Bank of England PRA

Supervisory statement 4/25 – Enhancing banks' and insurers' approaches to managing climate-related risks

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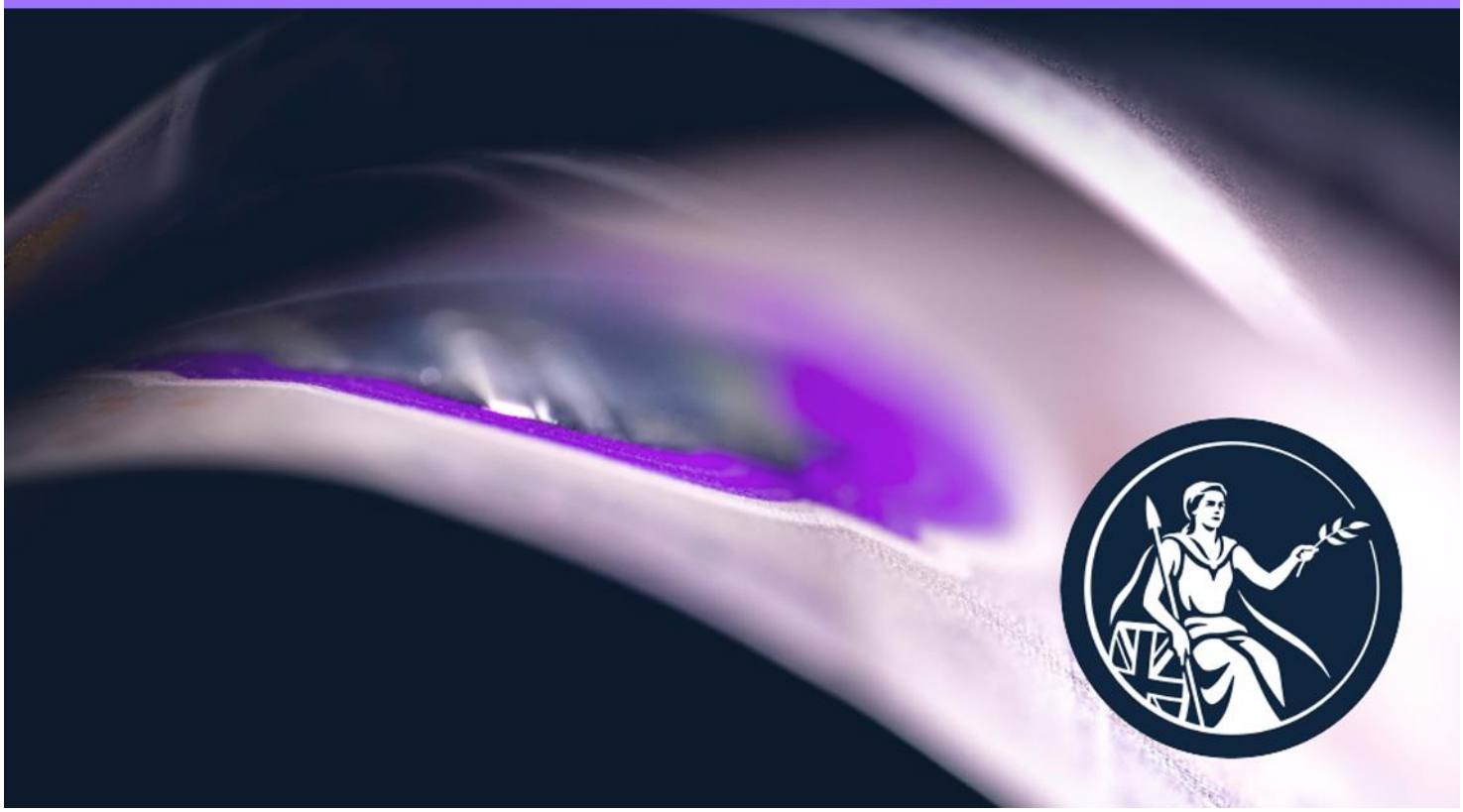
December 2025



