2050, and demand for coal by 91%. Emissions from any fossil fuels still needed in a 1.5°C scenario would have to be reduced using technologies such as carbon capture and storage (CCS) or direct air capture (DAC).

Figure 7: Fossil Fuel Supply Outlook in IEA NZE Scenario

Fossil fuel supply

Declines in fossil fuel demand are sufficiently steep that there is no need for new long lead time upstream oil and gas conventional projects, nor from new coal mines or mine extensions.

97%
REDUCTION IN FOSSIL FUEL GHG EMISSIONS



Milestones	2022	2030	2035	2050
Fossil fuel supply(EJ)	511	362	237	88
Oil	189	148	110	42
Natural gas	144	118	77	32
Coal	179	95	50	15
Scope 1 and 2 emissions (Gt CO_2-eq)				
Oil	3.4	1.3	0.7	0.1
Natural gas	1.7	0.6	0.3	0.03
Scope 3 emissions (Gt CO_2-eq)				
Oil	8.9	6.9	4.7	0.8
Natural gas	6.9	5.5	3.2	0.3
Coal	15.3	8.2	3.5	0.2

Source: IEA, "Net Zero Roadmap: A Global Pathway to Keep the 1.5°C Goal in Reach," 2023.

Emerging economies' progress with the energy transition likely to be slower than with developed economies.

The IEA projects that faster-growing emerging economies, such as those in Southeast Asia, will likely make the energy transition less rapidly than more developed, high-income economies. But the future for fossil fuels globally is clear in this scenario: falling volumes and shrinking market share.

We assessed banks on their oil and gas policies, in terms of whether they had committed to not only cease new financing of oil and gas projects and activities, but also on whether they disclose long-term oil and gas financing policies covering the entire industry supply chain. Most banks have not committed to cease new financing of

projects, nor have they disclosed long-term policies to wind financing down.

Advanced economy banks have room to improve their policies on financing oil & gas.

Banks in Asia's advanced economies have more comprehensive policies for ending their financing of coal. But there is still plenty of room for them to improve their policies on financing the oil and gas sector.

Financing New Projects

OCBC and UOB have policies to stop financing new upstream oil and gas projects; DBS is solely focused on reducing financed emissions from oil and gas.

Only two banks, OCBC and UOB, announced policies to stop financing new upstream oil and gas activities altogether.

From OCBC: *We will not extend project financing to upstream oil & gas projects that obtained approval for development after 2021. IEA 1.5°C pathway states that the oil and gas fields that were approved for development up till 2021 are sufficient to meet the interim energy needs as the population transitions towards a world that does not rely on fossil fuels.*[23]

From UOB: *We commit to no new project financing for upstream O&G projects approved for development after 2022… Given the diverse and developing nature of regional economies, we believe that current O&G decarbonisation pathways are not realistic in their reflection of critical aspects of a just transition. Robust, aggressive plans will be needed to successfully address the sector's mitigation needs. Despite the difficulties, we recognise that any meaningful climate transition programme must encompass the oil, gas, and coal sector to be effective, and we have set commitments that reflect limiting the new supply of oil and gas and exiting the thermal coal sector.*[24]

Both OCBC and UOB re-iterated no new financing commitments for upstream oil and gas projects in their respective 2023 sustainability reports.

DBS chose not to stop financing new upstream oil and gas projects, but instead adopted targets for cutting overall financed emissions from oil and gas. "The O&G sector is one side of a supply-demand equation," DBS explained. "Without concerted efforts to reduce O&G demand (through the transition of the power, transportation, and industrial sectors in particular), reducing the supply of O&G products will be neither possible nor desirable."[25]

Six other banks have not pledged to halt financing new upstream oil and gas activities, though some impose environmental restrictions.

The other six banks also made no public commitment to stop financing new upstream oil and gas activities. Some, however, have plans to restrict financing upstream activities with greater potential environmental impact.

SMFG's Sumitomo Mitsui Banking Corp., for example, conducts environmental and social risk assessments of any oil sands, Arctic, or shale oil and gas developments seeking funding. Mizuho and MUFG also say they carry out risk assessments of proposed oil sands, Arctic, and shale oil and gas projects.

Hana is the only South Korean bank of the three we assessed that announced restrictions on financing of certain types of oil and gas projects. Hana says it won't fund any new projects, or the expansion of existing ones, if more than half of the project's production involves tar sands, shale oil and gas, Arctic oil and gas, or ultra-deep-water oil and gas.[26]

Figure 8: Banks' Commitments to Stop New Upstream Oil and Gas Financing

Evaluation	DBS	OCBC	UOB	Mizuho	MUFG	SMFG	Hana	KB	Shinhan
Announced a policy to stop financing new upstream oil and gas projects and activities	N	Y	Y	N	N	N	N	N	N

Long-term Policies for Oil and Gas

While most of the banks we assessed say they will stop financing new coal projects and phase out all coal-related financing, none commit to a deadline for phasing out financing to the oil and gas sector altogether.

DBS and OCBC have ambitious targets for cutting financed emissions from oil and gas.

Of the Singapore banks, DBS and OCBC have both medium- and long-term targets for significantly reducing financed emissions from the oil and gas sector. DBS plans to reduce its financed emissions from oil and gas by 92% by 2050 from 2020 levels. OCBC pledged to cut oil and gas financed emissions by 95% by 2050 from 2021 levels. UOB has not set an overall financed emissions target for oil and gas, instead joining OCBC in announcing it will not finance new upstream projects.

DBS and OCBC are the only two banks of the nine with long-term targets for reducing overall financed emissions from oil and gas. None of the nine banks plans to phase out financing to the industry by 2050—either for upstream drilling and production of oil and gas, or downstream refining, processing, and distribution, or from gas-fired power generation assets (see appendix).

DBS, however, noted that its "absolute emissions targets for the [oil and gas] sector cover upstream, downstream and integrated companies, making it one of the most extensive targets set to date by any financial institution."[27]

OCBC only targets financed emissions from upstream oil and gas operations.

While DBS plans to cut emissions from both upstream and downstream parts of the oil and gas business, OCBC took a different approach, saying it targets only financed emissions from upstream oil and gas operations, but not downstream. OCBC argues that downstream emissions, being by-products of upstream production, will be reduced when upstream emissions are reduced:

> We have measured the emissions of our clients who are involved in the upstream part of the oil & gas value chain, including integrated oil & gas companies. Upstream operations are material contributors to sector emissions, through Scope 1 emissions, as well as Scope 3 emissions associated with final use or combustion of oil and gas products. By targeting the upstream sub-sector, a reduction in emissions will cascade down to the remaining parts of the value chain.[28]

Taken together with their commitment to phase out financing of coal (see below), DBS and OCBC's long-term targets for reducing financed emissions from oil and gas represent the closest thing among the nine banks to completely phasing out fossil-fuel financing. But by targeting emissions instead of financing itself, the two banks left open a window to keep financing fossil fuel activities from clients if GHG emissions from their activity are abated through technologies such as carbon capture and storage (CCS) or direct air capture (DAC).

