Provisional Translation

Practices and Issues on Climate-related Risk Management

~ Building on “Supervisory Guidance on Climate-related Risk Management and Client Engagement” ~

June 2025

Financial Services Agency

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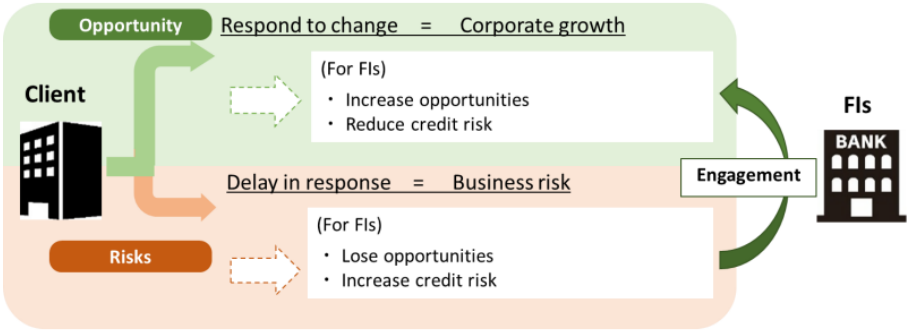
Ⅰ. Introduction

In July 2022, the Financial Services Agency of Japan (“FSA”) published the "Supervisory Guidance on Climate-related Risk Management and Client Engagement” (hereinafter the “Guidance”)[1], which outlines the FSA’s viewpoints on supervisory dialogues with financial institutions on their efforts to address climate change, as well as approaches and case examples of constructive dialogues (“engagement”) with their clients[2].

The Guidance presents the view that the efforts of financial institutions for encouraging clients to seize business opportunities (such as the development of new markets and business partners) and reduce their climate-related risks (both transition risks[3] and physical risks[4]) by supporting them in addressing climate change can lead the financial institutions themselves to gain business opportunities and reducing climate-related risks through investments, loans, and transactions with such clients (Figure1).

Figure1: Relationship between clients and financial institutions’ opportunities and risks



(Source) The Guidance II. Figure2

Based on this understanding, the FSA has conducted scenario analysis using common scenarios to identify the potential impacts of climate-related risks on financial institutions and the whole financial system. Additionally, the FSA has deepened discussions[5] on practical challenges and key issues faced by financial institutions as they pursue decarbonization, the importance of client engagement, and other key points. During this period, there has been increasing recognition of the need to provide financing to support companies transitioning toward carbon neutrality and

[1] "Supervisory Guidance on Climate-related Risk Management and Client Engagement" (July 2022). The Guidance primarily focuses on banks and insurance companies.

[2] In this report, "clients" includes the companies invested in by insurance companies. Where necessary, the term "clients" should be read as a group of clients, such as a sector or region. The same applies hereinafter.

[3] Transition risks are risks that changes in regulations, technology, and market conditions in connection with the transition to carbon neutrality or net zero can cause.

[4] Physical risks are risks that the impact of severe natural disasters or changes in temperature and precipitation on clients’ business can cause.

[5] For instance, see the “Report by the Working Group on Financial Institutions’ Efforts towards Decarbonization of the Economy"

net zero[6]. At the same time, many financial institutions are making progress in identifying and assessing climate-related risks and in providing support to their clients.

Taking into account the progress made by financial institutions and the evolving domestic and international environment, the FSA established the Office for Climate-related Financial Risk Monitoring Hub in August 2024. This office aims to systematically and cross-sectorally assess the state of climate-related risk management and client support efforts in financial institutions.

This document summarizes examples of current initiatives and recognized issues based on the efforts of the financial institutions covered in the dialogue taken in the 2024 administrative year, FY2024 (hereinafter, references to “financial institutions” or types of financial institutions such as “major banks” in the context of this fact-finding refer to these financial institutions)[7]. The document outlines the current situation as follows:

- Chapter II presents how financial institutions are formulating strategies and establishing governance systems to deal with climate-related issues
- Chapter III shows how institutions are recognizing and assessing climate-related risks
- Chapter IV describes financial institutions’ efforts in risk management and support for clients in responding to climate change.

The financial institutions covered in the FY2024 dialogue consider climate change a critical management issue and are advancing their climate-related risk responses in a manner suited to their respective size and business characteristics. However, climate-related risks could emerge over the medium- to long-term, and some concerns have been raised about whether they can be fully addressed within conventional risk management frameworks.

This document, based on the Guidance, aims to provide practical reference examples as of June 2025 to support the future efforts of financial institutions. It is also intended to serve as a foundation for dialogue between the FSA and financial institutions in building better practices. Moving forward, the FSA will continue to engage in dialogue with financial institutions on the responses to climate change, taking into consideration changes in the surrounding environment and developments in international discussions.

[6] In this document, carbon neutrality and net zero are both defined as GHG emissions less removals and absorptions reaching zero. However, the terms "carbon neutral" and "net zero" used in the descriptive parts of case examples of financial institutions are as defined by each financial institution.

[7] Approximately 20 financial institutions including major banks, regional banks, major life insurance companies, and major non-life insurance companies

Ⅱ. Strategies and Governance related to Climate Change

Ⅱ－1. Strategies

Effects related to climate change would materialize in a long-time horizon, and high uncertainty remains around how they would materialize and how significant their impacts are. For this reason, it is important for financial institutions to recognize climate change as an issue for the board of directors and management, develop company-wide strategies from a medium to long-term perspective (the Guidance III. 1.). In order to steadily implement them, financial institutions are expected to reflect these strategies in their business plans and operational policies, and to constantly review them in response to evolving external conditions and the inherent uncertainty of climate-related risks.

（1）Strategic Positioning of Responses to Climate Change and Climate-related Risks

Financial institutions are increasingly identifying climate change—or broader sustainability-related social and environmental challenges—as a material, company-wide[8]management priority (“materiality”) and one of the central pillars of corporate strategy.

Some regional banks frame climate action as a way to contribute to the sustainable development of local industries and economies. Particularly in regions where climate-related risks are pronounced or where there are challenges in the local capacity to respond to climate change, some regional banks have tried to raise momentum across the region by clarifying their stance of proactively addressing climate change with the aim of accelerating regional economies.

Moreover, some financial institutions designate environmental risks, including climate change, as one of the top risks or emerging risks with the potential to significantly impact future business operations. (see Chapters III and IV for details of risk recognition, assessment and management).

（2）Strategy and Policy Development

Financial institutions have adopted strategies and policies to address both the opportunities and risks related to climate change (hereinafter referred to as "climate-related strategies") in recent years. Specifically, some financial institutions have formulated plans to achieve net zero targets[9], policies to promote sustainable businesses, and client engagement/support policies. Some of them have formulated policies excluding or taking a cautious approach to investments, loans, and insurance underwriting with severe negative impact on the environment, including so-called

[8] Where necessary, the term "company-wide" should be read as “group-wide.” The same applies hereinafter.
[9] Financial institutions have published these documents under the titles of "Transition Plan," "Roadmap towards Decarbonization," and others, which varies among them.

"negative screening[10]." Some have designed risk management policies, such as heat maps that identify sectors with higher risks. A number of financial institutions regard support for client transitions as a central element of their climate-related strategies. Additionally, as part of climate-related strategies, some of them are working to foster internal awareness and to strengthen internal capabilities to deal with climate-related financial risks by implementing employee education and training programs.

The following are examples of initiatives taken by major banks and major life / non-life insurance companies (hereafter referred to as "major financial institutions") as well as regional banks.

Case Examples by Institution Type	
Major Financial Institutions	・Referring to documents from international initiatives[11] ・Integrating overseas regulations and policies (for example, consider local climate change policies of overseas subsidiaries when formulating their investment, loan and insurance underwriting policies and setting group-level metrics and targets (II-1 (3)))
Regional Banks	・Leveraging government support programs to align with international transition plan frameworks ・Setting region-wide GHG emissions reduction targets (II-1 (3)), and form partnership with local governments to promote responses to climate change across the region ・Using developed climate-related strategies as dialogue tools with investors and other stakeholders by demonstrating their relevance to the enhancement of corporate value

While promoting the formulation of climate-related strategies in this way, several financial institutions also expressed challenges in connecting these long-term strategies to day-to-day, concrete business plans and operating policies. This difficulty often stems from uncertainties regarding the development of future technologies and the timing of risk manifestation.

As stated in the Guidance, supporting clients' seizing of opportunities and reducing climate-related risks lead to business opportunities and risk mitigation for financial institutions as well. Given this, it is essential for financial institutions to be aware of clients' transition risks and physical risks and assess the impact on themselves. From this perspective, taking clients' strategies into account when formulating financial institutions own climate-related strategies is vital. However, some of them cited challenges in cases that clients—in particular, small and medium-sized companies (SMEs)—have yet to formulate strategies or that clients' climate-related strategies are not consistent with their business strategies regarding, for example, the timing of capital investment.

[10] Investment techniques that exclude companies or sectors that do not meet certain predetermined criteria from investment

[11] Such as TCFD (2017), “Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD Recommendations)" and various implementation guidance, the Glasgow Financial Alliance for Net Zero (GFANZ) (2022), "Financial Institutions' Net-zero Transition Plans"

They also noted the need to review climate-related strategies in a timely manner as discussions progress domestically and internationally. In particular, internationally active financial institutions cited differences in the NDC[12] of each country as an issue in formulating group-wide strategies, and some pointed out the importance of international confidence in the scientific consistency of the decarbonization pathway with the 1.5-degree target of the Paris Agreement. Financial institutions have become increasingly sensitive to litigation risk stemming from changes in the awareness and interests of stakeholders as well as in policies and guidelines in various countries.

（3）Metrics and Targets

Financial institutions have set various metrics and targets under their climate-related strategies. The metrics and targets are typically classified into following four main categories.

i. GHG Emission Reduction Targets:

- Emissions reduction targets are broadly divided into those related to in-house emissions (Scope 1 and 2 emissions) and those related to emissions from investment and loans (such as Scope 3 emissions category 15[13] and emission intensity[14]). In this document, emissions from investments and loans are referred to as Financed Emission (FE)[15].

Scope 1 and 2 emissions
・All financial institutions have set targets for reducing their own Scope 1 and 2 emissions. ・In line with the Government's target, financial institutions have set long-term goals for achieving carbon neutrality or net zero by 2050 and an interim target for 2030. ・Some have set more ambitious targets of achieving them prior to 2050.
Financed Emissions (FE)
・Major financial institutions have included FE in carbon neutrality or net zero targets by 2050, and some are beginning to set interim targets for 2030 by sectors. ・Some major life insurance companies have set targets as an insurance operating company and as an institutional investor separately, and includes FE as a target of the latter. Some large non-life insurance companies have set emission reduction targets through underwriting in addition to investment. ・Some regional banks have set GHG emission reduction metrics for the entire region, including their clients, with the aim of improving regional sustainability and playing a central role in it. ・In some cases, FE targets are set only for core group companies, depending on the degree of business impact and risk awareness. Some regional banks that do not currently set targets are also measuring and disclosing FE, and internally discussing setting targets in the future.

