Provisional Translation

Recent Developments of Practices on Management of Storm and Flood Risks and Support to Clients in the Financial Sector

July, 2026

Financial Services Agency

This is only a provisional translation. The original version is available in Japanese. Readers should consult the original version if in any doubt.

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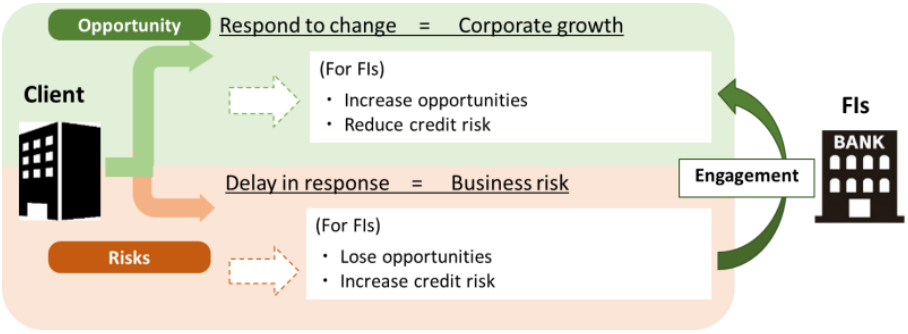
Ⅰ. Introduction

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"), which incorporates the FSA's viewpoints in dialogues with financial institutions, its approach to inspection and supervision, and case examples of support by financial institutions for clients' responses to climate change.[1,2]

The Guidance presents the view that climate-related opportunities for clients—such as the emergence of new markets and business partners—and climate-related risks, namely transition risks[3] and physical risks[4], may also become business opportunities and business risks for financial institutions through investments, loans, and transactions with those clients. Accordingly, the Guidance suggests that, by supporting clients' responses to climate change, financial institutions can help clients seize opportunities to gain new markets and business partners and reduce their climate-related risks, and that such support may also lead financial institutions themselves to seize opportunities and reduce risks (Figure 1).

Figure 1: Relationship between clients' and financial institutions' opportunities and risks



(Source) The Guidance II. Figure 2

[1] "Clients" include firms invested or underwritten by insurance companies (the same applies hereinafter).

[2] "Supervisory Guidance on Climate-related Risk Management and Client Engagement" (July 12, 2022). The financial institutions referred to in the Guidance are primarily banks and insurance companies.

[3] Transition risks mean risks arising from the impact on businesses of changes in regulations, technologies, market conditions, and other factors associated with the transition toward carbon neutrality and net zero

[4] Physical risks mean risks arising from the impact on businesses of the increasing severity of natural disasters, changes in temperature and precipitation, and other effects associated with climate change

Based on the Guidance, the FSA keeps on understanding the current practices and issues of financial institutions' responses to climate change. In FY2024, the FSA surveyed the status of, and issues related to, financial institutions' strategies, governance, risk management, client support for responding to climate change, and so on. In FY2025, the FSA focused on physical risks among climate-related financial risks. In recent years, disasters caused by floods, typhoons, and other relevant events have become more frequent and severe globally. In Japan as well, storm and flood damage is one of the major natural disaster risks, and, as disasters become more severe, greater attention has been drawn to their impact on people's lives and economic activities, as well as to the importance of measures to address them.[5]

For example, in Japan, against the backdrop of the increasing severity of storm and flood damage and related issues, the amount of non-life insurance claims paid has fluctuated significantly from year to year. With respect to water damage, an increase has been observed in the average level of insurance claims paid by non-life insurance companies.[6]

In addition, scenario analysis conducted by the FSA in cooperation with non-life insurance companies, etc. confirmed the possibility that the scale of storm and flood damage may expand as climate change progresses. Such risks may have a material impact not only on business activities, but also on the financial institutions' operation.[7]

As described above, in light of the growing importance for financial institutions of responding to the financial risks caused by storm and flood, this report summarizes the results of surveys conducted by April 2026 on the topics such as approaches for managing risks arising from storm and flood damage faced by financial institutions' clients, as well as on business continuity, etc. when financial institutions themselves are affected by storm and flood damage. Based on the Guidance, this report aims to provide practical references for financial institutions and relevant stakeholders in advancing their management of the risks caused by storm and flood.

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[5] Ministry of Land, Infrastructure, Transport and Tourism, White Paper on Land, Infrastructure, Transport and Tourism in Japan, 2025 (June 2025).

[6] General Insurance Rating Organization of Japan, "FIRE INSURANCE." Annual fluctuations in claims paid were considered based on the statistics for the accident categories "Windstorm and Hail" and "Water Damage." With respect to water damage, the average for fiscal years 2014 to 2018 was compared with the average for fiscal years 2019 to 2023.

[7] "2nd Scenario Analysis on Climate-Related Risks [Insurance Sector]" (June 20, 2025).

II. Overview of the Survey

(1) Institutions Surveyed and Information Sources

This survey was conducted for major banks, regional banks, life insurance companies, and non-life insurance companies.[8] It covers 17 financial institutions in total. In conducting the survey, the FSA referred to various publicly available materials, including disclosure materials of each financial institution, as well as the results of questionnaires and interviews conducted by the FSA.

(2) Scope of Risks Covered by the Survey

As described above, this survey focuses on physical risks among climate-related financial risks, and in particular covers financial risks arising from storm and flood damage (storm and flood risks).

This survey does not cover earthquakes, tsunamis, and volcanic eruptions, or other natural disasters that are not generally considered to be directly linked to climate change.

(3) Topics Covered in the Survey

This survey, from the perspective of further understanding the current practices and issues of financial institutions' responses to storm and flood risks, covers the following topics:

- Recognition of transmission channels through which storm and flood risks may affect the management of financial institutions;
- Risk recognition regarding storm and flood risks;
- Past cases in which storm and flood risks materialized (credit risk and operational risk);
- Status of implementation of scenario analysis, etc. and financial institutions' recognition of and issues for further consideration regarding the results;
- Efforts to refine risk analysis;

[8] In this report, "financial institutions," "banks," "major banks," and similar terms, when referring to institutions covered by the survey, mean these financial institutions. Unless otherwise stated, plural terms used in this report, such as "some financial institutions," "banks," "insurance companies," and "cases," may refer to either the singular or the plural.