Mizuho and UOB caution against long-term targets for reducing oil and gas financing.

Other banks argued against adopting targets that eliminate financing for oil and gas. Mizuho, though it has a 2030 target for reducing financed emissions from oil and gas, argues that withdrawing

financing for fossil fuels would cause prices for energy to spike. Instead, it is focusing on increasing climate-related financing:

> 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.[29]

UOB argues that reducing financing to its oil and gas customers might unjustly deprive fossil fuels to developing countries with growing energy demand that can't yet feasibly be replaced with sustainable fuel:

> Given the highly regional nature of UOB's O&G portfolio, we believe that current decarbonisation pathways are not realistic in their reflection of critical aspects of a just transition. In addition, current views on the region's just contribution to fossil fuel reduction vary widely across models, with several pathways showing an aggregate increase to 2030. This reflects the complexity of the region's energy demands and fuel supply mix.[30]

Coal

Figure 9: Bank Policies on Coal Financing

Evaluation	DBS	OCBC	UOB	Mizuho	MUFG	SMFG	Hana	KB	Shinhan
Announced a policy to stop new thermal coal financing	Y	Y	Y	Y	Y	Y	Y	Y	N
Announced a policy to phase-out thermal coal sector financing	Y	Y	Y	Y	Y	Y	Y	N	N

There's little room for coal in the IEA's NZE scenario. The IEA projects that, in this scenario, by 2040 no more electricity will be generated by coal-fired power plants without facilities to abate the CO_2 emitted by those facilities.

There is no need to build more of these coal-fired power plants in a world where global warming is kept within 1.5°C. "Low-emissions electricity rises so rapidly," the IEA projects, "that no new unabated coal plants beyond those under construction at the start of 2023 are built."[31]

The IEA's NZE scenario anticipates drastic coal usage reduction by 2040, with no new unabated coal plants.

This scenario is already showing signs of playing out, the IEA says: more than 90 countries, representing nearly all the coal-fired power produced, have either committed to phasing out unabated coal or target net-zero coal emissions. The IEA projects that, in its NZE Scenario, falling coal demand will cut coal supply by more than half in 2030, to 85 exajoules (EJ), and by 92% to 15 EJ in 2050, from 179 EJ in 2022.

Financial institutions must cut lending to the coal sector and cease funding new projects.

It is thus incumbent on global financial institutions to wind down lending to the coal sector and stop financing new thermal coal projects. In addition to assessing whether the nine banks in our report have policies against financing new coal projects, we also examined whether they plan to phase out financing to the thermal coal sector altogether.

The nine banks demonstrate more ambitious policies when it comes to financing coal—both mining of thermal coal and coal-fired power.

Eight banks pledged to stop financing new coal projects or coal companies.

Eight of the nine banks pledged to stop financing any new coal projects, both coal mines and coal-fired power plants. Some banks also say they will stop providing, or limit, corporate finance to coal-related companies. The Singapore banks, along with Mizuho and SMFG, have the most comprehensive policies in this regard.

Of the South Korean banks, KB and Hana committed to end project financing for both coal mines and coal-fired power plants. Shinhan committed only to end financing of new coal-fired power plants, but not new coal mines.

The three Singapore banks also pledged not to take on new clients that depend on coal.

The three Singapore banks committed in 2019 to stop financing new thermal coal projects, both coal-fired power plants and thermal coal mines. The banks have since expanded these restrictions, which we detailed in our 2023 report *Singapore Banks Raise the Bar,* to include limits to corporate financing to coal-related companies. The three banks won't, for example, accept as a new client any company that derives more than a certain share of revenue or power from coal.

Mizuho and SMFG won't finance coal-fired power plants and restricted funding of coal companies.

SMFG and Mizuho disclosed similar restrictions on corporate financing to companies involved in thermal coal:

From SMFG:

> - Support for newly planned coal-fired power plants and the expansion of existing plants [is] not provided. In addition, among companies whose main businesses are coal-fired power generation, we will not provide support for those that do not have any existing transactions, including but not limited to lending, with SMBC Group.[32]

From Mizuho:

> - *We will not provide financing and investment:*
>   - to companies with no existing financing and investment transactions and whose primary business is coal-fired power generation.
>   - which will be used for new construction of coal-fired power generation plant and expansion of existing coal-fired power generation plant…
> - *We will not provide financing and investment:*
>   - to companies with no existing financing and investment transactions and whose primary business is thermal coal mining or infrastructure operations linked with thermal coal mining.
>   - which will be used for development of new thermal coal mine, expansion of existing thermal coal mine, acquiring an interest in existing thermal coal mine, development or new infrastructure linked with thermal coal mining and expansion of existing infrastructure linked with thermal coal mining.[33]

Seven of the nine banks have committed to phasing out coal financing, most with a specific end year.

Of the nine banks, seven committed to ending coal financing, with most also imposing a deadline for doing so. DBS and UOB both committed to end coal financing by 2040, with OCBC committing to phasing out its exposure to thermal coal "over time." For all three banks, this commitment to exit coal financing includes both coal-fired power plants and coal mines.

Japan's Mizuho, MUFG, and SMFG also committed to stop coal financing (power plants and mines) by 2040, with Mizuho and SMFG pledging to end by 2030 financing of coal mining in any of the 38, largely high-income countries that is a member of the Organisation for Economic Co-operation and Development.

The three South Korean banks lag their counterparts in Japan and Singapore. Hana committed to end all coal project financing by 2050, though it is not clear if this includes mines. KB and Shinhan have no policies to phase out coal financing by a specific year.

Sustainable Finance

We evaluated banks' plans to increase sustainable financing and the taxonomies they use to identify it.

We assessed the banks on whether they have targets for increasing their financing of sustainable projects, and if so, how they have progressed. We also wanted to determine whether they employed a recognised benchmark or taxonomy to establish the guidelines they use to decide which projects are green, sustainable, or part of the global transition to sustainability.

All the banks published their own definition of sustainable finance and disclosed what standard they used to develop it (see appendix).

All the banks defined sustainable finance using recognised standards from the CBI, EU, ICMA, LMA, or national guidelines.