[12] Nationally Determined Contribution: National GHG emission reduction targets consistent with the Paris Agreement

[13] Scope 1, 2, and 3 emissions: Categories of GHG emissions defined by the GHG Protocol, an initiative that examines and develops international frameworks for measuring and managing GHG emissions. Scope 1 emissions are direct emissions within the company; Scope 2 emissions are indirect emissions derived from energy sources such as electricity, heat, and steam purchased or used by the company; and Scope 3 emissions are indirect emissions other than Scope 2 (emissions of other companies related to the company's business activities). Scope 3 emissions are categorized into 15 categories according to economic activities in the supply chain. Emissions related to investments and loans fall under category 15.

[14] The amount of GHG emissions per unit of economic or physical activity; also called "emission factor" or "carbon intensity."

[15] In a narrow definition, FE refers to Scope 3 emissions category 15 (absolute volume), but in a broad sense, emissions other than Scope 3 emissions category 15 (such as portfolio emission intensity) may be included. This document refers “FE” as broad definition.

ii. Targets for Reducing Exposure to High-Emitting Sectors:

- As described in II-1 (2), financial institutions generally do not make new investments or loans that have a severe adverse impact on the environment or have a policy of being cautious about such investments or loans. On top of that, some financial institutions have set a target of phasing out existing exposures if applicable. For example, regarding investments and loans for the construction and expansion of coal-fired power plants, financial institutions have decided not to make any new investments or loans, and some also set a target of reducing the balance of existing investments to zero by 2050 or before.
- Yet, investments and loans to specific sectors and companies are not uniformly divested based on the amount of emissions alone. Individual decisions are made based on whether there are plans for transition, while actively engaging with clients to support transition efforts (see Chapter IV for details).

iii. Targets related to Business Opportunities, such as Sustainable Finance:

- Financial institutions have also set targets for fund provision to address climate change. Some large non-life insurance companies have set targets for underwriting amounts and revenue growth rates for climate-related insurance products. The target is not necessarily specific to climate-related issues, and there were many cases in which the target was set for green finance or finance or more broadly sustainable finance (see IV-3 (3) ii for details).
- The target levels are set considering past performance, those of other financial institutions in the same sector, and expected future demand.
- Many financial institutions that have set both i. and iii. targets pointed out that the targets can act as constraints on one another and that the difficulty in quantitatively understanding the impact of achieving these targets on financial conditions and risk profile. Thus, some financial institutions are devising internal control measures and disclosures / investor relations (IR) practices (see BOX3).

iv. Targets related to Client Engagement:

- Some financial institutions have set numeric targets for client engagements.
- Recognizing that finance to support clients' transition to net zero (hereinafter "Transition Finance (TF)") may increase FE, some financial institutions have not only set FE reduction targets but also categorized and evaluated their clients' responses to transition risks based on information obtained through engagement and public disclosures (see Chapter IV).
- Some financial institutions have set metrics and targets related to the development of experts on climate-related issues for the effective client engagement (see II-2 (2) for initiatives related to the human resources development).

As described in II-1 (2), challenges are raised regarding the incorporation of climate-related strategies into day-to-day business plans and operating policies. Followings are the examples to ensure that long-term strategies are effectively implemented at the business level.

Ingenuity in Setting Targets for Climate-related Strategies	
Target Setting in Business Plans	・Setting targets to be achieved not only in the long-term (2050) but also in the time horizons of medium-term or annual business plans and make targets in each time horizon align
Target Setting that Reflects Earnings Opportunities and Characteristics of the Client Base	・Setting disaggregated targets for sustainable finance volumes by region within the medium-term business plan ・Specifically, setting those targets based on estimated future demand in major industries in the region as well as that in regions or sectors currently have high emissions and are expected to require transition finance

The allocation of targets to group companies and branch offices varies among financial institutions. Some financial institutions that have not allocated targets to group companies and branch offices cited that the targets are promoted under the initiative of the head office, as well as the possibility of becoming too conscious of achieving branch-level targets (particularly related to those of funds provision amount) to maintain customer-centric approaches.

In some cases, financial institutions incorporate climate-related indicators into executive or employee compensation systems, in order to make them aware of these targets and to promote climate-related strategies and policies throughout the company.

For executives, linking sustainability performance to stock-based compensation has been increasing in recent years. The ways to reflect indicators are varied among financial institutions; some reflects the achievement level of each metric; some reflects the overall qualitative evaluation.

The indicators to be reflected are not necessarily metrics or targets of climate-related strategies but may include indicators such as ESG[16] evaluation[17] of the financial institution by external rating agencies (see BOX1). Some financial institutions have reflected the metrics and targets of their climate-related strategies, including quantitative targets such as the status of emissions reductions and the amount of sustainable finance implemented, in the evaluation of executive compensation over the medium- to long-term. There are also cases where the progress of FE reduction target was not reflected. This is because the amount of FE fluctuates due to changes in the corporate value of customers[18], which is often not directly related to the financial institution's own initiatives.

Some financial institutions have considered the amount of sustainable finance implemented and the status of engagement when evaluating employees' performance. Some also have paid

[16] Environment, Social and Governance

[17] ESG evaluation includes evaluation of issuers and stocks, second party opinion on bonds and loans, verification, certification, rating. For details, see the FSA (2022), "Report of the Technical Committee for ESG Evaluation and Data Providers."

[18] In the case of companies, FE is calculated by multiplying “the ratio of the amount of investments and loans provided by financial institutions to the company’s total amount of financing” by “the company’s GHG emissions”. Total amount of financing refers to corporate value, the sum of market capitalization and interest-bearing debt, which is subject to the macroeconomic environment.

allowances to their employees according to the economic and social impact achieved during the medium-term business plan. To spread innovative and exemplary initiatives, some of the financial institutions have set internal awards for those initiatives.

In addition, some financial institutions have introduced internal carbon pricing mechanisms on a trial basis. Internal carbon pricing is a method for setting and using internal carbon prices to promote more environmentally informed decision-making. Specifically, when considering introducing equipment, CO_2 emissions are quantified as a cost and integrated into investment decision-making processes, thereby encouraging emissions reduction and raising employees' awareness.

BOX 1 ：Utilization of Evaluations from Third-party Organizations [19] such as ESG Evaluation Organizations

From the perspective of objectively evaluating their sustainability-related initiatives and progress, some financial institutions have reflected the evaluations of third-party evaluation organizations in their executive compensation and other metrics.

Some financial institutions have been monitoring evaluations given to them by evaluation organizations and setting target for improving the evaluations. In fact, the FSA observed cases of upward shifts in evaluations due to the progress of recent initiatives.

On the other hand, some financial institutions claimed that evaluations by evaluation organizations had dropped year on year despite their efforts to address climate change. As evaluation organizations evaluate companies in accordance with their own objectives and methods, the views, and perceptions of companies subject to evaluation and those of evaluation organizations do not necessarily coincide. However, some of the financial institutions whose evaluation dropped expressed the opinion that there are problems with transparency in the standards of the evaluation system and the reasoning, particularly in the case of the buyer-pay model[20].

Additionally, some financial institutions used evaluations by ESG evaluation organizations to assess the ESG risks of clients in each sector and company (See IV-2 (1)).

Ⅱ－2．Governance

Climate change may impact on financial institutions' overall operations through various channels. For example, it may relate to the corporate sales division regarding the impacts on clients, the market investment division regarding the impacts on market portfolios, and other various

[19] There is a diverse group of institutions that provide evaluations. See, for example, "List of ESG Evaluation and Data Providers that notified the FSA of their intention to endorse the "Code of Conduct for ESG Evaluation and Data Providers."

[20] A business model in which evaluation is conducted in light of the evaluation organization's own methods based on public information and questionnaire responses, without a request from the company to be evaluated

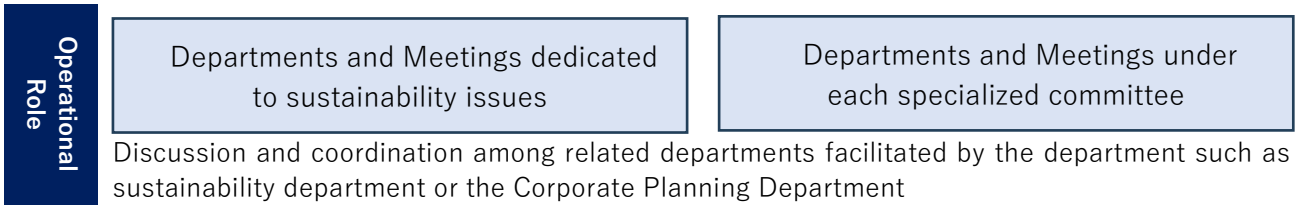
divisions, including the corporate strategy division, risk management division, legal division, internal audit division, and the IR / PR division responsible for communicating with external parties such as investors. It is important for financial institutions to establish appropriate internal control frameworks in line with the climate-related strategies (the Guidance III. 1.).

（1）Organizational Structures

Financial institutions have established a committee dedicated to sustainability issues, recognizing it as a material issue for company-wide management. The committee oversees the progress of climate-related strategies including metrics and targets and typically reports directly to oversight bodies such as the Board of Directors. Some financial institutions have also appointed a Chief Sustainability Officer (CSuO) to lead sustainability-related initiatives.

Since responses to sustainability issues—including climate change—involve a wide range of related departments such as management, investment / loan operations, and client relations, some financial institutions have structured their sustainability committee to include not only the CEO, but also officers and employees of departments such as sales, investment, corporate strategy, finance, risk management, and internal audit. Some include those of group companies as members to share information and keep group-wide consistency. There are also cases of leveraging external expertise (see BOX2). In addition, as described below, where necessary, responsibilities are shared between the committee and the department in charge of sustainability and existing expert committees (such as Risk Management Committee, Responsible Investment Committee).

Case Examples of Governance Structure at Financial Institutions



Many financial institutions declared that securing human resources with expertise and strengthening systems are issues to address sustainability and climate change issues, which are increasing year by year. Under these circumstances, some financial institutions have assigned dedicated staff. On the contrary, other financial institutions make employees double hatted to smoothly share information among group companies and departments.

（2）Securing and Developing Human Resources

Financial institutions have been tackling the challenge of acquiring knowledge on sustainability for individual staff. They have taken steps to raise the overall level of their staff as well as to develop specialists. For instance, to raise the overall level, some financial institutions have encouraged their staffs to acquire sustainability-related qualifications, conducted internal training, and disseminated related information from headquarters. On the other hand, some pointed out that since specialists' knowledge on climate change responses is required to support clients, the training of specialists is a more important issue. Therefore, some financial institutions have focused on the training of in-house professional staff from a medium- to long-term perspective, while others have recruited mid-career ESG analysts and people with experience in climate-related businesses. Also, some financial institutions have attempted to acquire operational expertise in sustainability-related investment and management through the experience of fund investment.

Some of them also recognize a gap in awareness and motivation among frontline staff, according to differences in the size and needs of their respective clients. In general, large enterprises and listed companies tend to be addressing climate change already. On the other hand, some SMEs might have not recognized climate change as an urgent issue, such as cases in which there are no requests from large enterprises that are working to reduce emissions throughout their supply chains or cases in which other management issues, such as human capital, have to be prioritized. In other cases, climate-related issue is recognized as material at the management level, but not at the individual staff level. Under these circumstances, regional banks, in particular, raised the interest and knowledge gap among staffs with different client segments—large enterprises or SMEs—as one of the challenges.