- Responses to risks in investments and loans, insurance underwriting, and financial institutions' own business facilities and operations; and
- Client support: practices and issues for further consideration in responding to storm and flood risks.

The results for each of these survey items are presented in the following chapter.

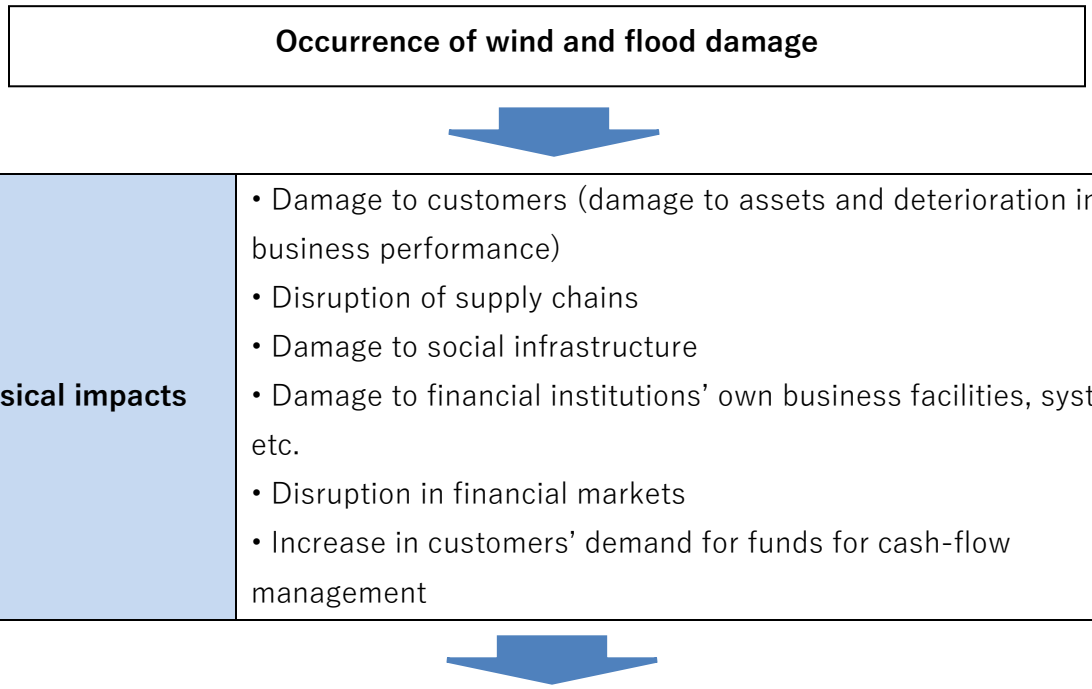
III. Survey Results

This chapter describes an overview of the survey results for each of the items presented in the preceding chapter (II. (3)). In addition to the results of questionnaires and interviews, this chapter also presents findings based on financial institutions' disclosure materials.

III-1. Transmission Channels to Financial Institutions

Among climate-related financial risks, physical risks, including storm and flood risks, may affect financial institutions by acting as drivers of traditional financial risk categories, such as insurance underwriting risk, credit risk, market risk, liquidity risk, and operational risk. These impacts may arise through damage to customers (both corporate and individual), disruption of supply chains, damage to social infrastructure, and damage to financial institutions' own business facilities (Figure 2).

Figure 2: Transmission channels to financial institutions



	in the value of collateral assets) • Market risk (price fluctuations and increased volatility) • Real estate investment risk (deterioration in revenues and expenses) • Liquidity risk (outflows of funds and difficulty in funding) • Operational risk (business disruption and repair costs) • Reputational risk (decline in reputation due to delays in business responses, etc.)

(Source) Prepared by the FSA with reference to financial institutions sustainability disclosure-related materials.[9]

III-2. Risk Recognition

Financial institutions' disclosure materials show that climate-related financial risks and risks arising from large-scale natural disasters, including their impact on business continuity, are positioned as one of the most important risks, with some institutions identifying as top risks. In this survey, the FSA found more specific risk recognition (BOX 1).

BOX 1: Examples of risk recognition found in the survey

Risk category	Main content
Credit risk	In loans such as project finance, in addition to the direct impacts of the increasing frequency and severity of storm and flood damage, revision of insurance underwriting conditions by non-life insurance companies in light of risk may affect the stability of cash flows over the whole life-cycle of a project and the preservation of collateral value.
Real estate investment risk	For real estate mainly for investment, in addition to the direct impacts of the increasing frequency and severity of storm and flood damage, increases in non-life insurance premiums may deteriorate revenues and expenses in real estate leasing businesses.
Operational risk	As storm and flood damage becomes more frequent and severe, operations may be affected through the suspension of functions of social infrastructure such as transportation systems.

[9] This refers to the sustainability sections of "integrated reports," "sustainability reports," "climate- and nature-related reports," "TCFD/TNFD reports," and similar materials.

Reputational risk	For projects seemed to have high storm and flood risks (particularly for ones carrying an extremely high risk of secondary disasters), reviews fully considering such risks are important. If financing is provided without sufficient consideration of these risks, the materialization of secondary disaster risks and resulting damage to surrounding areas could call into question the appropriateness of the lender financial institution's judgement, potentially affecting its reputation.

III-3. Past Cases in Which Risks Materialized

Past materialization of storm and flood risks is summarized below, mainly with respect to credit risk and operational risk.[10]

(1) Credit Risk

Some financial institutions experienced internal ratings downgrades due to storm and flood damage, reflecting factors listed in Figure 4; however, the number of such cases was limited. Several financial institutions also noted that, following insurance payouts, the use of subsidy programs, and the recovery of business activities, the affected internal ratings were subsequently upgraded, and thus the overall impact on credit costs was limited. In addition, no regional bank that had experienced heavy rain disasters in recent years reported major fluctuations in credit costs at the time of severe disasters. As factors contributing to this outcome, they referred to their support for client firms to meet the funding needs necessary for recovery and business continuity through changes in loan conditions, the provision of new loans and the firms' receipt of non-life insurance payments.

Figure 4: Main factors for the downgrade of internal ratings due to storm and flood damage

Financing type	Main factors
Corporate finance (general loans)	• Factory flooding and business disruption due to typhoon damage • Business suspension and commencement of bankruptcy proceedings due to flood damage

[10] With respect to insurance underwriting risk, issues like fluctuations in amounts of non-life insurance claims paid have been confirmed, as described in Chapter I.