DBS in 2022 published its own Sustainable & Transition Finance Framework & Taxonomy. It relies on criteria and definitions in the EU taxonomy for sustainable activities, Climate Bonds Initiative's (CBI) Climate Bonds Taxonomy, the International Capital Market Association's (ICMA) Green Bond Principles, and the Loan Market Association's (LMA) Green Loan Principles.[34]

SMFG's banking subsidiary SMBC Group developed a "Green Finance Framework" for evaluating green bonds and loans. It also cites ICMA's Green Bond Principles and LMA's Green Loan Principles, as well as the Japanese Ministry of Environment's "Green Bond and Sustainability Linked Bond Guidelines" and "Green Loan and Sustainability Linked Loan Guidelines."[35]

In May 2023, SMBC also published a "Transition Finance Playbook" citing seven references:

- ICMA's Climate Transition Finance Handbook;
- "Basic Guidelines on Climate Transition Finance," by the Japan Financial Services Agency, the Ministry of Economy, Trade and Industry, and the Ministry of the Environment Japan;
- NZBA's Transition Finance Guide;
- CBI's white paper, "Financing credible transitions;"
- LMA's Green Loan Principles;
- The Min. of Environment's green loan guidelines; and
- "Asia Transition Finance Guidelines," by the Asia Transition Finance Study Group.[36]

Hana published a "Sustainable Finance Framework Guide" that applies the South Korean Financial Service Commission's Green Financial Guidelines, the Ministry of Environment's K-Taxonomy, and the EU Taxonomy.[37]

All the banks have targets for sustainable financing and disclose progress, but not the proportion of total financing.

All nine banks also disclose the amount of sustainable financing they issued in their most recent reporting year, as well as a specific target for increasing it (see appendix).

DBS, for example, said it already surpassed its original goal of issuing SGD50 billion in sustainable finance by 2024, having conducted SGD61 billion in sustainable finance transactions since 2019.[38]

Japan's Mizuho Bank raised its cumulative sustainable finance target over the 2019-30 period to JPY100 trillion (USD690 billion), half of which is earmarked for environment and climate-related finance, reporting that by the end of September 2022, it issued JPY16.4 trillion yen in sustainable financing.[39]

Hana aims to provide KRW60 trillion (USD45 billion) in green and sustainable or ESG financing by 2030, which it intends to divide into KRW25 billion bonds, KRW25 billion in loans and KRW10 billion in investments. Hana reported that, by the end of 2022, it issued roughly KRW4.3 trillion in ESG bonds, including KRW3.3 trillion in sustainability bonds, and KRW14 trillion in ESG loans and investments.[40]

None of the nine banks disclose sustainable financing's share of total financing.

We also assessed whether the banks disclose what share of their total financing sustainable financing will comprise. Our research, however, found that none of the nine banks disclosed this, nor do they have a target for what proportion of their overall financing should be sustainable (see appendix).

Recommendations

- Broaden net-zero targets to include more banking activities, including facilitated emissions.
- Set comprehensive sectoral targets (including interim targets) for reducing emissions aligned with a 1.5°C pathway and clearly disclose the metrics and baseline year.
- Establish a policy on new upstream oil and gas projects as well as a long-term policy on oil and gas financing covering the entire supply chain, from upstream to downstream.
- Set coal financing policies that ensure a total withdrawal of corporate financing to coal companies and eliminate loopholes allowing financing in certain circumstances.
- Accelerate growth in sustainable financing with the use of clear, short- and medium-term targets.

Governance

We gauged banks' climate governance, including board engagement, executive pay & public disclosure.

Banks are developing policies to reduce their emissions from financing as well as governance structures to improve their ability to plan and coordinate their approach to sustainability issues. Some of these structures go as high as the board of directors, where new disclosure rules require more transparent oversight of climate-related policies and assessment of the risks climate change issues pose to the bank.

The best example of this is the annual TCFD reports banks now publish voluntarily with their regular, statutory financial filings. While the TCFD has disbanded and handed its responsibilities to the IFRS Foundation, banks will continue publishing these reports, in which they disclose their performance and policies around the TCFD's four key themes: strategy, governance, risk management, and metrics and targets. As the TCFD observed:

> Investors and other users of climate-related financial disclosures are interested in understanding the role a company's board plays in overseeing climate-related issues as well as management's role in assessing and managing those issues. Such information supports evaluations of whether climate-related issues receive appropriate board and management attention.[41]

As a result, banks in Asia and beyond are expanding efforts to prepare for climate change and develop policies that aid the energy transition. They also face increasing requirements from regulators to disclose their plans, prompting banks to disclose more about how they will integrate climate change into their operations.

Banks are developing governance to transparently manage climate risks & plan sustainability strategies.

Our assessment included six questions related to governance, designed to better understand how bank boards handle climate change and what they disclose to the public about those efforts. We sought to determine whether banks elevated climate change and sustainability as a board-level issue and ensured their boards have sufficient expertise to handle it.

We also assessed whether banks incorporate sustainability—and climate change specifically—into performance reviews for determining executive compensation. Lastly, our assessment sought to determine whether the banks align their reporting with the four pillars defined in the TCFD's recommendations for disclosure: governance, strategy, risk management, and metrics and targets.

Board-level Responsibility for Climate Change

Seven banks put their boards or board-level committees in charge of climate issues.

Seven of the nine banks assign responsibility for sustainability issues related to climate change to a board member or a board-level committee. The only two banks that haven't, MUFG and Mizuho, instead put climate change issues under direct board oversight.

Singapore's OCBC established a sustainability committee in early 2023, explaining:

> The Board takes ultimate responsibility for and drives all aspects of sustainability at OCBC, including sustainability reporting and management's preparation of the Sustainability Report. To support the board in its oversight of the bank's environmental, social and governance (ESG) issues, the Board Sustainability Committee was established on 7 February 2023.[42]

For Japan's SMFG, "climate change measures, internal committees including the Sustainability Committee, in addition to the Board of Directors, provide oversight, and deliberations are held in each committee."[43] South Korea's Hana said that "in order to systematically implement ESG management in all affiliates, Hana Financial Group has established a group-wide climate change response system by assigning roles to the BOD, management, and working teams."[44]

Five banks consider broad sustainability expertise in board nominations, but only four have a board member with climate expertise.

Five of the nine banks—KB, Mizuho, OCBC, SMFG, and UOB—take broader sustainability expertise into account in their board nomination process. But none specifically factors in climate change-related expertise.

Four of the banks—DBS, UOB, Mizuho, and SMFG—have someone with skills and experience related to climate change on their board or on a board-level committee. DBS established a sustainability

committee in February 2022 and shortly thereafter appointed an international sustainable finance expert to it. UOB announced at the end of 2023 its formation of a sustainability advisory panel whose three members have backgrounds in climate change and sustainability.

Seven of the banks, with varied levels of detail, disclosed which climate-related matters their board discussed in their most recent reporting.

Executive Remuneration

Six banks link executive pay to climate performance, while three consider broader ESG or sustainability metrics.

Six of the banks—DBS, Hana, Mizuho, Shinhan, KBFG, and SMFG—take climate change performance specifically into account when determining executive compensation. The other three say they take performance on ESG or sustainability more generally into account to determine executive compensation. Some banks, therefore, include climate change in determining ESG/sustainability performance. But banks need to provide more detailed disclosures about how they gauge that performance and translate it into determining executive remuneration.

TCFD Reporting

All nine banks we assessed have published a recent TCFD report, either separately or as part of a broader ESG or annual sustainability report (see appendix). This is undoubtedly a result of the increasing public and regulatory focus on how well banks integrate climate change action into their strategies and operations.