BOX 2 ：Leveraging External Expertise

The development and implementation of climate-related strategies, as well as the identification of transmission channels, require knowledge of climate science and technology.

To overcome these challenges, some financial institutions have been collaborating with external parties in addition to the aforementioned initiatives on organization structure and human resource development.

For example, some financial institutions have invited external experts (academic experts, practitioners, etc.) with expertise in climate change and sustainability to the Board of Directors, the Management Committee or the committee dedicated to sustainability as outside directors or members to engage in effective discussions. Some have publicly disclosed skills matrices of board members and executives, including outside experts. The financial institutions that have invited outside experts noted that this is significant in terms of stimulating discussions, providing feedback on their own initiatives, and keeping abreast of the latest developments around the globe.

Besides, in the medium- to long-term, it is also important to foster expertise internally. From this perspective, some financial institutions have utilized staff exchange programs with government agencies and other financial or non-financial companies. Some have participated in support projects provided by government agencies to promote initiatives throughout the financial institution, while hosting roundtables between ESG investors and branch staffs to raise awareness and improve client support capabilities, especially for SMEs.

（3）Implementation of Internal Audits

In recent years, many financial institutions have started to conduct internal audits (thematic audits) on sustainability issues. There was a wide range of topics as follows.

Case Examples of Viewpoints in Internal Audits	
Engagement	・Status of engagement and penetration at branch/front offices ・Framework for medium- to long-term client engagement ・Support from head office ・Cooperation within the group
Financing Policies	・Operation of negative screening (including internal control) ・Insurance premium rates and revenue management, including risk model verification, and their control status, regarding frequent and severe natural disasters
Determination of Sustainability Label (including	・Appropriateness and status of standards for determining the eligibility of labels for sustainability-labeled finance[22] in light of the internal guidelines, as well as level of understanding among branch/front offices' staffs ・Appropriateness of preparation, attachment, and storage of necessary documents that are the premise of judgment ・Status of the written judgment that can be verified later ・Status of management during the term

[22] Financial instruments labeled such as "green" or "transition," to indicate that their use of proceeds and characteristics take environmental and social considerations into account. The eligibility for such labels is certified based on criteria established by governments, international organizations, and other relevant bodies.

Mitigating Greenwashing Risk[21])	・Development and implementation of methods for aggregating balances ・Implementation of checks and balances to reduce greenwashing risk ・Group-wide or global management system
FE Calculation and Targets	・Documentation of FE calculation procedures ・Compliance with the established procedures and accuracy of the calculated FE ・Internal controls that ensure the accuracy and reproducibility of calculations ・Development and operation of a process for reporting and examining such as progress evaluation and the necessity of reviewing sectoral targets
Scenario Analysis	・Documentation and status of the logic and process of scenario analysis ・Status of scenario analysis in accordance with the prescribed calculation logic ・Development of internal controls that ensure the accuracy and reproducibility ・Timely update of scenarios and review of data
Climate-related Risk Assessment of Clients	・Status of classification/assessment of clients according to internal criteria, e.g. criteria which reflect their clients' progress in addressing climate-related risks ・Appropriateness of preparation, attachment, and retention of necessary documents that are the premise of assessment ・Status of the contents of the assessment that can be verified later ・Appropriate intra-term management
Disclosures	・Accuracy and consistency of disclosures across the organization ・Development of internal controls that ensure the accuracy and reproducibility ・Responses to changes in external trends ・Compliance with mandatory disclosure requirements

At some financial instructions, the initial internal audit was conducted with advice and human resources provided by an external consulting firm. Some pointed out that the content of internal audits has recently shifted from the confirmation of frameworks such as governance structure to the confirmation of practical issues such as the status of risk management. Some also commented that they were able to start initiatives that they had felt were challenges, such as the provision of resources (e.g., increasing the number of personnel), thanks to issues pointed out by internal audits. Some also pointed out that it is desirable for the sustainability departments and the audit departments to share information on a regular basis since the scope of sustainability issues is broad, the level of expertise is high, and the content and level required for internal audit would change as international / domestic discussion evolve.

Plans for future internal audit varies by financial institution. Some financial institutions plan to conduct regular audits, although others mentioned that the next audits would be considered with a view to the upcoming application of Sustainability Disclosure Standards (SSBJ Standards[23]).

[21] Risks of financial products being claimed to contribute to climate change response without lack substantive efforts or actual impact

[23] Sustainability Standards Board of Japan

（4）Development of Internal Controls over Non-financial Disclosures

Since the publication of the TCFD's final report (the "TCFD Recommendations") in 2017, financial institutions have been supporters for those recommendations. In addition, following the revision of Japan's Corporate Governance Code in 2021 and the Cabinet Office Order on Financial Instruments Business, etc. in 2023, financial institutions have been promoting the climate-related disclosures on governance, strategy, risk management, and metrics and targets in integrated reports, annual securities reports, websites, and other methods. With the finalization of the SSBJ standards in March 2025[24], there has been a movement to establish and implement internal controls over the processes of measuring, collecting, and reporting sustainability disclosure information, including climate-related one, to ensure the level of reliability equivalent to that of financial reporting.

Specifically, some financial institutions have begun to assess their internal controls on a trial basis through internal rules, risk control matrices, and control self-assessment[25]. They have started these initiatives from material disclosure items with first priorities.

（5）Use of Information Technology (IT)

The following examples of IT adoption are heard from financial institutions when preparing non-financial reports about climate-related issues, collecting and calculating FE (see III-2 (2) for details) and executing investments, loans, and insurance underwriting.

Case examples of IT Adoption	
Collection and Calculation of FE	・Introducing SaaS[26] ・Introducing and developing a system that can be linked with vendor's data
Engagement, Finance Execution/Interim Management	・Introducing Business Intelligence (BI) tools[27] to visualize trends in clients' emissions and financing volumes ・Enhancing existing systems and tools to include functions for recording and storing evaluation results related to ESG initiatives of clients ・Implementing additional features in existing system and tools to enable eligibility checks for sustainability-labeled finance

Although approaches of system development differ among financial institutions, cases of utilizing existing systems or tools, rather than large-scale development from scratch, are observed: such as utilizing existing emissions measurement and BI tools jointly developed with data vendors, leveraging existing credit management and insurance premium calculation systems, and introducing SaaS to enable flexible responses. Some financial institutions have been using IT to accumulate and visualize data, leading to enhance data management.

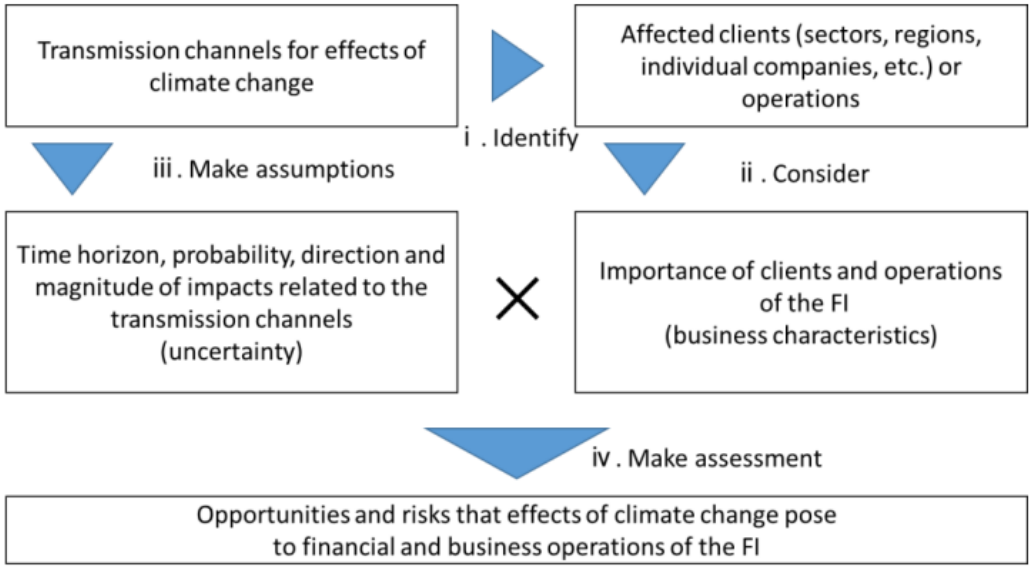
[24] https://www.ssb-j.jp/jp/ssbj_standards/2025-0305.html
[25] Activities to conduct self-evaluation of the appropriateness and effectiveness of internal controls by persons in charge of operations
[26] Software as a Service: Non-installable software or services that can be used on the Internet
[27] Software that analyzes and visualizes huge volumes of data held by companies for use in management and business operations

Ⅲ. Recognition and Assessment of Climate-related Risks

Ⅲ－１. Recognition and Assessment of Transmission Channels and Risks

When developing and implementing the strategies for responding to climate change as illustrated in Chapter II, it is important for financial institutions to adequately collect and analyze information on various changes related to climate change. Next, it is essential for financial institutions to understand various channels through which these changes affect the financial institutions themselves. It is important for financial institutions to assess at least qualitatively the significance of climate change-related opportunities and risks to their business, taking into account their business characteristics, by following the steps described in Figure2, for instance. (the Guidance III.2.)

Figure 2 : Examples of assessment procedures for climate-related opportunities and risks



（Source）The Guidance III. 2 . Figure4

（1）Transmission Channels related to Climate Change

Financial institutions are working to identify the various changes and transmission channels associated with climate change. In doing so, they examine:

- Structural changes in supply chains, client network and local industrial composition,
- Linkages and feedback effects within the financial system[28]
- Potential spillover effects between the financial sector and the real economy[29]
- For global financial institutions, exposure to climate-related risks stemming from differences in national regulations or overseas investments.

[28] e.g., changes in investor behavior influencing market risk or liquidity
[29] e.g., reductions in lending or insurance coverage leading to weakened business viability

However, many financial institutions pointed out that they are still in the preliminary stages of analyzing these transmission channels in detail. They cited the difficulty of predicting when and how climate-related risks will materialize, as well as the challenges of obtaining adequate data and developing analytical tools, particularly for quantifying non-financial risks (see III-4 for details).

（2）Materiality Assessment to Finance and Business Operations

Once transmission channels are identified, financial institutions assess the materiality of climate-related risks and opportunities by taking into account these channels. In assessing the materiality of risks, they identify sectors and clients that are particularly affected and their importance (see III-2 for details). They also delve into the time horizons over which climate-related risks may manifest and the potential severity of their impacts.

Financial risks are generally classified into risks such as credit risk, market risk, liquidity risk, operational risk, and insurance underwriting risk. Financial institutions have positioned climate-related risks as "risk drivers" that increase or decrease the risks in each risk category, rather than adding new standalone risk categories to these, as described in the Basel Committee's principles[30] and FSA's Guidance.

With the understanding that climate-related risks could impact across risk categories broadly, financial institutions are undertaking qualitative assessments of the impacts on each risk category. Some regional banks experiencing recent extreme weather have expressed the view that they draw increasing attention on the impact of large natural disasters on operational risks (e.g., disruption of public infrastructure such as transportation). Financial institutions regularly, for example annually, review the materiality of these risks (including the assessment of materiality by sector and client, as described later in III-2). For quantitative assessment, they use scenario analysis (see III-3 for details).