	• Cancellation of new business and decision to voluntarily discontinue operations due to typhoon damage
Project finance	• Damage to solar power generation facilities due to heavy snow (in some cases, review of insurance conditions or repayment delays occurred) • Damage to solar power generation facilities and delays in construction due to heavy rain • Damage to wind power generation facilities due to heavy rain

On the other hand, project finance[11] for renewable energy and infrastructure projects, non-recourse loans[12] for real estate, and similar finance structures depend on cash flows generated by the relevant project or real estate. Therefore, when storm and flood risks materialize, they tend to have a more direct impact on credit risk. In fact, some institutions reported cases where facilities were damaged by storm and flood and internal ratings were downgraded. However, even in such cases, ratings remained at or above the “need attention” category.

(2) Operational Risk

With respect to the impact of storm and flood damage on financial institutions’ own business facilities and operations, there were cases at major banks and insurance companies where some facilities were flooded or operations were suspended. However, cases involving significant repair costs or long-term suspension of operations were limited in number.

By contrast, regional banks typically operate within limited geographic areas, and many of their business facilities are concentrated in specific regions. Among regional banks that experienced natural disasters such as heavy rain, there were cases where branches and ATMs were flooded or suffered power outages, forcing many of them to suspend operations. These experiences led banks to review and strengthen their risk response measures. Figure 5 shows examples of disaster events and principal impacts on financial institutions.

[11] A financing method for a specific project or business in which the source of interest payments and repayment of the financing is, in principle, limited to cash flows (revenues) generated by the project, and the collateral for the financing depends on the assets of the project.

[12] A financing method for specific real estate (or a real estate portfolio) in which the source of interest payments and principal repayment is, in principle, limited to cash flows generated by the real estate, such as rental income and sales proceeds, and the collateral depends on the real estate and related assets.

Figure 5: Examples of disaster events and principal impacts on financial institutions

Disaster Events	Principal impacts
Flooding / water leakage	Suspension of facility functions (branches, ATMs, etc.) or suspension of operations
Power outage	Suspension of facility functions (partially addressed by private power generators, etc.)
Water outage	Impact on facility functions and responses through stockpiles or alternative means
Damage to facilities, vehicles, etc.	Incurrence of repair and disposal costs
Transportation disruption	Difficulty for employees to commute, changes in operating arrangements, and business continuation through alternative facilities, mobile branches, etc.

III-4. Status of Analyses and Relevant Issues and Points for Discussion

(1) Status of Implementation of Analyses

Because climate-related risks involve uncertainty regarding how they may materialize and the magnitude of their impacts, scenario analysis[13] is generally used to assess and quantify such risks. Our survey confirmed that the financial institutions covered by the survey conduct scenario analysis for physical risks, including storm and flood risks.

Figure 6 shows the major financial risks commonly covered in scenario analyses related to storm and flood risks by type of financial institution.

Figure 6: Examples of major risks covered in scenario analysis, by type of financial institution

Type of financial institution	Financial risks commonly covered in scenario analysis
Banks	• Credit risk of loans, etc.
Life insurance companies	• Insurance underwriting risk (conducted by some

[13] Scenario analysis means quantitative assessment and simulation of the timing and degree of impacts on financial institutions' earnings and finances under scenarios, based on certain scenarios regarding future temperature increases, policy responses by governments, and other relevant factors, while making assumptions considered reasonably plausible to a certain extent regarding transmission channels under those scenarios.

	institutions) • Market risk in asset management portfolios
Non-life insurance companies	• Insurance underwriting risk • Market risk in asset management portfolios
Note：Some financial institutions also cover the risk of impairment of tangible fixed assets at their own business facilities.	

Regarding the results of scenario analysis for storm and flood risks, many financial institutions took the view that the financial impact would be limited. Some institutions noted that, although the scenario analysis suggested a limited overall impact, the actual financial impact could be larger than the results of scenario analysis when such risks materialize, because analytical methods are still under development and results may vary significantly depending on assumptions used. As a possible reason, they also referred to the potential underestimation resulting from the issues for further consideration described in (2) below not being sufficiently incorporated.

By type of financial institution, banks mainly conduct analyses covering credit risk. Specifically, from the perspective of assessing the impacts on lending portfolios, such analyses are organized around two types of impact: (i) the impact of collateral impairment on recovery prospect; and (ii) the impact of business interruption on borrowers' ability to repay.

Life insurance companies suggested that life insurance underwriting risk arising from storm and flood damage is relatively low compared with mortality risk arising from heat and heatstroke, and the status of implementation of scenario analysis varied across companies. With respect to market risk in asset management portfolios, analyses using evaluation models provided by external vendors are conducted; such methods are also observed at non-life insurance companies.

At non-life insurance companies, with respect to insurance underwriting risk, analyses based on models developed by international initiatives are conducted to ensure comparability in disclosure documents. From the perspective of risk management, practices are observed in which risk amounts are quantitatively assessed using companies' own internal models.

In addition, across all types of financial institutions, there were cases where the risk of impairment of their own business facilities was included in the scope of analysis, and they

conducted facility-by-facility risk assessments using scenario analysis and hazard maps (III-5 BOX 2).

(2) Issues for Further Consideration Found in This Survey

In this survey, the following points were found as issues for further consideration in the analyses of physical risks arising from storm and flood damage (Figure 7).

Figure 7: Issues for further consideration regarding scenario analysis

Issue	Description
1. Damage arising from storm	Water damage is considered, but damage arising from storm is not considered (storm damage).[14]
2. Facility information	In analyses of the impact from business interruption, major facilities of clients other than their headquarters are not sufficiently considered.
3. Supply chains	The impact of risk transmission to supply chains is not sufficiently considered.
4. Compound disasters	Compound disasters are not sufficiently considered.

i. Damage arising from storm

Regarding water damage, analytical methods and assessment frameworks can be referenced in documents published by government agencies and relevant sources.[15] By contrast, with respect to storm damage, financial institutions noted that it is difficult to develop analytical methods because data on storm damage are insufficient and no readily available methods or frameworks have been identified.

[14] In this context, water damage means risks from rain and water, while storm damage means risks from storm; flood risk caused by typhoons is included in water damage.