Figure 10: Board-level Mechanisms and Processes Relating to Climate Change

Evaluation	DBS	OCBC	UOB	Mizuho	MUFG	SMFG	Hana	KB	Shinhan
Appointed a board member or committee that has responsibility for sustainability issues directly related to climate change	Y	Y	Y	N	N	Y	Y	Y	Y
Has at least one board member with relevant skills or experience in climate-related issues to give input into strategy	Y	N	Y	Y	N	Y	N	N	N
Stated in detail what climate-related matters the board has discussed within the most recent reporting year	Y	N	Y	Y	Y	Y	Y	N	Y
Established an executive remuneration scheme that takes into account climate change performance to determine compensation	Y	N	N	Y	N	Y	Y	Y	Y

Recommendations

- Include climate change performance in determining executive pay, including meeting banks' climate-related goals and targets.
- Ensure the board has climate-change expertise for setting strategy and policy and assessing risks and opportunities.
- Include climate change experience specifically as a criterion for board nominations.
- Disclose more fully climate change-related matters discussed at the board level, such as policy, strategy, and approaches to governance and risk management.

Risk Management

Banks must disclose what risks climate change poses to their business & clients—and how they manage those risks.

Risk management in the context of TCFD reporting requires that a bank assess the physical risks posed by climate change and the risks posed by decarbonisation trends and policies. Risk management also involves an assessment of how a bank's clients are responding to those physical and transition risks, and the level to which the bank is helping clients manage them.

As the TCFD explained:

> Investors and other users of climate-related financial disclosures are interested in understanding how a company's climate-related risks are identified, assessed, and managed and whether those processes are integrated into existing risk management processes. Such information supports users of climate-related financial disclosures in evaluating the company's overall risk profile and risk management activities.[45]

While these reports are still voluntary for most banks, climate risk reporting may soon become a regulatory requirement for the largest, international ones. The Basel Committee on Banking Supervision (BCBS), which sets prudential standards for member banking regulators to apply to global banks under their jurisdiction, last November issued a consultation on adding common disclosures for climate-related financial risks to the prudential reporting already required of the biggest banks.[46] Banks in Asia should therefore prioritise climate risks to their portfolio, especially international banks in advanced economies such as Japan, Singapore, and South Korea.

We evaluated bank engagement with clients on risks, their development of transition risk matrices & their disclosures.

We assessed bank engagement with clients to help them understand and respond to the transition risks they face. We also assessed whether the banks have a comprehensive, detailed transition risk matrix to track client progress in managing these risks.

We determined whether banks conduct and disclose scenarios for transition and physical risks related to climate change. We also asked whether banks have the internal capacity to evaluate their clients' transition strategies as part of that risk assessment.

Transition Risk Engagement

Two Japanese banks lead in developing client-level risk management.

Two Japanese banks, Mizuho and MUFG, lead in developing client-level risk management, with both explaining their methodologies in their most recent disclosures.

In its most recent TCFD report, Mizuho stated:

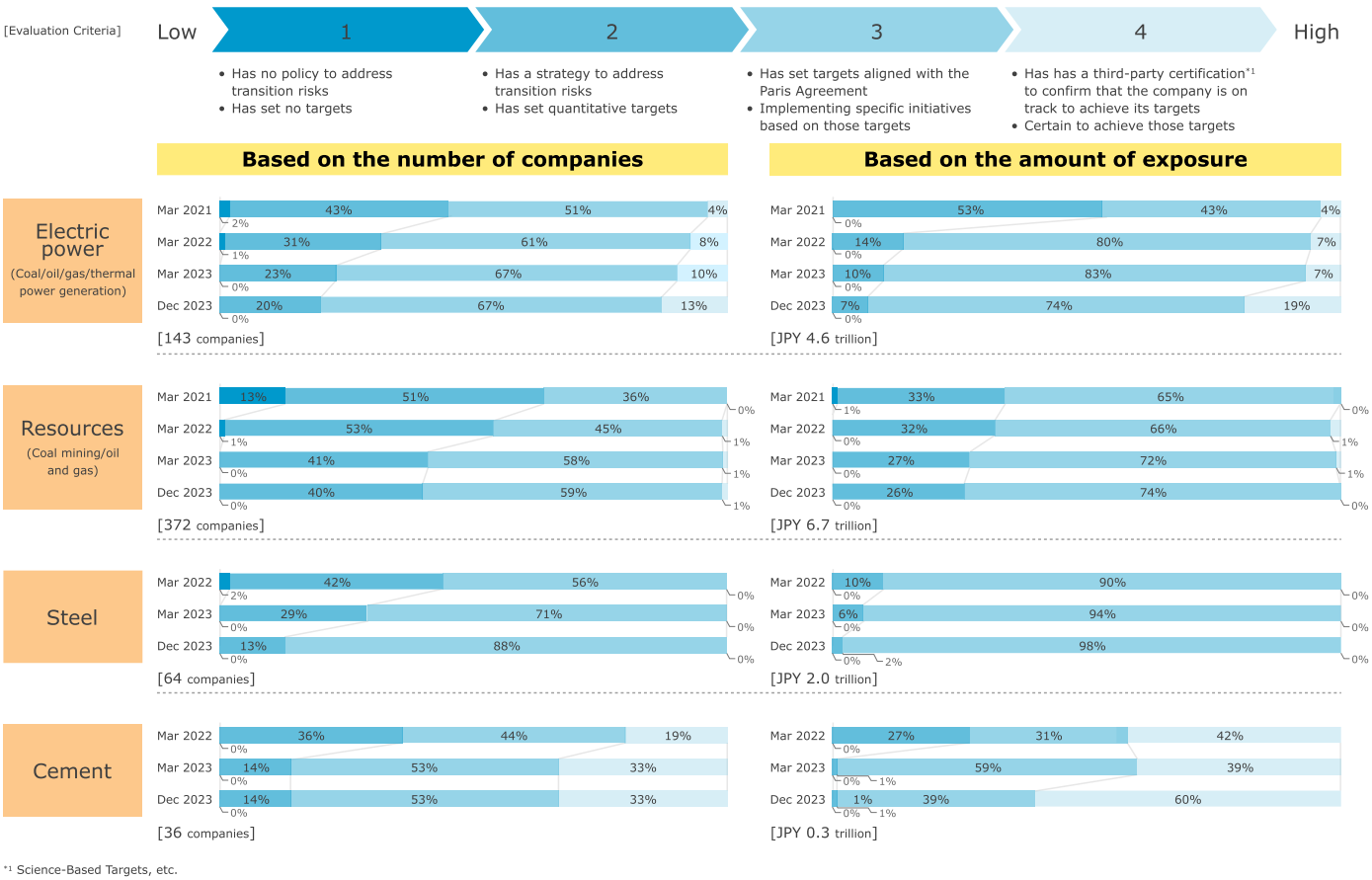
> We evaluate the degree of risk for each client along two axes: the client's sector (vertical axis) and the status of the client's responses to transition risks (horizontal axis). From these evaluations, we provide appropriate support for the client's transition. The state of risk control in carbon-related sectors is reported to the Risk Management Committee each quarter. We make gradual improvements to our risk control frameworks for carbon-related sectors through quantitative identification of climate-related risks and revisions to evaluations of client responses to transition risks in light of external business landscape.[47]

Mizuho pioneered client-level risk management by evaluating sector-based risk and clients' risk responses.