（3）Information and Data used for Recognition and Assessment

Followings are the major examples of qualitative information and quantitative data used by financial institutions to understand the transmission channels that affect their finances and business operations and to assess their potential impacts.

[30] Basel Committee on Banking Supervision (2022), "Principles for the effective management and supervision of climate-related financial risks"

Examples of Commonly Referenced Qualitative/Quantitative Resources		
	Qualitative Information	**Quantitative Data**
Common to Both Transition / Physical risks	・Policies, guidelines, information, including those on websites, from governments and international organizations ・Discussions with clients or external experts ・Academic researches on climate change or natural disasters ・Client engagement and its results—status of clients' responses and strategies ・Credit ratings and ESG evaluations	・Publicly available climate scenarios and variables (e.g. from NGFS[31]、IEA[32]、IPCC[33]) ・Track record of provisioning sustainability-related funds and tools, balance of investments and loans, and payment of insurance premiums ・Data and analysis tools purchased from third-party vendors. ・Client's financial performance data and credit preservation information ・Number of patents and patent scores
Transition Risks	・Transition plans, pathways and prospects by international organizations and industry associations	・Statistical data such as temperature, rainfall, and population ・Non-financial data such as GHG emissions of clients ・Degree of concentration of carbon-related assets exposure
Physical Risks	・Governments' and municipalities' infrastructure construction plans addressing natural disasters ・Views and research findings by in-group or external consulting firms	・Databases, analysis tools, and damage functions related to climate change projections and climate change impact assessments provided by governments and international organizations ・Location information of branch offices, clients, and collateral properties ・Loss estimation models for each floor of property, hazard maps, and natural disaster occurrence probabilities

Ⅲ－２．Sector- or Client-level Materiality Assessment

In order to assess the impact of climate change on financial institution, it is important to, for each transmission channel, identify the clients (sectors, individual companies, etc.) and operations of the financial institution that will be particularly affected by climate change. In doing so, it is essential to collect information related to clients, such as the progress and outlook of the clients' efforts in response to climate change, market and regional economic conditions, geographical environment, characteristics of industry and technology, and the financial and earnings situation, including investment capacity, and to carefully understand the actual situation, through engagements and other means described in detail in Chapter IV, while taking into account the financial institutions' business characteristics. (the Guidance III.2., IV.1.)

[31] Network for Greening the Financial System
[32] International Energy Agency
[33] Intergovernmental Panel on Climate Change

（1）Identifying Material Sectors and Clients

Financial institutions assess which sectors and clients are particularly affected by climate change in their portfolios, mainly by combining the following two perspectives. Sectors referred in the TCFD Recommendations[34] are often used as a starting point for sectoral assessment.

First, in assessing materiality, they consider sectors' or clients' GHG emissions, i.e., the magnitude of the FE for financial institutions, for transition risks and the location of clients for physical risks. Some pointed out that the FE, which is the values at a certain point in the past, does not reflect the forward-looking information such as each client's efforts for transition and changes in the future risk amount, and is not necessarily suitable as an indicator of transition risk. On the other hand, some pointed out that the FE could be utilized for a macro analysis to identify the bias of transition risk in portfolios toward specific sectors.

Second, financial institutions evaluate sectors and clients based on their financial and operational importance, considering the size of exposure (e.g., investment and loan volume, amount of insurance underwriting) and revenue impact (e.g., amount of insurance premium). A major non-life insurance company has developed a system that collates data on disaster risk with data on individual insurance contracts and used those data to assess the impact of natural disaster risk on the company's financial position. Some regional banks have emphasized the importance of key industries in their core business bases.

When setting FE targets, monitoring, and disclosing FE and exposures (including concentration risk), and prioritizing engagements, financial institutions utilize the results of these materiality assessment. In addition, some financial institutions use the results to refine and enhance clients' risk assessment and scenario analysis. For example, they identify locations that affect the clients' sales as critical locations to assess material clients and to refine scenario analysis (see III-3 for details).

（2）Collecting and Calculating Clients' Emissions

i. Scope

Financial institutions collect and calculate GHG emissions and emissions intensity of their clients. The scope of sectors covered varies among financial institutions and include: all sectors; sectors based on the TCFD Recommendations; sectors with emissions reduction targets (II-1); and sectors or clients identified as material (III-2). For sectors based on the TCFD Recommendations, some financial institutions calculate clients' GHG emissions in a unified and simple manner by multiplying the emission intensity from a public database by the sales volume, etc. of their clients.

[34] 18 sectors classified to 4 groups—Energy; Transportation; Materials and Buildings; Agriculture, Food, and Forest Products

For sectors for which targets had been set, some financial institutions obtained as much information as possible about their clients, and when it was difficult to do so, they used in-house or data-vendors-provided estimation.

All financial institutions collect and calculate their clients' Scope1 and 2 emissions for any of the sectors. There are cases where clients' Scope3 emissions are covered when those emissions are included in financial institutions' sector-specific targets for FE (II-1).

ii. Sources

In collecting and calculating clients' emissions and emissions intensity, most financial institutions relies more on information from data vendors (including obtaining clients' disclosure information through data vendors) or their own internal estimates, rather than on public and non-public information[35] provided directly from clients. The reason is that few clients, SMEs and unlisted companies, in particular, currently collect and calculate their own emissions. The extent to which data vendors or in-house estimates are used also varies by sector and financing method. For example, it is pointed out that in the power and utility sector, financing is mainly structured as project finance[36] and project-level emissions are identified based on information provided by the companies participating in the project and in-house estimates based on the information.

Some financial institutions have tried to encourage SMEs and unlisted companies to calculate GHG emissions by providing GHG emissions calculation and visualization tools to their clients with intention to utilize those tools to collect and calculate their own FE as well (see BOX5).

In some cases, banks are trying to collect non-public information, such as the emissions of unlisted companies, through interviews or the aforementioned provision of tools. There were also cases where banks confirm emissions of project finance individually at the time of investment.

iii. Efforts to Ensure Accuracy

Financial institutions are taking following measures to ensure the accuracy of FE calculations.

Examples of Efforts to Ensure the Accuracy of FE Calculations		
General Matters		・Establishing internal rules and manuals for emissions calculation *In some cases, these are developed for each sector. ・Implementing of risk control matrices ・Utilizing IT tools（II -2 (5)） ・Disclosing data quality scores by PCAF[37]
	Collect from Data Vendors	・Contacting data vendors to resolve outlier values ・Verifying clients' disclosure information through sample checks

[35] Non-public information refers to information that is not disclosed on the website or other IR documents of the clients although they collect and calculate their emissions.

[36] Finance for a specific project (business), with the funding for payments of interest and principal on the finance limited to the cash flow (profits) generated by the project. The finance is secured only by the assets of the project

[37] Partnership for Carbon Accounting Financials. The PCAF assigns data quality scores to the FE data quality on a scale of 1 to 5, with a score of 1 being the highest quality, based on the data content available.

Calculation Methods of FE	**Collect through Engagement (Non-public Data)**	・Cross-checking data against those of third-party sources or in-house estimates
	In-house Estimates	・Reviewing calculated values by a different person or department from the one responsible for the original calculation

As mentioned above, some financial institutions are using IT or are developing IT infrastructure (II-2 (5)). On the other hand, some financial institutions say that FE can be calculated manually at present because, as seen in III-2 (2) ii, many of them estimate their emissions in-house in a simple manner, and they are not in a situation to collect a wide range of disclosure information from their clients, and because the number of clients whose emissions are under scope of identification and calculation is limited.

iv. Challenges Identified

One of the challenges going forward is to refine the methods used to track and calculate clients' emissions. In particular, regarding the Scope3 emissions of clients, many financial institutions commented that although the values and estimates from data vendors are used to track and calculate emissions, the lack of accuracy makes it difficult to set emission reduction targets, manage risk, and use those values and estimates for disclosures. In addition, for expanding the scope of FE calculations, some pointed out that the collection of highly granular data required for detailed calculations is an issue (see III-4 (2) for details).

III－3．Use of Scenario Analysis

Scenario analysis[38] is considered to be an effective tool to quantitatively assess climate-related risks that are highly uncertain as to how and to what extent they materialize. It is desirable for financial institutions to eventually utilize scenario analysis to identify transmission channels, clarify and quantify risk as well as risk reduction effects and profit opportunities of supporting their clients' responses to climate change, and further develop their strategies for responding to climate change, while also communicating such results to investors and other stakeholders. (the Guidance III.2.)

（1）Implementation of Scenario Analysis

Financial institutions use scenario analysis to quantitatively capture climate-related risks. Most of them rely on internationally recognized scenarios, including those from NGFS, IEA, and IPCC. Examples of risks subject to scenario analysis, depending on the business characteristics and risk recognition, are listed below.

[38] Scenario analysis involves quantitative assessment through simulations of the timing and size of the impacts on financial institutions' financial condition under several scenarios with regard to future temperature increases and policy responses by governments, based on reasonable assumptions on the transmission channels.

Examples of Major Risks Subject to Scenario Analysis by Institution Types (parentheses refer risk drivers) *	
Banks	・Credit risk of loans and other credit (transition risks / acute[39] and chronic[40] physical risks)
Life Insurance Companies	・Insurance underwriting risk (chronic physical risks) ・Market risk in asset management portfolios (transition risks / acute and chronic physical risks)
Non-life Insurance Companies	・Insurance underwriting risk (acute physical risks) ・Market risk in asset management portfolios (transition risks / acute and chronic physical risks)

* Treatment may differ among financial institutions within the same institution types

Banks tend to focus on credit risk and cost estimation in scenario analysis considering the size of loans and other credit on their balance sheets. Although challenges in enhancing scenario analysis are discussed later in III-4, the following measures are taken by the major banks.

Examples of Major Banks' Efforts to Enhance Scenario Analysis	
Transition Risks	・Expansion of sectors subject to analysis, e.g. expanding from sectors deemed to have high transition risks to those deemed to have medium or lower risks
Physical Risks	・Expansion of the coverage, e.g. expanding client coverage to overseas bases, and expanding physical risk coverage to both acute and chronic ・Refining analyses such as by using clients' location information, e.g. identifying operation bases that significantly impact clients sales, while considering which sector and commercial areas they are in

Financial institutions such as large insurance companies use data vendors' tools to conduct scenario analysis of market risks in their asset management portfolios. However, some claims that these tools are still under development, that there is a gap between the results based on these tools and the trend of the risk amount recognized by the financial institutions. They also have difficulties in comparing the amount of risk between different time points due to changes in methodologies. For these reasons, some financial institutions hold dialogues continuously with data vendors to improve tools.

Some financial institutions received advice from consulting firms when developing analytical models for scenario analysis, but most of the analyses are now conducted in-house. Some financial institutions have used documents published by governments[41] and international organizations to conduct in-house analysis. As examples of partial outsourcing of analysis, there are cases where the analysis of representative companies within sectors subject to transition risks or part of the data collection and estimation related to physical risks, have been outsourced.

[39] Acute physical risks arising from increases in the frequency and severity of natural disasters such as typhoons
[40] Chronic physical risks that gradually emerge in response to long-term fluctuations such as temperature increases
[41] Some regional banks refer to "Practical guide for Scenario Analysis in line with the TCFD recommendations" published by Ministry of the Environment (MOE).