[15] Examples include the Ministry of Land, Infrastructure, Transport and Tourism, "Manual for Economic Evaluation of Flood Control," the Ministry of Land, Infrastructure, Transport and Tourism, "Guidance on Physical Risk Assessment under the TCFD Recommendations," and the Ministry of the Environment, "Practical Guide for Scenario Analysis of Climate Change Risks and Opportunities in Line with the TCFD Recommendations (for the Banking Sector)."

ii. Facility information

With respect to information on major facilities of clients other than their headquarters, financial institutions noted that facility data are not necessarily sufficiently prepared, and that methods for assessing the impact of disasters based on actual use, structure, and other relevant characteristics have not been sufficiently established.

iii. Supply chain

With respect to supply chains, financial institutions noted difficulties in obtaining data on clients' business relationships, insufficient methods for evaluating the impact of risk transmission across clients' supply chains, and issues of increased model complexity and computational burden when incorporating such impacts into their analysis scopes.

iv. Compound disasters

With respect to storm and flood damage, etc., financial institutions recognize the need to assess the impacts of multiple disasters occurring simultaneously or in succession. At the same time, analytical methods considering the interactions among disasters have not been sufficiently developed. They noted that, although it is possible to assess each disaster individually to a certain extent, further advancement of analytical methods is necessary to quantitatively understand the impacts when such disasters are combined.

These issues suggest that financial impacts could be larger than the results of current scenario analyses. In addition to banks' analyses of credit risk, some of these issues may also be relevant to insurance companies' analyses of market risk and to non-life insurance companies' insurance underwriting risk.

III-5. Refinement of Analyses

In relation to the issues for further consideration described in III-4, financial institutions are undertaking various initiatives to refine their analyses of storm and flood risks. This section organizes the main initiatives identified in this survey from the perspectives of scenario analysis for investments and loans, insurance underwriting, and financial institutions' own business facilities.

(1) Scenario Analysis for Investments and Loans

Figure 8 summarizes the main initiatives confirmed in relation to investments and loans among initiatives to refine scenario analysis for storm and flood risks.

Figure 8: Initiatives to refine scenario analysis for storm and flood risks

Main initiative	Overview
Consideration of storm damage risk	・ Conducting analyses that include the impact of storm damage (using external models, etc. to conduct assessments that consider property and regional characteristics, depending on the necessity)
Consideration of facility information	・ Conducting analyses that consider damage to clients' major facilities other than their headquarters.
Consideration of supply chains	・ Conducting analyses using input-output tables and remittance data between clients to consider the impact of storm and flood damage on clients' supply chains ・ Conducting analyses using macroeconomic indicators presented in the NGFS[16] short-term scenario (DAPS)[17]
Introduction of physical disaster simulations	・ Conducting analyses based on estimation of disaster processes that consider topography, structures, and other relevant factors using external models (physical disaster simulation)
Consideration of asset class characteristics	・ Obtaining specialized disaster probability and meteorological data from data vendors and conducting analyses reflecting the characteristics for respective asset class
Analyses using multiple patterns	・ Conducting analyses based on multiple scenarios and maximum-loss analyses in cases where specific areas are hit by serious disasters
Other refinement	・ Refining analyses by subdividing analytical units, including by

[16] - Network for Greening the Financial System: A network of financial authorities for climate-related risks and related matters

[17] DAPS (Disaster and Policy Stagnation) scenario: One of the short-term scenarios developed by the NGFS, which assumes that a large-scale disaster occurs while climate change measures do not progress and current policies remain in place, resulting in broad impacts on economic activity

initiatives	dividing space into meshes of a certain resolution and assessing risks on a mesh-by-mesh basis ・ Conducting assessments that consider differences in building use, structure, and other relevant factors

i. Consideration of storm damage risk

In analyses that include not only water damage risk but also storm damage risk, some financial institutions conduct assessments that consider property and regional characteristics while using external vendor models and other relevant tools where necessary. They noted that, although the impact of water damage is relatively large, there were cases where the impact of storm damage exceeds that of water damage depending on the location and structure of properties, such as properties located on higher floors. They therefore emphasized the importance of multifaceted analysis, rather than focusing solely on either storm damage or water damage.

ii. Consideration of facility information

Although it is difficult to comprehensively obtain information on clients' major facilities other than their headquarters, such as factories, some financial institutions collect such information from clients' disclosure materials,[18] including annual securities reports and websites, etc., as well as from the information from external vendors,[19] and then analyze the impact on business. Some financial institutions use the information on major facility locations other than headquarters identified with collateral properties information in analyses of the impact from business interruption.

In addition, some institutions identify and include facilities that have a material impact on sales among production and sales facilities, depending on the clients' industries and their positions in the supply chain—upstream, midstream, or downstream—in their analyses.

Financial institutions noted that conducting analyses with identifying major facilities other than

[18] Financial Institutions explained that they use facility information, etc. stated in items such as "Status of Facilities (Status of Major Facilities)" as facility information disclosed in annual securities reports.

[19] When using information from external vendors, there were cases where financial institutions confirm the accuracy of such information on a sample basis by checking facilities using map services and comparing the information with clients' disclosure materials.

headquarters enables more refined risk assessment based on the distribution of counterparties' facilities, thereby serving as a basis for the consideration of risk management at the individual company level.
Initiatives to understand risks using hazard maps and other relevant tools were also observed (BOX 2).

iii. Consideration of supply chains

With respect to the impact on supply chains, initiatives were observed in which analyses were conducted using input-output tables and remittance data between clients. Through such initiatives, financial institutions sought to consider not only directly affected parties but also the indirect transmission of impacts. However, limitations remain in comprehensively understanding business relationships, including the fact that available data is limited to the scope covered by the respective financial institutions. Nevertheless, financial institutions recognized that, even under such limitations, considering supply chain impacts enables assessments that are more aligned with actual conditions.
In addition, in light of the difficulty in considering impacts at the level of individual companies in supply chains (see III-4 (2), "Consideration of Supply Chains," above), they also sought to consider impacts such as supply chain disruptions under a macroeconomic environment reflecting disaster-related supply shocks and relevant factors, by conducting analyses using macroeconomic indicators, such as GDP, shown in the NGFS short-term scenario (DAPS scenario).