Mizuho says it tries to confirm how clients are responding to transition risks by engaging with them and providing support "in a phased manner." In its latest TCFD report the bank noted steady progress by clients in all sectors on responding to transition risks compared with the previous year. It created a graphic matrix to depict this progress (Figure 11).

> We will continue to practice engagement and provide financial and non-financial solutions to facilitate our clients' progress on decarbonization initiatives and on responding to transition risks…We also monitor progress on transition risk responses as a metric and work on improving transparent classification methodologies.[48]

Figure 11: Mizuho Measure of Client Transition Risk Responses



*1 Science-Based Targets, etc.

Source: Mizuho, Sustainability Progress, 2024

MUFG disclosed a transition assessment framework to boost client engagement.

Another Japanese bank, MUFG, stated in its Climate Report 2024 that it:

> …has implemented a transition assessment framework, which evaluates our clients' transition status, and a transaction screening process in order to provide managed transition support. We monitor the progress toward achieving our 2030 interim targets as we strengthen our client engagement activities through these activities, and we are implementing an escalation process that will apply to clients with whom we are unable to confirm any specific plans or directions for transition. The Transition Plan Monitoring Meeting, jointly chaired by the CSO and CRO, will verify the effectiveness of these frameworks and the progress of our transition plan.[49]

Similarly, MUFG stated in a recent disclosure that it assesses "the transition status of clients in carbon intensive sectors, looking at areas such as 1.5°C alignment with interim targets, transition plans, climate-related governance structure, and their past emission

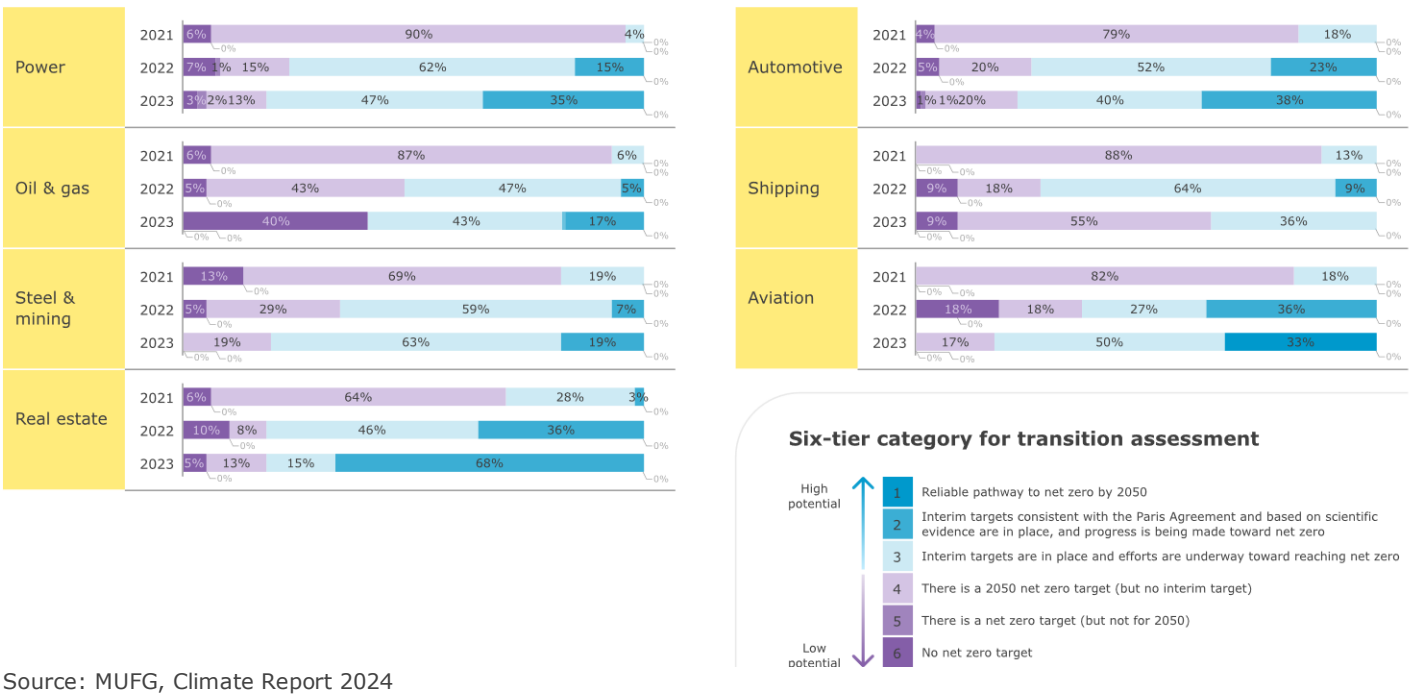
reduction records. In addition to this assessment, other information obtained through engagement activities are reflected in the six-tier category to evaluate our clients' transition progress."[50]

The bank has adopted a six-tier category for transition assessment of its clients, ranging from 1 (high potential) to 6 (low potential), based on the following categorisations:

- Reliable pathway to net zero by 2050
- Interim targets consistent with the Paris Agreement and based on scientific evidence are in place, and progress is being made towards net zero
- Interim targets are in place and efforts are underway toward reaching net zero
- There is a 2050 net zero target (but no interim target)
- There is a net zero target (but not for 2050)
- No net zero target

The assessment of clients is based on the bank's analysis of external information, covering three key themes: targets, governance, and emissions. Furthermore, MUFG's "Evaluations also incorporate information gained through engagement activities. For the power and upstream oil and gas sectors, where transition risks are high, plans for decarbonization and key technologies supporting this (net zero) target are confirmed in greater detail" by the bank, according to the Climate Report.[51]

Figure 12: MUFG Measure of Client Transition Risk Responses



Source: MUFG, Climate Report 2024

Mizuho and MUFG respectively have adopted the most sophisticated process for tracking and managing client-level risk, especially in carbon-intensive sectors.

Figure 13: Banks' Progress on Client-level Risk Management

Evaluation	DBS	OCBC	UOB	Mizuho	MUFG	SMFG	Hana	KB	Shinhan
Provided a transition risk matrix that includes a migration analysis	N	N	N	Y	Y	N	N	N	N
Provided any detailed additional analysis in its transition risk matrix of clients in high-risk sectors	N	N	N	Y	Y	N	N	N	N
Established a well-defined escalation policy for clients that have not migrated out of a high-risk category as defined by the transition matrix	N	N	N	Y	N	Y	N	N	N

Assessing Climate and Transition Risks

All nine banks disclosed transition and physical climate-change risks.