（2）Use of Scenario Analysis Results

Many financial institutions commented that there are challenges in specifically utilizing the results of scenario analysis in risk management due to the following reasons: (i) there is a gap between the time horizon of scenario analysis and that of conventional risk management; and (ii) the analysis is based on a large number of assumptions due to lack of data, uncertainty of probability and timeline of risks manifesting (III-4 (iv)). Even under such circumstances, some financial institutions utilize the results such as in internal ratings judgment and credit risk monitoring, in physical risk assessment of business locations, and in client engagement.

III－4．Issues related to Risk Recognition and Assessment

The following table provides specific examples of the key issues raised by financial institutions. Of these, some expressed the view that the lack of data and the refinement of scenarios could be improved through further enhancement of disclosures in the future.

(i) Issues related to the Uncertainty of the Probability and Time Horizon of Risk Manifestation
・Unpredictable timing and magnitude of risks: long-term manifestation and no past track record ・Complicate forecasting is needed: the impact of climate change will be influenced by various factors acting in combination, and the transmission channels will also change due to various factors ・Uncertainty of the scope, speed, and timing of introduction of technological innovation as well as national policies
(ii) Issues related to Quantification and Data Limitations
・Difficulties in gathering client non-financial data, particularly supply chain data, data on operational and reputational risks, and data on short-term climate change scenarios ・Lack of granular data in understanding physical risks, such as information on business bases of clients and the impact of flood damage on housing by floor ・Developing research and quantitative analysis on the impact of global warming on health and mortality
(iii) Issues related to Setting Scenarios
・Increasing and refining scenarios including those of short term and opportunity, expanding the scope of analysis (sector, asset. and risk categories) ・Consideration of scenarios that are consistent between physical and transition risks ・Shift from analysis using macroeconomic indicators to analysis taking into account the impact on the financials of individual companies and the intensity of their initiatives ・Accuracy and consistency of data and scenarios provided by data vendors ・Standardization of scenarios and analysis techniques for horizontal comparison in investor decision making and in the supervisory work of authorities
(iv) Issues related to Governance and Utilization of the Results of Scenario Analysis
・Facilitation of better understanding of scenarios and analysis logic, and monitoring scenarios updates ・Costs associated with systemization, talent acquisition and outsourcing ・Utilization of analytical results in decision-making on client engagement, investment and loan decision making, stress testing (confirmation of equity sufficiency), and hard limits

Ⅳ. Climate-related Risk Management

Ⅳ－１. Risk Management

Climate-related risks are not considered as a new risk category but as "risk drivers" that increase or decrease risks in each risk category through the various abovementioned channels. Therefore, climate-related risks that may materialize in the short-term are to be identified and managed within the existing risk management framework. With regard to climate-related risks that may materialize over the medium- to long-term, it is important for financial institutions to assess how the climate-related risks will affect each risk category over the medium- to long-term and to address them accordingly, for example, by integrating risk management policies/frameworks or taking into account their own business characteristics (the Guidance III.3.(2)).

（1）Risk Management Policy and Framework

Given the positioning of climate-related risks as one of the top management risks or emerging risks (Chapter II), many financial institutions have incorporated climate-related risks into their risk management frameworks, such as the Risk Appetite Framework (RAF). Specifically, in addition to clarifying the positioning of climate-related risks as management risks in the Risk Appetite Statement (RAS), they regularly report the status of risks to the management through Risk Management Committee or other relevant committees.

As mentioned earlier, financial institutions have established risk management policies and frameworks based on the recognition that climate-related risks are "risk drivers" that affect financial risks such as credit or market risks. Even though, the FSA observed the case where climate-related risks are categorized independently from other financial risks, specifically on the RAF.

As for transition risks, some financial institutions report the information obtained through client engagement to the management and make efforts to understand the transition risks of clients and their portfolios from various perspectives. This is because, as mentioned in III-2, GHG emissions of clients (FE for financial institutions) only capture fragmentary information from a point in the past, and do not reflect clients' forward-looking information such as their efforts for transition and changes in their future risks levels. Some financial institutions also monitor their exposures to and its concentrations to affected sectors and clients identified in III-2 (see IV-2).

（2）Quantitative Risk and Capital Management

In the case where climate-related risks are managed as a separate risk category on the company-wide RAF, the financial institution manages FE as a quantitative indicator by selecting FE in high-emitting sectors as a risk appetite indicator and managing it by sector or business unit in

accordance with the externally announced target (II-1 (3)). Some financial institutions also devise ways to capture FE in risk management frameworks (see BOX3).

BOX 3 ： Challenges and Ingenuity of Management on FE

Many financial institutions expressed concern that the implementation of new TF may increase their FE until the clients receiving the TF adopt the necessary transition technologies and begin reducing emissions. They are concerned that efforts to address climate change may be deemed to be regressed in disclosures and IR materials by supporting clients' transition, and that this could hinder the promotion of TF.

In order to mitigate these concerns while promoting TF, some financial institutions have considered or adopted the following internal management, disclosures and IR measures, and considered alternative benchmarks.

Examples of Ingenuity	
Internal Management	・Separating FE associated with TF to clients whose net-zero pathways align with the Paris Agreement, for internal purposes, from FE used for disclosures and IR materials ・Identifying and incorporating clients' current and potential future transition risk reduction efforts—which actual FE figures alone cannot fully capture—into metrics and internal controls through engagement and other approaches (see IV-2 (2))
Consider Effective Indicators to Replace or Supplement FE	・With reference to "Addressing the Challenges of Financed Emissions" ,[42] ➢ Setting not only absolute value of FE but also emission intensity as targets and metrics for each sector ➢ Considering using the avoided emissions[43] brought about by the products / services of clients and TFs, and introducing engagement results / action as metrics
Disclosure and IR Ingenuity	・Disclosing not only FE, but also targets for emissions intensity and avoided emissions, as well as strategies and policies for emissions reduction, and the status of engagement with high FE clients ・In cases where FE increased or is expected to increase from the previous fiscal year, if the reason for the increase is due to a change in methodologies, expansion of the scope of measurement, or promotion of TF, specifying such reason

Of these initiatives, it was noted that effective indicators that can replace or supplement the FE are still under consideration and discussion. For example, some financial institutions noted that avoided emissions present challenges in terms of calculation, practical use and international understanding due to the varying methodologies and applications. Nevertheless, as pointed out in this chapter, II-1 and III-2, many financial institutions cited practical challenges to capture transition risks only with FE and that it could be an obstacle to promoting

[42] The FSA, Ministry of Economy, Trade and Industry (METI), and MOE (2023), "Addressing the Challenges of Financed Emissions"

[43] An indicator that quantifies the degree to which a company has contributed to the reduction of GHG emissions

TF. These financial institutions pointed out the importance of capturing climate-related risks from diversified perspectives by combining multiple indicators in addition to FE.

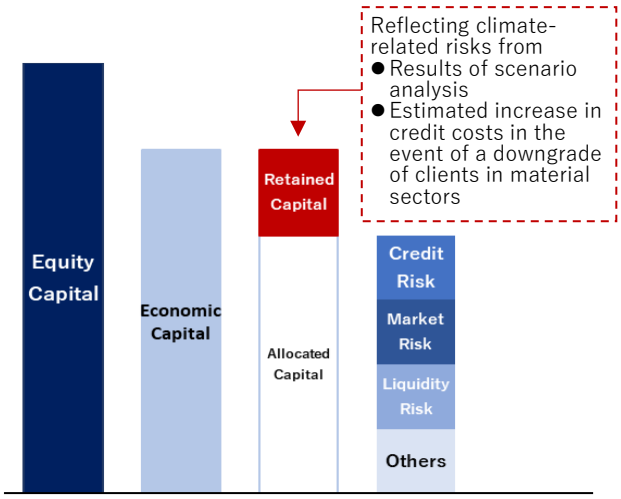
To understand climate-related risks from multiple perspectives, financial institutions refine their FE monitoring and devise disclosures or IR materials. For example, some financial institutions disclose FE related to commercial loans by sector, while some regional banks identify FE associated with specific business areas and key business partners that they particularly focus on, and use this information for monitoring and for disclosures / IR following TF implementation.

Regarding the impact on market risks, a financial institution, on a trial basis, monitors price fluctuations of certain securities for a certain period to check whether their value have fallen due to climate change factors. Other financial institution reflects in its integrated risk amount the decrease in the value of clients' shares resulting from losses caused by natural disasters or carbon pricing.

Most of them, however, find it difficult to quantify climate-related risks in the medium- to long-term due to the challenges identified in III-4, such as the uncertainty of climate-related risks and the data limitation. Even though, some financial institutions, for example, incorporate natural disaster risks into their integrated stress testing to confirm the capital adequacy for large claim payments. The FSA also observed the instance of capital allocation to climate-related risks (see BOX4).

BOX 4 ：Capital Allocations to Climate-related Risks

Most financial institutions do not allocate capital for climate-related risks as a separate category based on the idea that climate-related risks are captured within each financial risk category. Under these circumstances, a regional bank, while recognizing climate-related risks as "risk drivers," allocates additional capital to cover climate-related risks as part of its economic capital allocation. The capital is allocated as a preparation for tail risks, separately from the capital allocation determined based on VaR (Value at Risk) calculated by, for example, the historical method. Specifically, the regional bank allocates additional capital within its retained capital (buffer) based on the results of climate-related scenario analysis and the reflection of climate-related risks in its internal ratings.



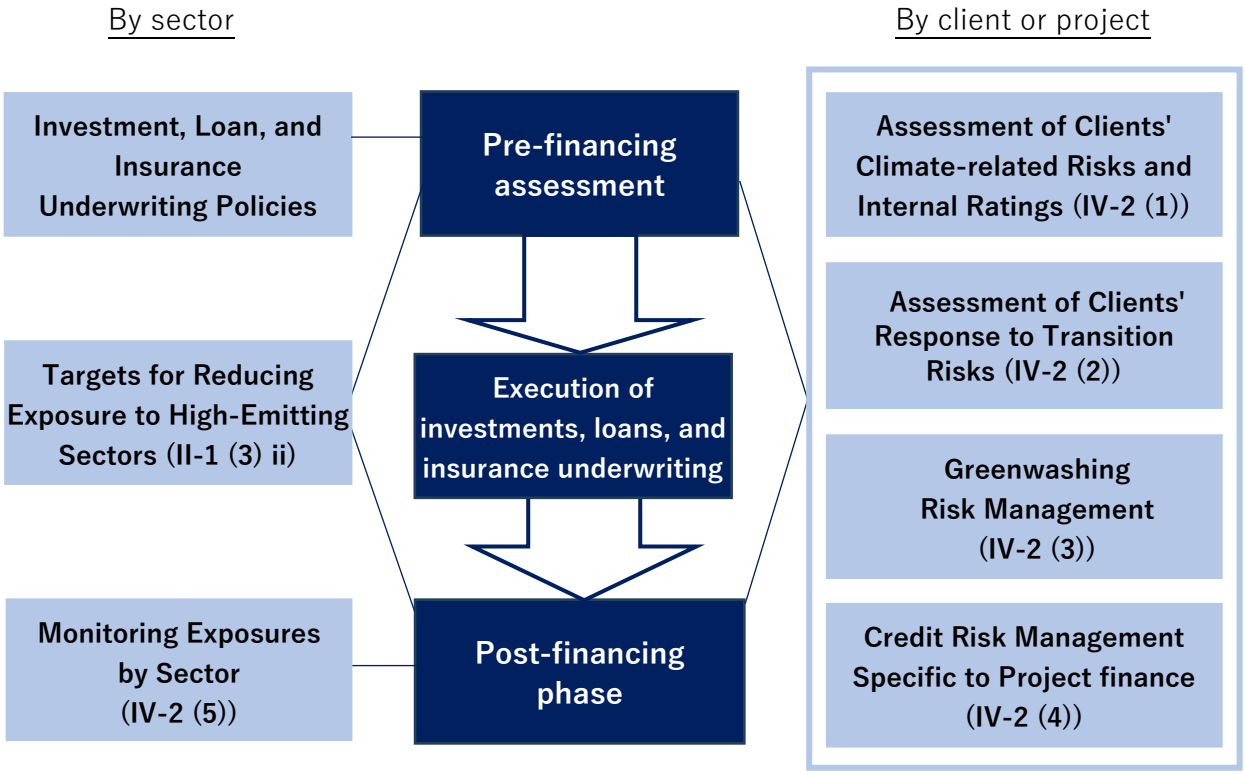
However, given the issues identified in III-4, international discussions on whether and how to reflect climate-related risks in the risk-weighted assets and capital requirement are still evolving. This is a case example that, while understanding these issues and limitations, the bank is taking steps to address them in a manner suited to its size and characteristics.