iv. Introduction of physical disaster simulations

Some financial institutions conducted simulations of storm and flood damage that take account of geographical characteristics and building structures while using external models and analyzed the resulting damage (physical simulations). Financial institutions noted that, unlike conventional statistical methods, such as regression analysis, physical simulations enable the estimation of damage for disasters at a scale not observed in past statistical data taking account of disaster processes such as river flooding and typhoons, as well as topography,

structures, and other relevant factors. Financial institutions also stated that, because such analyses can incorporate complex natural disaster processes, physical simulations contribute to improving the explainability and persuasiveness of analytical results.

v. Consideration of asset class characteristics

Initiatives were also found in which financial institutions conduct analyses that take account of asset class characteristics by using disaster probability, meteorological data, and other relevant information provided by data vendors. In particular, for project finance and non-recourse loans for real estate, detailed data are used in analyses because risk assessment according to the facility conditions, structure, and other relevant characteristics of individual projects or properties is important (for the use of such analyses, see III-6 (1) iii).

vi. Analyses using multiple patterns

In addition to representative scenarios used for disclosure, initiatives were observed involving analyses based on multiple scenarios and analyses to understand impacts from the perspective of maximum loss even under the same scenario, including analyses that assume the occurrence of a large-scale disaster in a specific region where clients' facilities are concentrated.
Financial institutions explained that these initiatives are conducted on the premise of existing risk management frameworks, to further understand the range of impacts and the possibility of extreme losses.

vii. Other refinement initiatives

Other initiatives included efforts to refine analyses by subdividing analytical units, such as dividing space into meshes of a certain resolution and understanding risks on a mesh-by-mesh basis.
Initiatives were also observed to refine analyses according to the characteristics of target assets, such as assessments that consider differences in building use and structure.

(2) Scenario Analysis for Insurance Underwriting

The main initiatives found in relation to scenario analysis for insurance underwriting are summarized in Figure 9.

Figure 9: Main initiatives to refine scenario analysis for insurance underwriting

Main initiative	Overview
1. Review of risk models	• Reflecting recent increases in precipitation • Considering changes in typhoon and heavy rain occurrence probabilities based on future climate projections • Reviewing damage functions
2. Increasing the granularity of input data	• Increasing the granularity of input data, such as facility information
3. Considering reinsurance, etc.	• Analyses assuming changes in underwriting conditions due to reinsurance • Considering impacts on reinsurance contracts and reinsurers' creditworthiness after disasters

In addition, some companies regularly evaluate model assumptions and the limitations and uncertainty of assessment methods to improve their analyses.
Furthermore, under the recognition that analytical methods are still under development, some companies regard the advancement of analyses and the utilization of analytical results as ongoing issues and engage in information gathering and collaboration with external parties.

(3) Scenario Analysis for Institutions' Own Business Facilities

With respect to analyses of the risk of impairment of financial institutions' own business facilities, there were cases where they combine analyses based on expected losses for all facilities with maximum-loss analyses focusing on specific areas under the assumption of a large-scale disaster.

BOX 2: Initiatives to understand risks using hazard maps, etc.

Initiatives to understand risks using hazard maps regarding flood and relevant information were

also observed.

(Analyses related to investments and loans)

There were initiatives in which financial institutions plot clients' facilities on hazard maps for future points in time, such as 2030, and obtain an overview of physical risks across the entire portfolio. Financial institutions stated that, at present, they use such initiatives, separately from quantitative scenario analysis, to deepen understanding of the likelihood of financial impacts and as a starting point for internal and external discussions.

In individual lending decisions as well, there were cases where financial institutions use hazard maps, etc. to understand risks specific to the location of properties. Some financial institutions also seek to improve risk recognition at the front-line employees by using materials for loan officers that summarize how to read hazard maps and points to check when considering loans.

(Analyses related to financial institutions' own business facilities)

With respect to understanding risks related to financial institutions' own business facilities, there were cases where they conduct analyses covering all facilities based on hazard maps, etc. published by national and local governments. There were also cases where financial institutions classify facilities according to the need for evacuation and response procedures, in proportion to the expected inundation depth, duration, etc. for each facility. For major properties, some financial institutions also conduct assessments that include risks not fully captured by hazard maps by interviewing local governments and confirming past inundation records.

There were also cases where financial institutions use such analytical results to develop facility-by-facility evacuation plans and policies for responding to water disasters (for details, see III-6 (3) i).

III-6. Responses to Risks

The survey found that, as responses to storm and flood risks, financial institutions are undertaking risk management and risk reduction initiatives, including those from the perspective of adaptation to climate change, in the areas of investments and loans, insurance underwriting, and their own business facilities and operations.

(1) Main Risk Response Initiatives in Investments and Loans

In the area of investments and loans, some financial institutions implement responses taking account of storm and flood risks at both the initial consideration stage and the interim management stage. The main initiatives are described below (Figure 10).

Figure 10: Main risk response initiatives for investments and loans

Implementation stage	Main initiatives
At the project consideration	1. Formulating policies for high-risk areas or projects and adjust terms and conditions for investments and loans (collateral evaluation and insurance underwriting condition, etc.)
During interim management	2. Screening (picking up investees and borrowers who are considered to be affected by storm and flood risks) 3. Use of scenario analysis 4. Interim management in project finance, etc.

i. Formulation of policies and reflection in terms and conditions based on risks

At the initial consideration, there were cases where financial institutions formulated policies for certain corporate loan projects in areas with high storm and flood risks and reflected such risks in terms and conditions for investments and loans.

In addition, based on past disaster cases, some financial institutions formulated policies and adjust terms and conditions for project finance transactions in regions with high risks of specific natural disasters, taking into account the facility characteristics and disaster risks of individual projects or properties, as well as the concentration of their facilities.