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Contents

1: Introduction

1.1 Climate change and the transition to a net-zero emissions economy create operational and financial risks for firms and economic consequences. In April 2019, the PRA became the first prudential regulator to publish supervisory expectations for how banks and insurers ('firms') should enhance their approaches to managing the financial risks from climate change (**SS3/19**). The PRA started supervising firms against these expectations from January 2022. Other prudential regulators have followed suit since then and supervision of climate-related risk management is now a norm among prudential regulators.[1]

1.2 In recent years, the PRA has provided feedback on firms' progress and examples of effective practice in a number of different documents including: two 'Dear CEO' letters,[2,3] four 'Dear CFO' letters,[4,5,6,7] the 2021 and 2025 PRA Climate Change Adaptation Reports ('CCAR'),[8,9] and the **report on Climate-related Risks and the Regulatory Capital Frameworks**. Through thematic reviews of firms and regular supervisory engagement work underpinning these publications, the PRA has improved its understanding of the financial and operational resilience risks firms face from climate change (hereinafter 'climate-related risks').

1.3 New international guidance relevant to the supervision of climate-related risks has also been issued since the PRA first published SS3/19. This has included the **Basel Committee on Banking Supervision's (BCBS) Principles for the effective management and supervision of climate-related financial risks**, **the International Sustainability Standards Board's (ISSB) global climate disclosure standards**, as well as the latest developments in standards and guidance supporting the **Insurance Core Principles** (ICPs) published by the International Association of Insurance Supervisors (IAIS) and the advice provided in its **2025 Application Paper**.

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1 EU: **ECB publishes final guide on climate-related and environmental risks for banks**. Singapore: **Guidelines on Environmental Risk Management for Banks**.

2 PRA letter to chief executive officers of all PRA-regulated firms – **Letter from Sam Woods 'Managing climate-related financial risks'**, July 2020.

3 PRA letter to CEOs of PRA-regulated firms – **Letter from Sam Woods 'Thematic feedback on the PRA's supervision of climate-related financial risk and the Bank of England's Climate Biennial Exploratory Scenario exercise'**, October 2022.

4 PRA letter to chief financial officers of selected PRA-regulated deposit-takers – **Letter from Victoria Saporta 'Thematic feedback from the 2021/2022 round of written auditor reporting'**, October 2022.

5 PRA letter to chief financial officers of selected PRA-regulated deposit-takers – **Letter from Victoria Saporta 'Thematic feedback from the 2022/2023 round of written auditor reporting'**, September 2023.

6 PRA letter to chief financial officers of selected PRA-regulated deposit-takers – **Letter from David Bailey 'Thematic feedback on accounting for IFRS 9 ECL and climate risk'**, September 2024.

7 PRA letter to chief financial officers of selected PRA-regulated deposit-takers – **Letter from David Bailey 'Thematic feedback on accounting for IFRS 9 expected credit losses (ECL)'**, September 2025.

8 October 2021: **PRA Climate Change Adaptation Report 2021 - Climate-related financial risk management and the role of capital requirements**.

9 January 2025: **PRA Climate Change Adaptation Report 2025**.

1.4 Since the PRA first set expectations for firms on the management of climate-related risks in 2019, firms have taken concrete steps to build their risk management capabilities. However, the level of understanding of climate-related risks among firms is varied and the development of leading practice in the effective management of these risks is challenging and continues to evolve. Firms have provided feedback that they would welcome greater clarity on what the PRA expects firms to do to manage the effects of climate change.