Ⅳ－２．Sector- or Client-level Risk Management

As climate-related risks faced by clients can translate into business risks to financial institutions through investments, loans, and other transactions with those clients, it is important for them to understand clients' strategies and responses to climate changes when they develop climate-related strategies (II-1) and recognize and assess the transmission channels and risks (III-1). The Figure 3 illustrates the approaches to sector- or client-level (or project-level) risk management taken by financial institutions. The diagram below describes the separation of the risk management measures before and after the provision of investments, loans, and insurance underwriting for the sake of convenience[44]. Most financial institutions said that there is no difference in the examination process between investments, loans, and insurance underwriting that contribute to clients' responses to climate change (hereinafter referred to as climate-related finance) and general finance.

[44] Policies for investments, loans, and insurance underwriting for activities that have a significant negative impact on the environment (II-1 (2)) and targets for reducing exposure to high-emitting sectors (II-1 (3) ii) are included in this conceptual diagram because they have an aspect of preventive measures against risks (risk management), although they are financing policies.

Figure3: Conceptual diagram of sector- or client-level (or project-level) risk management efforts by financial institutions



（1）Assessment of Clients' Climate-related Risks and Internal Ratings

Many financial institutions conduct climate-related risk assessments of their clients before and after providing investments, loans, and insurance underwriting.

i. Governance Structure of Assessment

As with conventional credit ratings based on financial data, many financial institutions assess clients' climate-related risks through front-line departments such as branch offices, with the assessments validated by the second-line functions such as credit review divisions. In some financial institutions, however, expert judgment is provided by divisions responsible for sector-wide industry research or by analysts specializing in ESG.

ii. Scope of Assessment

Many financial institutions conduct climate-related risk assessments primarily for clients in sectors they considered to have higher transition risks.

iii. Major Considerations in the Assessment

Some of the key factors that financial institutions consider in assessing their clients' climate-related risks include assessment of the client itself, that of the sector in which the client operates, and comprehensive assessment of the client and other companies in the same sector.

Examples of Key Considerations at the Financial Institutions to Assess Clients	
Transition Risks	・Status of GHG emissions and energy usage ・Existence of a strategy to address transition risks, and if exists, the effectiveness of the strategy ・Existence of setting and disclosing long-term/interim reduction targets for GHG emissions ・Alignment of targets (if any) with goals and pathways set by the Paris Agreement, governments, and industry associations ・Specific initiatives and feasibility of achieving transition risk reduction targets ・Status of emission reductions, compared to base year or targets ・Creation of impact, e.g. identification and measurement of avoided emissions
Physical Risks	・Concentration of operations in specific areas with high physical risks (*) (*) e.g., areas prone to frequent typhoons and hurricanes ・Existence of a strategy to address physical risks, and if exists, the effectiveness of the strategy, e.g. such as response to sea level rise, disasters
Governance	・Involvement of the Board of Directors ・Risk management processes
Others	・Evaluations by ESG evaluation organizations, etc. (BOX1) ・Incident information such as by television or newspapers

Although there are few cases in which quantitative factors are taken into account, some financial institutions screen clients that need to be scrutinized for climate-related impact on creditworthiness based on risk amount measured in III-3 or the degree of negative impact of future carbon tax payment costs and other factors on the future client's profitability.

Such assessments require detailed information about clients and the climate-related risks they face. Some financial institutions mentioned it is particularly challenging to reflect physical risks. This is due to the difficulty of assessing damages arising from physical risks to important business locations, including overseas affiliates and domestic and international plants.

iv. Utilization of Assessment

Many financial institutions that have conducted assessments of their clients' climate-related risks have considered the results of those assessments in deciding their credit ratings.

The FSA observed cases where credit ratings were adjusted downward by notches within the same rating tier, based on the assessments, but most of financial institutions have not changed credit ratings solely because of climate-related risks. These financial institutions may also consider downgrading a client's credit rating if climate-related risks are expected to materialize in the near term and impact the client's creditworthiness. However, at present, most of them did not see any clients whose climate-related risks have materialized to the extent that their credit ratings need to be downgraded.

（2）Assessment of the Client's Response to Transition Risks

Some financial institutions assess and monitor clients' responses to transition risks through dialogue and try to reflect them into their own risk management and policies. For example, several financial institutions grade their clients' responses to transition risks by checking and examining the status of their strategy formulation, the content thereof, and the setting, achievement and feasibility of targets through opportunities such as engagement described later in IV-3. Some financial institutions have developed manuals for assessment viewpoints so that they can assess level of risk for each client in an internally uniformed manner.

Examples of Evaluation Criteria			
		Cases where Targets and Actual Performance are Considered	Cases where Targets, including Interim Ones, are Considered
Grading scale (response to transitional risk)	Low level of action High	・Has no policy to address transition risks ・Has set no targets ・Has a strategy to address transition risks ・Has set quantitative targets ・Has set targets aligned with the Paris Agreement ・Implementing specific initiatives ・Certain GHG emission reductions have been achieved relative to targets ・Target and performance are consistent with the 1.5 degree-aligned pathway ・Has had a third-party certification (Science Based Targets, etc.) ・Certain to achieve those target	・No net zero target ・There is a net zero targets (but not by 2050) ・There is a net zero targets (but no interim target) ・Interim targets are in place and efforts are underway toward reaching net zero ・Interim targets consistent with the Paris Agreement and based on scientific evidence are in place, and progress is being made toward net zero ・Reliable pathway to net zero 2050

Results of these assessments are reflected in internal ratings (IV-2 (1)) and borrower classifications, as well as engagement policies. In some cases, financial institutions have adopted policies to carefully review the terms and conditions or even continuation of transaction with the client, if the client is graded low enough to indicate that it has difficulty in addressing transition risks and do not take specific initiatives after a certain period of engagement (see IV-3 (3) iii for details).

In addition, with regard to the issue of the lack of a historical track record on climate-related risks (III-4), attempts have been made to accumulate data and analyze progress on the grades of clients' transition risks, utilizing them in risk management in the future.

Emissions and emission intensity by sector and client (III-2 (2)) are used to determine scope and policies for client engagement. Financial institutions do not use them as indicators for sector- or client-level credit risk management because the clients' efforts and future paths to reduce

climate-related risks are not necessarily reflected in the current emissions values. However, one opinion was that data quality scores on GHG emissions could be used to understand the risks of individual clients.[45]

Some large financial institutions mentioned that when evaluating clients, particularly large enterprises in the high-emitting sector, with aforementioned evaluation criteria, they initially focused on the existence of plans and targets – now moving to a phase of confirming actual emission reductions of these clients. Some regional banks, on the other hand, noted that raising awareness of clients, particularly in the case of SMEs, is an issue and many of clients have not yet reached the stage of setting and confirming strategies and targets (II-1 (2)).

Some also face difficulties in evaluating their clients because climate-related risks are likely to emerge beyond the time frame of medium-term business plans, complicating the projection of long-term capital investment plans. Difficulties also arise from the uncertainty surrounding future technological innovation. For example, some financial institutions commented that when financing renewable energy-related construction—where technologies are relatively mature—it is feasible to engage in concrete discussions on construction timelines and emission reductions. In contrast, for technologies that has not yet reached the demonstration stage, it remains difficult to discuss and evaluate the implementation timing the effectiveness of emission reductions and economic viability at this stage.

（3）Greenwashing Risk Management

To mitigate greenwashing risk, financial institutions conduct additional eligibility assessments of sustainability label such as "green" or "transition." These assessments include verifying the use of proceeds, ensuring consistency with domestic and overseas guidelines, as well as obtaining third party certification or opinions. In some cases, such label eligibility assessments are carried out not only by front-line departments, such as branch offices, but also by specialized second-line departments prior to financing. In particular, for TF, some financial institutions have introduced additional checklists that include the items such as the status of clients' strategies and initiatives toward net zero, and the appropriateness of their target setting (see BOX6). These financial institutions also incorporate these assessments and verification into their credit rating determination processes, as mentioned in IV-2 (1). Additionally, some financial institutions have developed frameworks and rules to review the eligibility of sustainability label for TF. In some cases, they have conducted ex post facto reviews to verify details of labeled financing, assess its impacts, verify the use of proceeds, and determine the actual volume of financing executed under the sustainability label.

[45] Specifically, there was an opinion that by comparing the data quality score associated with client's emissions with the average data quality score of the sector to which it belongs, it could be used to infer that the client is reluctant to respond to climate change if the score of the client is low compared to the sector average, for example.

（4）Credit Risk Management Specific to Project Finance

Renewable energy development projects, which typically require large-scale funding, are often structured as project finance. In formulating such projects, many financial institutions require insurance coverage against natural disasters, as these projects are particularly vulnerable to such events. Some financial institutions assess risks such as sponsor risk, legal and regulatory risk, permit and approval risk and off-taker risk (e.g., deterioration in the creditworthiness of service purchasers), that are not covered by insurance, when reviewing internal credit ratings and borrower classifications after financing.

One observed case involved the downgrading of a solar power generation project's credit rating due to a reduction in insurance coverage reflecting damage to solar panels caused by a natural disaster after the project finance had been executed.

（5）Monitoring of Sectoral Exposures

Some financial institutions monitor exposures to specific sectors assessed to have higher climate-related risks as well as the concentration risk of such exposures. For example, they conduct scenario analysis (III-3) based on these exposures, including planned figures, and confirm whether the resulting outcome—such as credit costs—remains within levels that do not pose concerns for business operations.

Ⅳ－３．Client Engagement and Support

Based on the assessment of the opportunities and risks identified in Chapter III, it is important for financial institutions to actively engage in facilitating growth and sustainability of their clients' businesses through supporting clients' responses to climate change. Impacts related to climate change may vary depending on the characteristics of each industry and region and there could be various pathways toward decarbonization of individual companies and society as a whole. Therefore, it should be noted that uniformly applying measures and standards to reduce GHG emissions across companies and industries cannot be appropriate. Also, specific measures should be implemented based on their own independent management decisions, taking into account various factors including the size and characteristics of financial institutions. (the Guidance III.3.).