Furthermore, when making investments and loans in areas considered to have high storm and flood risks, financial institutions commonly conducted adjustments to collateral property

valuations and checked adaptation measures such as insurance coverage. In project finance and similar transactions, financial institutions commonly required appropriate insurance coverage as a financing condition and, for portions not covered by insurance, took secondary credit protection measures, such as establishing cash reserves and obtaining guarantees from sponsors. [20]

ii. Screening

With respect to screening, there were cases where financial institutions use external data, etc. to identify investees and borrowers considered to be affected by climate-related risks, including storm and flood risks, and use the results to select companies for detailed review in internal ratings.
In conducting such identification, they use indicators that quantitatively and qualitatively assess the impact of climate-related risks on clients' earnings and financial condition, and select clients for which the impact on creditworthiness needs to be closely assessed.

iii. Use of scenario analysis

With respect to the use of scenario analysis, some financial institutions reflect analytical results in investment and loan decisions and risk management for project finance and non-recourse loans for real estate. These forms of finance have characteristics whereby the materialization of storm and flood risks tends to have a direct impact on increases in credit risk.
Accordingly, some financial institutions regard scenario analysis as a tool for credit risk management focusing on climate-related financial risks, based on the need to assess risks and consider responses for each individual project. Specifically, while considering risk

[20] In some project finance transactions, frameworks such as the Equator Principles may be used. The Equator Principles are a framework for private financial institutions to identify, assess, and manage environmental and social risks related to large-scale development projects when financial institutions provide financing for such projects. Adopting financial institutions incorporate the framework into their internal policies and procedures, confirm the status of risk reduction measures and adaptation measures through assessments, and reflect the framework in the review process for individual projects, including by making implementation of such measures a financing condition where necessary. Under such frameworks, natural disaster risks, including storm and flood risks, may also be subject to assessment and management.

characteristics by asset class, they conduct analyses that also consider the facility characteristics and meteorological conditions of individual projects or properties, using specialized disaster probability and meteorological data obtained from external vendors, and use the results for monitoring purposes, etc.

iv. Interim management in project finance, etc.

When a natural disaster occurs around a property linked to project finance, etc., some financial institutions have established procedures for sharing information among relevant departments and considering reviews of internal ratings. Specifically, when they become aware of the occurrence of a disaster from external information, the information is shared with the lending department, and, as necessary, the department checks the actual status with relevant parties, such as the arranger of the loans, and considers the impact on credit risk.
In addition, in light of potential revisions of insurance underwriting conditions by non-life insurance companies (III-2 BOX 1), some financial institutions continuously check trends in insurance underwriting conditions, insurance premiums and other relevant information and, at initial consideration and credit review, incorporate the impact of increases in insurance premiums, expansion of deductibles, and other relevant actions into cash-flow assumptions and evaluate downside resilience under such assumptions.

(2) Main Risk Response Initiatives in Insurance Underwriting

At non-life insurance companies, because storm and flood risks are directly related to insurance underwriting, initiatives to manage the risks, such as management of risk amounts, risk transfer using reinsurance, etc., and adjustment of underwriting conditions, are implemented (Figure 11).

Figure 11: Main risk response initiatives for insurance underwriting

Perspective of initiative	Main initiatives
1. Management of risk amounts	Measurement and management of risk amounts using risk models
2. Risk transfer	Risk transfer using reinsurance, etc.

3. Adjustment of underwriting policies	Adjustment of insurance premiums, insurance periods, insured amounts, deductibles, etc.

(3) Main Initiatives to Respond to the Risks Concerning Institutions' Own Business Facilities and Operations

With respect to reducing risks to financial institutions' own business facilities and operations, they are developing and reviewing business continuity plans (BCPs), enhancing facility infrastructure, etc. to ensure business continuity during disasters. They also implement flood prevention measures or relocate their facilities depending on the result of the assessment of the facilities' risks using hazard maps.

In addition, financial institutions are advancing initiatives such as developing initial response procedures and information collection systems for disasters, establishing centralized management structures, and promoting continuous improvement through drills and post-disaster reviews. The main initiatives are summarized in Figure 12.

Figure 12: Main risk response initiatives concerning institutions' own business facilities and operations

Perspective of initiative	Content of initiative
1. Use of risk analyses results for facilities	Using the results for review of BCPs and disaster prevention measures
2. Risk management through RCSA[21]	Assessing effectiveness of risk management measures and residual risks through RCSA
3. Developing facility infrastructure and relocation	Developing facility infrastructure and relocating facilities to manage risks
4. Development of Initial responses	Developing action procedures, clarifying decision-making criteria, and establishing information sharing measures
5. Centralized Management Structure and Information Aggregation	Developing information aggregation and prompt decision-making protocol through disaster response headquarters

[21] RCSA (Risk Control Self-Assessment): A risk management activity through which business departments periodically self-assess the risks inherent in their operations and the effectiveness of controls for those risks, and pursue continuous improvement based on the assessment results.

6. Post-disaster Reviews and Continuous Improvement	Improving BCPs and structures through post-response reviews
7. Drills and Human Resource Development	Enhancing response capabilities through drills and promotion of acquisition of disaster prevention-related qualifications

i. Use of risk analyses results for facilities

There were cases where the results of risk analyses for facilities (see III-5 BOX 2) are used for reviewing BCPs and disaster prevention measures. Specifically, such results are used to consider infrastructure development or relocation for facilities with high inundation risk, and to prioritize countermeasures, considering the risk assessment and classification of each facility. There were also cases where financial institutions understand commuting risks by matching information on officers' and employees' homes and commuting routes with hazard maps. In addition, by identifying in advance each employee's family circumstances, such as whether there are family members requiring special consideration, and the tasks that each employee can perform, financial institutions use such information to determine whether employees can report to work and how to respond when a disaster occurs.

ii. Risk management through RCSA

Some financial institutions manage storm and flood risks through RCSA. Specifically, with respect to risks related to their own business facilities, etc., they assess the effectiveness of risk management measures that have been implemented, such as waterstop board and equipment placement, and also assess residual risks from the perspectives of loss severity and frequency of occurrence. Based on the results of such assessments, they determine whether improvements are necessary and consider additional management measures.

iii. Development of facility infrastructure and relocation

With respect to the development of facility infrastructure, some financial institutions have implemented measures to reduce inundation risk, such as installing waterstop boards, deploying sandbags, and installing emergency power supplies and storage batteries. There were also cases where financial institutions have taken measures to reduce damage caused by strong storms, such as removing projecting signs.
Furthermore, some financial institutions have secured alternative means of business continuity, such as introducing mobile branch vehicles, in preparation for situations where it is difficult to operate a facility.
In addition, some financial institutions relocate their facilities. For example, they promote the relocation of branches to upper floors, to reduce inundation risk. There were also cases where financial institutions have established criteria for determining whether to establish or relocate facilities, based on risks to the facilities, such as river flooding, inland flooding, and storm surges.