All nine banks conducted and disclosed scenarios for transition and physical risks related to climate change (see appendix). This reflects a significant improvement from *Banking Asia's Future,* which reported that only four banks disclosed a transition risk scenario, and only two disclosed a physical climate change risk scenario.

In assessing energy transition risks, highlights from each market included:

UOB (Singapore): "We partnered [with] an internationally recognised consultancy to enhance our methodology to holistically assess the impact of both transition and physical risks on borrowers' financial performance, taking into consideration the differentiated responses and drivers for different sectors."[52]

MUFG (Japan): "We conducted an analysis of transition risks up to the year 2050 and physical risks up to the year 2100." [53]

KB (South Korea): "KB Financial Group carried out an impact analysis on the next 30 years through 2050 based on assets as of the end of 2021."[54]

All the banks also conducted scenario planning to assess climate change-related physical risks and reported, with varying detail, the results:

OCBC (Singapore): In carrying out the assessment, a sample of 57 borrowers within the three sectors was first identified. The asset locations of these borrowers were subsequently overlaid with climate risk maps to evaluate their exposure to the seven types of climate-related hazards. This process generated a physical risk score for each borrower which could be used to compute the physical risks at the sectoral and portfolio levels.[55]

Mizuho (Japan): We estimated the amount of additional increases if a sudden stress event materialized based on the temperature increase pathways in the NGFS scenarios. For acute risks, we analyzed river flooding due to typhoons or torrential rains for cyclones and floods, naturally occurring fires caused by dry conditions for wildfires, and localized water shortages and water resource depletion for droughts.[56]

Shinhan (South Korea): Shinhan Financial Group adopted a scenario analysis method to determine the impact of climate change on Shinhan internally and its portfolio. We conducted the scenario analysis by making a categorization into transition risk and physical risk… In case of physical risk, we identified the impact on a report of the Korea Meteorological Administration in terms of Shinhan's internal operations. We analyzed the impact from decreases in real estate collateral value based on a climate risk model of Ewha Womans University-Financial Supervisory Service in the asset impact aspect. Shinhan Financial Group will continue to make the transition and physical scenario methodology more detailed to respond to climate change.[57]

Figure 14: Banks' Progress on Risk Management and Analysis Internally and Externally

Evaluation	DBS	OCBC	UOB	Mizuho	MUFG	SMFG	Hana	KB	Shinhan
Conducted climate-change related physical and energy transition risk analysis and reported on its results	Y	Y	Y	Y	Y	Y	Y	Y	Y
Developed internal capacity to evaluate client transition strategies as part of its overall risk assessment	Y	Y	Y	Y	Y	Y	Y	Y	Y
Provided analysis of reporting of GHG emissions at the sectoral level	N	N	N	Y	Y	Y	Y	Y	Y

Most banks have the capacity to assess client transition strategies using ESG-based risk assessments, questionnaires, or risk management frameworks.

All the banks have internal capacity to evaluate their clients' transition strategies. For the three Singapore banks, this internal capacity involved conducting an ESG-based risk assessment or asking clients to complete questionnaires on their approach to transition risks.

Others adopt risk management systems or frameworks to evaluate client transition strategies. Hana, for example, wrote in its 2022 TCFD Report that it established "the climate risk management system to address emerging risks from climate change and manages the key climate risks under the company-wide financial risk management system by integrating [a] risk management process."[58]

The six Japanese and Korean banks disclosed analyses of their GHG financed emissions.

Six of the nine banks—all from Japan and South Korea—also disclose sectoral level reporting of GHG emissions. Japan's Mizuho and MUFG provide the most comprehensive analysis of this, disclosing the results of financed emissions across 19 and 17 sectors respectively, from both corporate and project finance as well as its proprietary investments (stocks and corporate bonds). Other banks also provide industry-level breakdowns of financed emissions, but in less detail.

Mizuho says that in 2021 it became the first Japanese financial institution to join the PCAF. Since then, it has sought to improve its measurement and disclosure of financed emissions, based on the PCAF standard.

Figure 15: Mizuho Measurement of Financed Emissions by Sector

	Power utilities *3	Oil & gas*4	Steel	Capital goods	Chemicals	Automotive	Coal	Metals and mining	Maritime transporation	Packaged food and meats	Cement	Paper and forest products	Construction materials	Aviation	Real estate	Rail transportation	Agriculture	Beverages	Insurance	19 sectors total	Others *5	Total
[Loan] Financed Emissions ($MtCO_2e$)																						
- Scope 1,2	47	14	21	2	8	2	0.2	2	2	2	3	2	1	1	0.4	0.4	0.3	0.2	0.0	109	7	116
- Scope 3	21	76	14	103	21	37	1	12	9	4	0.4	3	1	0.8	2	1	0.5	0.5	0.0	309	47	356
[Investment] Financed Emissions ($MtCO_2e$)																						
- Scope 1,2	2	0.2	1	0.3	1	0.1	0.0	0.1	0.3	2	0.4	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	6	0.5	7
- Scope 3	1	1	1	9	3	3	0.0	0.3	0.2	1	0.0	0.2	0.1	0.0	0.1	0.2	0.0	0.1	0.0	20	4	23
Data Quality Score (1 is most certain (values disclosed by company with third-party certification), and 5 is least certain (estimated values)																						
- Scope 1,2	2.1	2.4	2.1	2.4	2.3	2.6	2.1	2.6	3.4	3.3	2.0	2.6	2.3	2.0	3.1	2.4	4.0	2.4	1.5	2.6	2.8	2.6
- Scope 3	2.4	2.8	2.2	2.9	2.8	2.9	2.8	3.0	3.6	3.4	2.1	3.4	2.9	2.4	3.3	3.1	4. 0	2.9	2.4	2.9	3.1	3.0
Financed emissions measurement — loan and investment balances (in billions of USD)																						
Loan balance	41	24	13	39	26	36	0.2	10	7	10	1	4	2	3	70	10	0.4	3	4	306	176	483
- Measurement coverage percentage*	98%	79%	100%	99%	99%	99%	100%	96%	73%	97%	99%	97%	97%	91%	89%	100%	100%	100%	96%	94%	80%	88%
Investment balance	1	0.5	1	6	4	2	0.0	0.5	0.5	2	0.1	0.3	0.1	0.0	3	3	0.1	0.2	1	25	21	46
Number of measured companies / project *2																						
Companies / projects	488	251	252	2,383	995	1,189	12	739	180	785	83	249	102	34	3,233	81	13	94	33	11,196	10,390	21,586