（1）Scope of Engagement

Some financial institutions have set targets for the number of engagements they conduct with their clients (II-1 (3) iv) and are taking steps to mitigate their clients' climate-related risks in line with these targets. In many cases, they prioritize engagements with sectors and clients identified

in III-2, i.e., those vulnerable to the impacts of climate change or those that are financially and operationally important to the financial institutions. Others prioritize engagements with the client in specific sectors – such as key regional industries or manufacturing sectors that are more likely to be integrated into the supply chains of large companies and therefore expected to address climate-related risks. Engagement may also prioritized for core members of regional supply chains or based on factors such as the status of climate-related strategies development or the urgency of institutional responses (e.g., compliance with corporate disclosure requirements or GX-ETS). In the case of fund investments, some financial institutions try to identify the situation through questionnaires and dialogues with asset managers who direct fund management. These financial institutions said they, in advance, have selected funds that must be responsive to engagement.

In addition, some financial institutions prioritize engagement with clients who demonstrate a desire or need to address climate-related risks. To identify such intention and needs, they distribute questionnaires focused on sustainability-related topics — such as the SDGs (Sustainable Development Goals), ESG factors, and SX (Sustainability Transformation)—to all clients. In particular, regional banks, which have a proportion of SMEs among their clients, utilize these questionnaires to gauge interest in responding to climate change and prioritize clients for targeted engagement, given the limited availability of public information on those clients.

Some large, internationally active financial institutions assign staff to their overseas group companies and engage with both domestic and overseas clients. On the other hand, some prioritize engagement with domestic clients, which account for a relatively high proportion of their investments and loan portfolios.

Some of the financial institutions that prioritize high-emitting clients in their portfolios, i.e., clients with high FE, indicated that many of their clients in high-emitting sectors show positive responses to engagement and questionnaires from financial institutions because decarbonization is positioned at the center of their growth strategies, while some clients are struggling to take concrete actions due to technical challenges associated with the transition to decarbonization. Some financial institutions, whose clients range from large enterprises to SMEs, cited that client responses are polarized. In particular, as mentioned in II-2 (2), interest in climate change responses among SMEs varies depending on their available resources, the priority of other management issues, and their position within the supply chain. As a result, some clients may be reluctant to respond to engagement efforts by financial institutions. The financial institutions' challenges are how to engage with such clients to reduce risks and how to connect such engagement to business opportunities. To overcome these challenges, they have implemented various measures, including devising engagement frameworks, and providing various solutions tailored to clients' responses and needs (IV-3 (2) and (3)).

（2）Governance Structures of Client Engagement

In many cases, client engagement policies are formulated by management-level bodies such as the Sustainability Committee or by the head office, and engagement itself is carried out in cooperation between the department dedicated to sustainability at the head office and front-line departments such as branch offices. The way to share responsibility among relevant departments differs depending on the organizational structure or target setting, as well as the situation of projects and clients of each financial institution. Some financial institutions are taking organizational measures to address the problem of differing responses from clients as mentioned in IV-3 (1). For example, although front-line departments, such as branch offices, generally take the lead in client engagement, the head office accompanies or takes the lead in cases that require specialized expertise, such as engagements with large or listed companies that are already addressing climate change, or with clients at an advanced stage of engagement who need to implement more sophisticated solutions. Others take a head-office driven approach to identify and clarify issues at clients, particularly to raise awareness among SMEs that have not begun to address climate change yet.

In order to conduct effective engagement, financial institutions endeavor to share information among relevant divisions, develop human resources, and improve skills as follows.

Examples of Initiatives for Effective Engagement	
Sharing of Information and Cooperation among Related Departments and Group Companies Domestic and Overseas	・Sharing information between departments as needed, complying relevant data and information to ensure smooth collaboration and handover among staffs, when engaging with the same client across different functions, such as investment or lending and insurance underwriting ・Collaborating with research departments and product development departments, as well as think tanks and consulting companies within the group, depending on the needs and responses of clients ・Sharing knowledge such as impact assessment method between overseas offices and group companies, for impact investment in overseas funds
Training and Skill-up to Enhance Expertise and Establishment of Dedicated Departments	・Promoting the acquisition of qualifications and utilizing a secondment system to develop human resources with expertise in climate change issues, as well as raise employee awareness of sustainability and share good practices through an internal award system (II-1 (2), BOX2). ・Setting up a department dedicated to local key industries and conducting engagement as part of local industrial reforms.

Regarding regional climate change responses, there are cases where financial institutions, major companies and local governments—having established common goals to solve regional issues such as decarbonization and enhanced resilience to natural disasters—cooperate to raise awareness and provide board-based support, including for SMEs, through holding seminars and sharing information. In some cases, regions with similar industrial structures have entered into agreements to share expertise.

（3）Content of Client Engagement and Support

Financial institutions tailor engagement content in line with the size and characteristics of their clients. For clients whose businesses are growing rapidly and are therefore expected to increase emissions in line with business expansion, financial institutions encourage them to balance their growth with climate change measures by holding dialogues on setting emission intensity reduction targets, which are measured as emissions par unit of sales, rather than focusing on absolute emission reductions.

In addition, financial institutions offer a variety of services to support clients based on their climate change preparedness and needs. For example, for clients with little interest in or who have yet to take action, support may begin with providing basic information on carbon neutrality, sharing insights into industry trends, or initiating dialogue through other management issues (see BOX5). For clients who are willing to act but are struggling with implementing specific measures, they may provide tools and consulting services. For those already acting or with defined financial needs, they may provide climate-related finance and support business transformation.

i. Provision of Tools and Consulting Services

The most common climate change response tool offered by financial institutions to their clients, including those with little interest in addressing climate change, is a GHG emissions visualization / calculation tool (see BOX5).

Consulting services and specific products are offered to clients that are actively making efforts or have specific needs. These services and products are provided not only to companies but also to local governments. For example, some regional banks identified a need for carbon credit[46] generation within local governments and facilitated introductions to relevant services providers. In other cases, financial institutions have supported environmental education in local communities by collaborating with government bodies, key local companies, and institutions of higher education. Demand for problem-solving support from local companies is strong, and at present, clients are increasingly interested in consulting services for disclosures based on the TNFD (Task Force on Nature-related Financial Disclosures) framework, in addition to addressing climate change.

Some financial institutions are providing support for clients to acquire SBT (Science Based Targets[47]) certification. However, some emphasized the importance of encouraging clients to pursue meaningful initiatives after obtaining certification, rather than providing support to clients only for the purpose of acquiring SBT certification just as formality.

[46] Although there is no uniform definition of carbon credits, carbon credits are often used to confirm and certify the difference between projected emissions (baseline) and actual emissions (baseline & credit) as "credits" through monitoring so that companies can trade carbon credits with other companies (The FSA, the Working Group on Financial Infrastructure for Carbon Credit Transactions).

[47] GHG emissions reduction targets under the Paris Agreement, as well as international frameworks for setting such targets

BOX 5 : Engagement and Support for Clients in the Initial Stages of Responding to Climate-related Risks

In the case that a client does not recognize climate change as an urgent issue or has no choice but to prioritize other management issues, it is difficult to increase the interest and knowledge of the staffs in the front office of the financial institution as well (II-2 (2)). In addition, some pointed out the difficulty of client engagement and support in those cases.

Many financial institutions consider that it is important for their clients to understand and calculate their own GHG emissions in the initial stage of responding to climate-related risks. Therefore, they hold GHG emissions visualization tools as one of the menus of client engagement and support. While many financial institutions are engaging in business matching with data vendors that develop such tools and introducing these products to clients, some financial are also try to leveraging such tools for their own data accumulation and FE identification. Some financial institutions offer multiple tools depending on the specific features and strengths of each.

Some financial institutions have observed that their clients' needs, which at first glance are not always explicitly related to climate-related risks, can serve as entry points for engagement and support on climate-related issues. Some regional bank mentioned they have received numerous consultations from clients concerned with cost-cutting as a pressing issue. In response, they proposed energy-saving measures as a solution, which also contributed to mitigating climate-related risks, such as reducing GHG emissions. As a result, these proposals helped raising awareness and provided clients with solutions to addressing climate change.

ii. Support through Provision of Funds, Such as Investments, Loans, and Insurance underwriting

Financial institutions provide their clients with following climate-related finance.

Main Types of Climate-related Finance
・Sustainability-labeled finance (investments, loan, and insurance underwriting for projects or companies that have obtained certified sustainability label such as "green" or "transition," indicating alignment with sustainability goals)
・Impact investment and sustainability linked loans (SLL) for which KPIs are set and impact assessment is carried out regarding whether it has a positive impact on the environment
・Loans for individuals, such as housing loans for the purchase of houses that meet certain criteria
・Investment trusts for retail clients whose underlying assets are sustainability-labeled finance
・Development and provision of investments, loans and insurance products that capture the climate-related issues and needs of clients
・Equity investment in startups developing climate-related technologies (“climate tech”)[48]

[48] Technologies that help reduce GHG emissions and adapt to the impacts of climate change (UNEP (2024), "The Climate Technology Progress Report 2024")

Financial institutions are actively promoting TF; however, many of the technologies necessary for the transition are still under development, and it will take time before they begin to generate stable cash flows. As a result,, there are currently few projects structured as project finance or in regional areas. Financial institutions have identified several challenges in implementing TF: (1) pathways of achieving "transition" are not uniform; (2) TF implementation may increase TF temporarily; and (3) it may be difficult to secure risk-return balance, as the additional procurement and manufacturing costs associated with transition are often hard to pass on to the price of products and services, thereby compressing the profit margins of recipients of TF.

In this regard, financial institutions assess the eligibility of TF by ensuring consistency with domestic and international guidelines and by obtaining third party certification (see BOX6). They also document decision-making process, challenges specific to TF, regional characteristics and industrial interconnectivity. These documents are then used to support client engagement and to facilitate communication with other stakeholders. In some cases, financial institutions evaluate the credibility of clients' climate-related strategies and the commitment of management through engagement. This allows them to simulate potential increases in FE in advance and to assess the likelihood of future reductions in FE through subsequent investments or loans.

BOX 6 ： Judging the Eligibility of TF, Documenting the Judgment Process, and Ensuring the Reliability of Clients' Transition

Some financial institutions have established and documented the following criteria, for example,—based on the guidelines formulated by government agencies and international organizations—regarding the eligibility of TF for clients. This includes the assessment of assets subject to investments and loans, particularly in cases of involving designated use of proceeds, such as project finance. They have formalized and documented the judgment process as well.