iv. Development of initial responses

With respect to initial responses when a disaster occurs, some financial institutions take initiatives to develop action procedures and clarify decision-making criteria in proportion to weather warnings and expected damage. Specifically, financial institutions support on-site decision-making at each facility by clarifying matters related to decisions on evacuation and temporary closure, as well as the timing for commencing advance preparations.
There were also cases where financial institutions have developed mechanisms to notify facilities of meteorological information to prepare for events in which risks may materialize rapidly within a short period of time, such as training. In addition, some financial institutions have developed mechanisms to confirm employees' safety status and the degree of damage by using employee-only applications, including improved versions of disaster prevention applications developed internally.
Furthermore, with respect to whether business continuity is possible at the time of disasters, some financial institutions make decisions by facility or by block, taking into account factors such as the availability of employee under the situation, the staffing necessary to carry out operations, and the availability of key holders, etc.

v. Centralized management structure and information aggregation

With respect to disaster responses, there were cases where financial institutions have established centralized management structures for information collection, analysis, and decision-making through the development of disaster response headquarters and the assignment of dedicated organizations.
There were also cases where, even when multiple departments are involved in disaster responses, information is ultimately aggregated at the head office and managed centrally, and relevant departments deal with the situation from a workspace.
Furthermore, some financial institutions have developed teleconference systems that connect their head offices and other facilities simultaneously. There were also cases where financial institutions have established structures to understand damage using footage of security cameras at facilities and provide instructions to facilities based on such information.

vi. Post-disaster reviews and continuous improvement

Some financial institutions review the responses together with relevant members of the head office and facilities, identify issues, consider improvement measures, and reflect the results in BCPs and organizational structures, thereby working to improve business continuity responses.

vii. Drills and Human Resource Development

There were initiatives to develop human resources and enhance disaster prevention response capabilities through disaster prevention drills and promotion of acquiring disaster prevention-related qualifications, etc.

(4) **Other Risk Management and Control Initiatives**

As part of responses to storm and flood risks, some financial institutions undertook risk management and internal audit initiatives, in addition to initiatives related to investments and loans, insurance underwriting, and measures and operational responses for their own business

facilities.

From a risk management perspective, some regional banks allocate additional capital in their economic capital allocation, taking into account the potentially significant impact that natural disasters may have on the region, as well as the fact that climate-related financial risks may materialize over the medium to long term. In such cases, additional capital is allocated as a buffer against tail risks, separately from ordinary capital allocation determined based on VaR calculated using historical methods, etc.

From an internal control perspective, some financial institutions check their responses to storm and flood risks through internal audits. However, internal audits dedicated specifically to storm and flood risks remain limited. In many cases, relevant initiatives are reviewed as part of operational risk management frameworks, such as business continuity management (BCM), or frameworks for climate-related disclosures. Specifically, financial institutions review the development of relevant issues: BCPs and relevant procedures to prepare for risks, the implementation of drills, initial disaster response structures, information sharing and decision-making structures, as well as controls over assumptions, input data, and analytical processes related to scenario analysis.

III-7. Support for Clients in Responding to Storm and Flood Risks

Financial institutions undertake initiatives to support clients in responding to storm and flood risks including those for adaptation to climate change, taking account of the characteristics of their business.

This section introduces initiatives related to (1) investments and loans and (2) others, separately.

(1) Client Support Initiatives through Investments and Loans

As initiatives to financially support clients' disaster prevention and mitigation,[22] financial institutions provide investments and loans following international frameworks[23,24] for green

[22] "Disaster prevention and mitigation" in this report refers to disaster prevention and mitigation for storm and flood damage. Initiatives for disaster prevention and mitigation primarily covering disasters whose relationship with climate change is not necessarily clear, such as earthquakes, tsunamis, and volcanic eruptions, are not described in this report.

[23] International frameworks established by the International Capital Market Association and the Loan Market Association require use of proceeds for projects that contribute to resolving environmental or social issues. For example, in green finance, adaptation to

finance and social finance, as well as ordinary loans.

While such initiatives are found, financial institutions noted that, compared with the mitigation (of climate change),[25] the market size and number of projects for investments and loans that contribute to disaster prevention and mitigation are relatively limited. They also cited issues such as the need for specialized analyses to assess disaster risks and the effects of counter-measures to the risks and the fact that methods for reflecting risk reduction effects in pricing are still under development.

To respond to clients' business continuity and funding needs at the time of disasters, some financial institutions provide loan products with functions such as cash-flow support when disasters occur and reduction of repayment burdens. These initiatives are summarized in Figure 13.

Figure 13: Examples of client support initiatives by financial institutions through investments and loans

Item	Content
Loans with debt waiver clauses	・ Loans with debt waiver clauses that apply typhoons or heavy rain meeting certain requirements, covering not only physical losses but also temporary expenses such as removal costs
Loans with business continuity expense insurance	・ Loans with insurance that covers additional expenses necessary for business continuity when a borrower suffers damage due to a natural disaster
Disaster-response commitment lines	・ Commitment lines with preferential interest rates applied during periods of water damage under which credit decisions are made depending on the result of an external analysis on the clients' risks and BCP status ・ Commitment lines with conditions under which storm and flood damage of a certain scale or larger is excluded from events that allow financial institutions to

climate change is positioned as one type of eligible project. In social finance as well, initiatives related to disaster prevention and mitigation may be eligible.

[24] At some financial institutions, initiatives were observed to promote understanding and improve knowledge among sales staff that this field may be eligible under frameworks such as green finance, including by posting good practices on internal portals.

[25] A field involving initiatives to reduce greenhouse gas (GHG) emissions, which are a cause of climate change, to mitigate climate change.

	refuse lending
Housing loans with functions to reduce repayment burdens during natural disasters	・ Housing loans with clauses or options that reduce repayment burdens when natural disasters occur

Some financial institutions noted that clients' use of these initiatives was not necessarily widespread. Factors mentioned in this regard included cases where clients give low priority to such disaster prevention and mitigation measures, they made decisions from the perspective of the cost-effectiveness for such special clauses, and clients may consider public support programs, etc. as funding sources in disaster periods.