Source: Mizuho TCFD Report, 2023

Figure 16: MUFG Measurement of Financed Emissions by Sector

	$MtCO_2e$	Oil & gas	Coal	Electric utilities	Aviation	Maritime transportation	Rail transportation	Trucking services	Automobiles & components	Metal & mining	Chemicals	Construction materials	Capital goods	Real estate management & development	Beverages	Agriculture	Packaged foods & meats	Paper & forest products	Others	TCFD total	Total
FY2021	Scope 1 and 2	35*2	0.2	85	13*3	12*3	0.4	0.5	3	23	9	3	2	1	0.3	2	5	2		**198**	
	(Reference Value) Scope 3	99*2	0.4	29	4*3	6*3	0.5	4	73	27	25	2	93	2*3	2	1	11	3		**383**	
FY2022	Scope 1 and 2	36	0.2	73	13	10	0.5	1	3	20	11	5	2	0.4	0.3	1	4	2	15	**180**	**196**
	(Reference Value) Scope 3	135	0.3	32	4	5	0.9	4	75	28	26	2	380	2	2	1	17	2	104	**716**	**819**

Source: MUFG, Climate Report 2024

Recommendations

- Develop and disclose a client transition risk matrix, or something similar, to help clients navigate transition risks, especially those in carbon-intensive sectors.
- Disclose more fully the results of research on the sectoral and client risks posed by climate change and energy transition.
- Disclose detailed reporting of financed emissions at the sectoral level, in terms of volume and share of total portfolio, covering both lending and investment (see Figures 15 & 16).

Conclusion

Last year's pledge by 194 countries and the European Union at COP28 to "transition away" from fossil fuels, together with recent projections from the IEA that momentum for a low-carbon transition is building, have put new pressure on banks to ensure they direct capital away from carbon-intensive industries and towards sustainable energy.

Asia's banks are well placed to capitalise on the evolving energy landscape.

In Asia, where energy demand is still rising, there are heightened expectations for banks to accelerate efforts to meet the goal of net-zero GHG emissions by 2050. In the region's most advanced economies—Japan, Singapore, and South Korea—banks are well-placed to spearhead the region's energy transition if they choose and so profit from a long-term industry shift.

Banks should decisively accelerate efforts to decarbonise finance to capture opportunity and avoid the risk that falling fossil fuel demand and regulatory shifts render fossil-fuel related assets obsolete.

Banks in this report have net-zero pledges, but need to add facilitated emissions, set detailed sectoral plans, and boost sustainable finance.

All the banks we assessed for this report have, as members of the NZBA, made broad, public commitments to achieving net-zero GHG emissions by 2050. But honouring those commitments will require that they step up their actions. Banks need to add facilitated emissions to the financed emissions they aim to reduce, set detailed and clear strategies for carbon-intensive industries, take more ambitious measures to reduce financing to oil and gas companies, and boost sustainable finance.

Banks need climate experts on their boards, paid depending on climate progress, and committed to helping clients manage transition risks.

To lead these efforts, banks must ensure their boards have climate-related expertise. They should also aid investors with transparency on the decisions their boards make on climate-related matters. To support management, boards should include climate-change goals as a factor in determining executive pay.

Banks also need to help clients manage this transition and the risks it poses to both borrower and lender. Developing a risk matrix or similar tool can help clients navigate the transition—particularly those in carbon-intensive sectors. To date, Mizuho and MUFG have disclosed their methodologies. Other banks should, too.

Asia's banks must intensify efforts to keep to the 1.5°C goal for global warming.

The window to achieve the IEA's 1.5°C pathway is rapidly closing. As it does, banks in Asia need to urgently accelerate efforts to achieve a low-carbon future. While they have taken promising steps, they will need to go much further to support a timely energy transition.

Appendix

Summary of Bank Commitments and Policies

Question	DBS	OCBC	UOB	Mizuho	MUFG	SMFG	Hana	KB	Shinhan
Policy									
Has the bank made a commitment to reach net zero emissions by 2050?	Y	Y	Y	Y	Y	Y	Y	Y	Y
Has the bank included facilitated emissions in its commitment to reach net zero emissions by 2050?	Y	Y	Y	N	N	N	N	N	N
Has the bank announced emissions targets for key carbon intensive sectors?	Y	Y	Y	Y	Y	Y	Y	Y	Y
Are the bank's sectoral targets aligned with a reference pathway that is based exclusively on alignment with a 1.5C scenario?	Y	Y	Y	N	N	N	N	N	N
Do the bank's sectoral targets include specific medium term and long-term target years that are aligned exclusively with a 1.5C scenario?	Y	Y	Y	N	N	N	N	N	N
Do the bank's sectoral targets include a clear description of the metrics used (such as absolute emissions or emissions intensity) combined with a given baseline year?	Y	Y	Y	Y	Y	Y	N	Y	N
Has the bank announced a policy to stop financing new upstream oil and gas projects and activities?	N	Y	Y	N	N	N	N	N	N
Has the bank announced a policy to phase out financing for the upstream oil and gas sector?	N	N	N	N	N	N	N	N	N
Has the bank announced a policy to phase out financing of midstream/downstream oil projects and activities?	N	N	N	N	N	N	N	N	N
Has the bank announced a policy to phase out financing of gas-fired power generation assets?	N	N	N	N	N	N	N	N	N
Has the bank announced a policy to phase out financing of midstream/downstream gas infrastructure?	N	N	N	N	N	N	N	N	N
Has the bank announced a policy to stop new financing for the thermal coal sector?	Y	Y	Y	Y	Y	Y	Y	Y	N
Has the bank announced a policy to phase-out financing for the thermal coal sector?	Y	Y	Y	Y	Y	Y	Y	N	N
Has the bank provided a definition of sustainable finance and developed it with reference to an external standard (such as a taxonomy)?	Y	Y	Y	Y	Y	Y	Y	Y	Y
Has the bank disclosed its level of sustainable financing as well as plans to increase it with a commitment to meet a specific target?	Y	Y	Y	Y	Y	Y	Y	Y	Y
Has the bank disclosed the share of its sustainable financing of total financing as well as plans to increase it with a commitment to meet a specific target?	N	N	N	N	N	N	N	N	N
Governance									
Has the bank appointed a board member or a board-level committee that has responsibility for sustainability issues directly related to climate change?	Y	Y	Y	N	N	Y	Y	Y	Y
Has the bank considered climate-related expertise during its board nomination process?	N	N	N	N	N	N	N	N	N
Does the bank have at least one board member, or board-level committee member, with relevant skills/experience in climate-related issues to give input into strategy?	Y	N	Y	Y	N	Y	N	N	N