	Examples of Criteria to be Confirmed
i. Alignment with the Paris Agreement	・Alignment of GHG emission reduction plans with transition pathways delivered from internationally recognized scenarios consistent with the Paris Agreement
ii. Validity and Feasibility of Specific Measures	・Existence of targets and specific measures to achieve the GHG emissions reduction plan ・Consistency between each specific measure, such as reduction measures for each project, and the overall plan ・Appropriateness of the implementation timeline for specific measures including the development, introduction and practical application of relevant technologies ・Impact of GHG emissions reduction when each specific measure is implemented ・Existence and feasibility of intention to utilize carbon removal technologies and carbon credits

iii. Validity and Feasibility of Investment Plans	・Appropriateness of investment plans for specific measures including high-emitting projects and asset phase-out plans ・Financial viability of the investment project
iv. Governance	・Commitment of management to the formulation and implementation of specific measures ・Status of follow-up and review of plans and specific measures ・Clarity of roles and responsibility of related departments for the implementation of specific measures ・Participation in climate-related initiatives ・Disclosures of GHG emissions
v. Impact on Sustainability	・Existence of possible significant harm to other sustainability objectives caused by specific measures or climate-related finance, and existence of mitigating measures for those adverse impacts ・Consideration of specific measures to contribute to a just transition[49] and the impact of the finance on related parties such as employees, society and supply chains

Based on the materiality assessments outlined in III-2, financial institutions determine the scope of clients or sectors for which the above criteria should be confirmed. The specific checkpoints and the scope of entities subject to confirmation vary depending on the sector and the type of financing, such as corporate loans and investments versus project finance. For example, with regard to the existence and appropriateness of plans and specific measures at the client level as outlined in ii. to v., in the case of corporate loans and investments, the scope of confirmation is the investee, i.e., the corporate clients. In the case of project finance, however, the focus is on the entity playing a material role in the project (hereinafter referred to as the "main company"), such as the main sponsor of a SPC (special purpose company). If the main company does not fall within any of the sectors subject to the scope mentioned above, the assessment is not conducted at the corporate level, but is limited to the asset level, assessing its eligibility in term of alignment with the Paris Agreement.

In some cases, financing that is deemed to be eligible for TF based on these criteria is counted towards the target for climate-related fund provision (II-1 (3) iii), and FE linked to TF is managed separately from non-eligible FE for internal control purposes (BOX3).

Since client and project transitions occur over the medium- to long-term, as described in IV-2 (3), the confirmation of TF eligibility is also carried out post-financing. In this regard, some financial institutions have explicitly stated, in their documentation that outlining TF eligibility criteria and decision-making process, that ongoing monitoring and engagement after the execution of financing are essential for supporting clients' transition efforts. Furthermore, they have noted and that if a client subsequently loses eligibility, the TF designation is revoked, and

[49] A concept that aims to achieve a transition a sustainable society while minimizing risks such as job losses among workers in affected industries when taking measures to address environmental issues

the financing is reclassified as regular financing and investment. In such cases, clients are encouraged to continue decarbonization efforts outside the TF framework (IV-3 (3) iii).

Needs for climate-related finance is often identified through routine business activities and relationship management. In some cases, particularly when engaging with high-emitting clients, financial institutions proactively uncover sustainability-related financing needs by, for example, introducing industry trends and presenting a range of solutions informed by the results of the questionnaires referenced in IV-3 (1).

Based on such funding needs, financial institutions have set targets for the volume of climate-related finance to be provided and are taking appropriate actions (II-1). It was noted that demand for such financing has been fairly strong to date, particularly for renewable energy projects and for the purchase of energy-efficient homes, such as ZEH.[50]

iii. Follow-ups on Progress for Target Achievement and Effects of Engagement

Financial institutions conduct post-financing follow-up with their clients receiving climate-related finance and engagement, for example, through ongoing dialogue or by monitoring the progress of clients who have set targets under SLLs.

The achievement of targets under SLLs is reflected in loan conditions such as interest rates. Similarly, many financial institutions are considering reflecting the results of follow-up in their lending and investment policies, including adjustments to terms such as interest rates in the future. They continuously follow up on their clients' progress on strategy formulation and efforts to achieve their targets, as well as the ongoing eligibility of TF described in BOX6. Most financial institutions adopt a policy of encouraging corrective action through engagement when a client is not on track to achieve its targets. Furthermore, if engagement proves ineffective over a certain period or if the required conditions are not met, some financial institutions consider taking additional measures – such as reviewing their transaction policies, reconsidering the label certification, exercising voting rights or sending letters to management in the case of equity investments.

（4）Key Challenges in Client Engagement and Support

Financial institutions have identified two main challenges in client engagement and support: fostering clients' awareness and ensuring profitability.

Regarding awareness-raising, regional banks commented that, depending on the size and situation of clients, it can be difficult to persuade them to reduce risks or pursue business

[50] Net Zero Energy House: A house that aims to achieve a net-zero annual primary energy consumption by introducing renewable energy and achieving significant energy conservation while maintaining the quality of the indoor environment such as through the introduction of highly efficient facility systems

opportunities related to climate change—particularly for clients whose size and circumstances lead them to show little interest in or place low priority on addressing climate change. They pointed out that SMEs tend to exhibit this tendency in particular, emphasizing the importance of finding ways to incentivize them. Some financial institutions involved in fund investment noted that responses to engagement and awareness of climate change vary depending on the policies of the asset managers overseeing the funds or the nature of the assets they invest in.

Regarding profitability, some expressed the view that a high level of profitability can be expected when a financial institution becomes an arranger of project finance related to renewable energy, for instance. On the other hand, some claimed that there are additional costs related to TF as mentioned above in IV-2 (3) (ii) and that insurance underwriting for renewable energy business is struggling due to high loss ratios. In particular, some insurance companies raised the issue that insurance products related to the introduction of new technologies are unprecedented, making it difficult to determine appropriate premium rates. They also mentioned that private financial institutions cannot shoulder the risks alone for projects that require large-scale funding or involve unproven technologies.

Under these circumstances, some non-life insurance companies have sought to ensure the profitability of new development projects by conducting risk assessments prior to development and offering insurance products that align with identified risk levels. They have also made efforts to estimate loss ratios over the medium- to long-term and to establish assessment standards. Some financial institutions have analyzed return performance of climate-related finance and confirmed that there are no significant discrepancies compared to other projects, for example, by examining spread performance between sustainability-labeled and non-labeled bonds.

Impact investment or SLL may be less economically rational for clients compared to conventional investments or loans because of the additional costs for impact assessments and verification of target achievement. Even so, some financial institutions pointed out that clients engage in those finances since they see value in receiving high-quality advice from financial institutions, being aware of their current situation, and improving their reputation with stakeholders.

BOX 7 ：Initiatives on Climate Change Adaptation[51]

In recent years, it has been pointed out that extreme weather events occurring worldwide are causing unprecedented scale of weather-related disasters and serious impacts such as an increase in the number of heatstroke cases. In addition to measures to reduce GHG emissions that cause climate change ("mitigation"), many financial institutions believe that measures to avoid or reduce damages of climate change that have already occurred or are expected to occur in the near future ("adaptation") are becoming increasingly important. They also recognize that

[51] Reacting to the climate change impact so as to prevent or reduce damage, and to contribute to a stable living environment, sound development of a society and economy, and to preserve the natural environment (MOE, "Climate Change Adaptation Act")

as climate change progresses, both transition risks and physical risks are expected to intensify simultaneously, making it essential to consider mitigation and adaptation measures in a comprehensive manner.

Typical measures taken by financial institutions to adapt to climate change include the formulation of their own business continuity plans (BCPs) and the development of infrastructure at their business bases. The followings are major examples of financial institutions' efforts to support clients in climate change adaptation.

Major Case Examples	
Physical Risk Scenario Analysis	・Analyzing clients' adaption readiness such as whether clients have implemented measures to address temperature increases ・Analyzing the impact of landslide disasters on credit-related expenses for solar power generation projects
Initiatives to Support Clients' Adaptation Measures	・Offering loans with clauses that partially waives debts of clients in the event of wind or flood-related losses ・Conducting business matching to support clients' BCP formulation and implementation
Measures Specific to Non-life Insurance Companies	・Developing and providing natural disasters prediction system ・Delivering disaster information and adaptation measures through dedicated services ・Providing physical risk assessment services
Others	・Implementing project finance for adaptation-related initiatives ・Investing in companies and projects—domestically and internationally—that develop adaptation technologies, including those focused on disaster mitigation and prevention ・Investing in bonds for disaster prevention, including origination of them, issued by local governments

However, some noted that opportunities for adaptation-related financing remain limited compared to those for mitigation, partly because relatively few clients are currently implementing large-scale adaptation initiatives. In particular, it was pointed out that finance needs for disaster prevention and mitigation measures, such as strengthening infrastructure resilience, are largely concentrated to entities such as local governments and government-affiliated financial institutions. Against this backdrop, some have approached those public-sector entities, both domestically and internationally, to structure bonds intended for adaptation projects. They noted that these efforts aim to discover new adaptation-related projects by disseminating information on such successful cases.

Some financial institutions have established dedicated departments to support clients, including local governments, in their climate adaptation efforts, while others are collaborating with industry, academia and peers within the financial sector, to develop relevant technologies, share knowledge, and create businesses necessary for adaptation to climate change.

Ⅴ. Conclusion

This document presents the initiatives and challenges related to climate-related risk management by financial institutions, as well as support for clients in mitigating such risks, based on dialogues conducted with financial institutions during FY2024.

The financial institutions covered in FY2024 have positioned climate change as a key management issue, and have made progress in formulating strategies, strengthening governance, and refining risk assessments. Based on the understanding that climate-related risks faced by financial institutions are inseparable from those faced by their clients, financial institutions have been striving to understand the climate-related risks of those clients through various data sources and direct dialogue. Furthermore, rather than immediately opting for divestment from companies or sectors perceived to have higher risks, financial institutions are actively engaging with them to support risk mitigation. This approach is intended not only to reduce climate-related risks for both financial institutions and their clients, but also to contribute to the acquisition of new business opportunities or enhancement of corporate value.

Financial institutions are expected to continue to enhance their climate-related risk management and improve corporate value in accordance with their awareness of climate-related risks. Yet, many financial institutions face challenges in conducting assessments of quantitative risks and in formulating strategies, in forward-looking and reliable manner, for both themselves and their clients—particularly because climate-related risks tend to emerge over longer time horizons than those typically considered in conventional risk management or business strategy.

Furthermore, the circumstances surrounding financial institutions vary greatly, depending on factors such as business scale and the characteristics of their clients. In particular, the awareness and interest of stakeholders—such as clients and investors—can function as barriers to climate action or influence employees' own risk perception within financial institutions. Therefore, the roles of these stakeholders are also important when financial institutions take action to address climate change.

In particular, it should be noted that the GHG emissions of financial institutions (FE) may increase temporarily as they provide finance to support clients' transition to net zero. In such cases, it is essential that (i) financial institutions confirm, through engagement, that there is a sufficiently high likelihood the client will, in the future, reduce its GHG emissions and improve its resilience to climate change, thereby lowering its overall risk, as well as that (ii) financial institutions are managing their own risks appropriately. Under these conditions, fostering stakeholders understanding of such temporary increases in emissions is critical for financial institutions to fully satisfy their expected role in supporting clients.

Discussions on these issues, both domestically and internationally, are still evolving. Against this backdrop, and under the Government of Japan's overall initiative to achieve carbon neutrality by 2050, the FSA will continue to engage in dialogue with financial institutions regarding their climate-related risk management and client engagement. These discussions will take into account that suitable approaches to address climate change will necessarily vary—depending on factors such as the degree of impact of climate change on the business and financial conditions of both clients and financial institutions themselves, as well as the size and characteristics of each financial institution.