Meanwhile, financial institutions noted that clients that have experienced storm and flood damage have adopted such initiatives to prepare for the risks. There were also cases where such initiatives have been adopted by clients as part of their sustainability measures. Clients that have long had a high level of interest in, and awareness of the necessity for, BCP measures and have continuously pursued such initiatives also adopted them. Financial Institutions also noted that further dissemination of information and promotion of understanding remain issues. In addition, some financial institutions made investments and loans to local governments and companies to advance disaster prevention and mitigation measures. The examples for such investments and loans are summarized in Figure 14.

Figure 14: Examples of investments and loans to local governments and companies to advance disaster prevention and mitigation measures

Example	Description
Local governments' disaster prevention and mitigation measures	・ Investments in local government bonds whose use is designated to disaster prevention and mitigation projects, such as water damage countermeasures ・ Cases in which financial institutions participated in the arrangement of green loans that were used for disaster prevention infrastructure projects and led the formation of the syndicate
Companies contributing to disaster prevention and	・ Investments in companies developing technologies that contribute to disaster prevention and mitigation

mitigation	
Climate change adaptation in emerging and developing countries	・ Establishing or participating in funding arrangements, including origination of investments and loans, that combine public and private funds (blended finance) for climate change adaptation in emerging and developing countries

(2) Client Support Initiatives Other Than Investments and Loans

This subsection introduces client support initiatives other than investments and loans by (1) non-life insurance companies and (2) other types of financial institutions (banks and life insurance companies).

Non-life insurance companies

At non-life insurance companies, because of their business characteristics centered on non-life insurance underwriting, a wide range of initiatives were found, including insurance underwriting, risk analysis and visualization, risk management support, disaster response, and recovery support. The examples are summarized in Figure 15.

Figure 15: Examples of client support initiatives by non-life insurance companies

Example	Description
Insurance products	・ Tailor-made insurance coverage reflecting clients' characteristics, etc. ・ Insurance linked to weather indices that pays insurance claims regardless of the existence or degree of actual loss (parametric insurance)
Risk analysis and visualization	・ Provision of hazard information and risk maps related to storm and flood risks ・ Forecasting and notification of storm and flood risks using meteorological data and AI ・ Simulation of storm and flood damage and assessment of damage scale and risks ・ Provision of platforms for analyzing and assessing the

	impacts of climate change and storm and flood risks
Risk management and BCP support	・ Support for developing BCPs and various manuals ・ Provision of tools to support initial responses and decision-making during disasters ・ Support for responses to risks through quantification of the total risk ・ Consulting on disaster prevention measures and infrastructure development ・ Support for developing stockpiles for disaster prevention and evacuation response structures
Claims payment and disaster response	・ Development of response readiness and insurance claims payment structures during large-scale disasters, using disaster response bases and nationwide facility networks ・ Identification of damage and claims adjustment using AI, satellite images, and drones, etc. ・ Payment of insurance claims using data integration and digital transformation (DX) ・ Support for disaster responses through provision of meteorological information and disaster prevention information
Recovery and reconstruction support	・ Support through recovery support services attached to insurance policies ・ Support for local governments in damage certification surveys and issuance of disaster victim certificates

Some non-life insurance companies developed client support structures by establishing specialized departments that handle client support related to disaster prevention and mitigation and supply chain management, etc. on a cross-cutting basis, or by establishing subsidiaries responsible for relevant functions.

In addition, through consortia formed in collaboration with companies in other industries and relevant organizations, they undertook initiatives, such as developing solutions related to disaster prevention and mitigation and climate change responses, and jointly considering financial and technological approaches.

Banks and life insurance companies

Some banks and life insurance companies understand clients' recognition of, and responses to, climate change and natural disaster risks, including storm and flood risks, through dialogue and business feasibility assessments, etc. In some cases, they also conduct dialogues on the impact on clients' businesses and possible countermeasures, using general information on climate change adaptation and external data, etc.

Based on such understanding, some financial institutions provide support not only by presenting possible countermeasures, but also in relation to risk management and BCP development, etc. The examples are summarized in Figure 16.

Figure 16: Examples of client support initiatives by banks and life insurance companies

Item	Content
Risk Management and BCP Support	・ Support through business matching, including referrals to external specialist service providers ・ Support for BCP development in cooperation with group companies and external consulting companies ・ Provision of client-specific hazard information and guidance on risk reduction measures using external databases, etc.

IV. Conclusion

This report summarizes the practices and issues for further consideration found in FY2025 through dialogues with financial institutions regarding their management of storm and flood risks and their support for clients.

This survey found that financial institutions have generally made progress in initiatives related to risk analysis, responses to risks, and support for clients.

Many financial institutions regard climate-related financial risks, including storm and flood risks, and risks arising from large-scale disasters as important risks. Meanwhile, they recognized that the impacts on their own financial condition and operations from past cases in which storm and flood risks materialized have been limited.

It is also found that financial institutions are advancing efforts to refine their analyses by using various risk analysis methods, such as scenario analysis, and a range of data. On the other hand, financial institutions also noted that understanding information on clients' major facilities other than their headquarters, reflecting impacts on supply chains, and considering compound disasters remain issues for further consideration. It is expected that these challenges will be addressed as risk analysis methods continue to develop, and the available data are expanded.

In terms of storm and flood risk management, this survey found initiatives reflecting the characteristics of financial institutions, including check of insurance coverage in investment and lending projects that are expected to carry relatively high storm and flood risks, reflection of storm and flood risks in collateral valuations, use of reinsurance, etc. in insurance underwriting, and review of BCPs and development of disaster response infrastructure at their own business facilities.

With respect to client support, in addition to financial support through investments and loans that contribute to disaster prevention and mitigation and financial products incorporating elements for disaster responses, non-financial initiatives were also observed, such as support for BCP development and visualization of risks. As stated in the Guidance, support by financial institutions for clients' responses to climate change can help clients seize opportunities and, through the reduction of clients' climate-related risks, can also lead financial institutions themselves to seize opportunities and reduce risks. Therefore, further expansion of support is expected, including raising awareness of the need to respond to such risks among clients and other relevant entities that are expected to face high storm and flood risks.

The impact of climate change on financial institutions' clients varies widely, and the impact of climate change on financial institutions through such clients is therefore also diverse. Taking these points into account, as well as the size and characteristics of financial institutions, the FSA will keep monitoring the development of financial institutions' management of climate-related financial risks, including storm and flood risks, and client support.