Has the bank stated in detail what climate-related matters the board has discussed within the most recent year?	Y	N	Y	Y	Y	Y	Y	N	Y
Has the bank established an executive remuneration scheme that takes into account climate change performance to determine compensation?	Y	N	N	Y	N	Y	Y	Y	Y
Has the bank aligned with the four pillars of the Taskforce on Climate-related Financial Disclosures (TCFD)?	Y	Y	Y	Y	Y	Y	Y	Y	Y
Risk Management									
Has the bank provided a transition risk matrix that includes a migration analysis?	N	N	N	Y	Y	N	N	N	N
Has the bank provided any detailed additional analysis in its transition risk matrix of clients in high risk sectors?	N	N	N	Y	Y	N	N	N	N
Has the bank established a well-defined escalation policy for clients that have not migrated out of a high-risk category as defined by the transition matrix?	N	N	N	Y	N	Y	N	N	N
Has the bank conducted a scenario analysis for energy transition risks and reported on its results?	Y	Y	Y	Y	Y	Y	Y	Y	Y
Has the bank conducted a climate-change related physical risk analysis and reported on its results?	Y	Y	Y	Y	Y	Y	Y	Y	Y
Has the bank developed internal capacity to evaluate client transition strategies as part of its overall risk assessment?	Y	Y	Y	Y	Y	Y	Y	Y	Y
Has the bank provided analysis of client reporting of their GHG emissions?	N	N	N	Y	Y	Y	Y	Y	Y

Endnotes

[1] UN Framework Convention on Climate Change, Conference of the Parties serving as the meeting of the Parties to the Paris Agreement, Outcome of the first global stocktake, Dec. 2023.
[2] International Energy Agency, World Energy Outlook 2023.
[3] International Energy Agency, World Energy Outlook 2023.
[4] COP28 UAE, Global Renewables and Energy Efficiency Pledge.
[5] IEA, The energy world is set to change significantly by 2030, based on today's policy settings alone, 2023
[6] Task Force on Climate-Related Financial Disclosures, 2017. The TCFD disbanded in October 2023 after publishing its 2023 status report. The FSB asked the IFRS Foundation to continue the TCFD's work on monitoring corporate climate disclosure through its own IFRS S2 Climate-related Disclosures.
[7] UN Environment Programme Finance Initiative, "The Commitment: Net-Zero Banking Alliance," 2023.
[8] Partnership for Carbon Accounting Financials (PCAF), Capital Market Instruments Proposed Methodology for Facilitated Emissions, 2022
[9] PCAF, Capital Market Instruments Discussion Paper 2021.
[10] UN Environment Programme Finance Initiative, "Guidelines for Climate Target Setting: Supporting Notes," 2022.
[11] UNEP FI, Guidelines for Climate Target-Setting for Banks, Version 2, April 2024
[12] Bloomberg, "Barclays Morgan Stanley Lead Banks into Milestone CO2 Deal," May 17, 2023.
[13] PCAF, The Global GHG Accounting and Reporting Standard, Part B, Facilitated Emissions, Dec. 2023.
[14] DBS, "Our Path to Net Zero: Supporting Asia's transition to a low-carbon economy," 2022.
[15] OCBC, "Partnering Clients towards a Net Zero ASEAN and Greater China," 2023.
[16] UOB, "UOB Sustainability Report 2022: Building the Sustainable Future of ASEAN."
[17] UNEP FI, "Guidelines for Climate Target Setting for Banks," April 2021.
[18] Asia Research & Engagement, "Singapore Banks Raise the Bar in Asia for Decarbonization Targets," 2023.
[19] UN Environment Programme Finance Initiative, "The Commitment: Net-Zero Banking Alliance," 2023.
[20] Science Based Targets Initiative, "Understand the methods for science-based climate action," 2021.
[21] KB Financial Group, "ESG Value & Impact: 2022 KB Financial Group Sustainability Report," 2022.
[22] IEA, "Net Zero Roadmap…"
[23] OCBC, "Partnering Clients towards a Net Zero ASEAN and Greater China," 2023.
[24] UOB, "Forging our Net Zero Future," 2022
[25] DBS, "Our Path to Net Zero…," 2022.

[26] Hana Financial Group, "Sustainable Finance Framework," July 2023.
[27] DBS, "Our Path to Net Zero…," 2022.
[28] OCBC, "Partnering Clients towards a Net Zero ASEAN and Greater China," 2023.
[29] Mizuho Financial Group, "FY2022 Sustainability Progress: Initiatives addressing Climate Change," April 2023.
[30] UOB, "Forging our Net Zero Future," 2022
[31] IEA, "Net Zero Roadmap…"
[32] SMFG, "Strengthening Efforts Against Climate Change," 2023
[33] Mizuho, "TCFD Report 2023: Climate-related Report," 2023
[34] DBS, Sustainable & Transition Finance Framework & Taxonomy, March 2022
[35] SMFG Investor Relations, "Debt Investors, Green Bond/Loan, Green Finance Framework," 2023.
[36] SMFG, SMBC "Transition Finance Playbook." Associated press release, May 2023.
[37] Hana, Sustainable Finance Framework Guide, 2021.
[38] Trade Promotion Council of India, "Green finance can help mobilise private investments," Oct. 2023.
[39] Mizuho, "FY2022 Sustainability Progress: Initiatives addressing Climate Change," April 2023.
[40] Hana, "2022 Sustainability Report: Big Step for Tomorrow," June 2023.
[41] TCFD, "TCFD Workshop: Section 2 — Governance," Feb. 2022.
[42] OCBC, "Our Sustainable Future. Our Enduring Legacy: Sustainability Report 2022."
[43] SMFG, "2023 TCFD Report: Task Force on Climate-related Financial Disclosures," Sept. 2023.
[44] Hana, "2022 Sustainability Report: Big Step…"
[45] TCFD Workshop, Section 4-Risk Management, 2022
[46] Basel Committee on Banking Supervision, "Consultative Document: Disclosure of climate-related financial risks," Nov. 2023.
[47] Mizuho, "TCFD Report 2023: Climate-related Report," 2023
[48] Mizuho, "TCFD Report 2023: Climate-related Report," 2023
[49] MUFG, "Climate Report 2024," 2024
[50] MUFG, "Climate Report 2024," 2024
[51] MUFG, "Climate Report 2024," 2024
[52] UOB, "Sustainability Report 2023," 2023
[53] MUFG, "Strategy: Climate Change Risks,"
[54] KB, "TCFD Report," 2022
[55] OCBC, "OCBC Task Force on Climate-related Financial Disclosures Report, 2021."
[56] Mizuho, "TCFD Report 2023: Climate-related Report," 2022
[57] Shinhan Financial Group, "TCFD Report," 2021
[58] Hana, "2022 Hana Financial Group TCFD Report: Big Step for Tomorrow."

Disclaimer

ARE has taken all reasonable precautions to ensure that the information contained in this Report is current and accurate as of the date of benchmarking. No representations or warranties are made (expressed or implied) as to the reliability, accuracy, or completeness of such information. Although every reasonable effort is made to present current and accurate information, ARE does not take any responsibility for any loss arising directly or indirectly from the use of, or any responsibility for any loss arising directly or indirectly from the use of, or any action taken in reliance on any information appearing in this Report.

Copyright

ARE wishes to support the distribution of this material subject to the license granted below. We also seek to find solutions to the challenges the report presents. Please do contact us if you have any questions relating to the contents.