1.5 This supervisory statement (SS) provides an updated set of expectations that consolidates published PRA feedback, reflects new international standards and embeds improved understanding of climate-related risks. It aims to ensure firms build the capabilities to effectively manage climate-related risks, in line with the PRA's primary objectives to promote the safety and soundness of the firms it regulates and secure an appropriate degree of protection for insurance policyholders. It is also intended to support firms in managing climate-related risks in a proportionate way, thereby furthering the PRA's secondary objective to facilitate effective competition in the financial markets for services provided by firms. The PRA also considers that replacing SS3/19 to achieve a closer degree of alignment with relevant international standards should have a positive impact on its secondary competitiveness and growth objective. Incorporating more complete assessment and management of the impacts from climate-related risks into business strategy may help firms better position themselves to identify sustainably profitable opportunities in climate-transition financing and insurance, reducing losses as climate impacts grow and the economy transitions.

1.6 The SS is set out as follows:

- Section 2 describes the ways in which climate-related risks can arise for firms and the distinctive elements of climate-related risks which, when considered together, present unique challenges and require a strategic approach.
- Section 3 provides guidance on implementation of this SS, including expectations around the evolution of the understanding and measurement of climate-related risks by firms. It also explains the PRA's approach to proportionate application of the expectations.
- Section 4 sets out the updated PRA expectations in seven chapters. Five chapters (Chapters 1–5) are applicable to all firms, one is specific to banks (Chapter 6) and one to insurers (Chapter 7):
    - Chapter 1: Governance
    - Chapter 2: Risk management
    - Chapter 3: Climate scenario analysis
    - Chapter 4: Data
    - Chapter 5: Disclosures
    - Chapter 6: Banking-specific issues
    - Chapter 7: Insurance-specific issues

Scope

1.7 This SS is relevant to all UK insurance and reinsurance firms and groups, ie those within the scope of Solvency II including the Society of Lloyd's and managing agents (Solvency II firms) and non-Solvency II firms (collectively referred to as 'insurers'), banks, building societies, and PRA-designated investment firms (hereinafter collectively referred to as 'banks'). 'Firms' will be used to refer to both insurers and banks, ie the complete set of firms within scope for this SS. The expectations do not apply to branches of overseas entities operating in the UK. As set out in **the PRA's supervisory approach to banking and insurance**,[10] the PRA's general approach to the supervision of subsidiaries of overseas headquartered international firms is anchored by an assessment of a range of factors including the nature and potential impact of the firm on UK financial stability, and involves an appropriate degree of co-operation with the home state supervisor.

[10] Paragraphs 163–173.

2: How climate-related risks affect firms

2.1 The financial and operational resilience risks to firms from climate change (climate-related risks) arise through two primary transmission channels: physical risks and transition risks. Climate-related litigation may be a distinct transmission channel or a subset of physical risks and/or transition risks.[11]

2.2 Physical risks arise from a number of factors and can be related to specific weather events (such as heat waves, floods, wildfires and storms) and longer-term shifts in climate (such as changes in precipitation and extreme weather variability, sea level rise and rising mean temperatures).

2.3 Physical risks may impact firms as a result of damage to assets and collateral arising from adverse climate-related events and may have wider impacts related to disruption to supply chains and to claims on trade and property insurance. Their impact will be further exacerbated when events overcome existing defences and adaptive measures, for example, the breaching of sea defences due to sea-level rise.

2.4 Transition risks arise from the process of mitigating climate change, including adjustments to enable a net-zero emissions economy. These adjustments include technological innovations, policy decisions and market changes. For example, as a result of adjustment to climate change, the UK motor vehicle manufacturing industry has had to respond to an increase in consumer demand for low-emission cars,[12] as well as to UK Government policies such as the zero-emission vehicle mandate.[13] Transition changes and associated risks can prompt a reassessment of the value of a large range of assets and hence changes in credit risk for firms.

2.5 Climate-related litigation can also affect the value of companies, including those that have failed to mitigate, adapt or disclose climate-related risks. Parties who have suffered losses from the effects of climate change may seek compensation from those they hold responsible. Those who pay the compensation may in turn seek to offset their financial loss by claiming from an insurer. Given the evolving and varied nature of litigation risk, the PRA expects firms to apply judgement as to whether litigation risk is reflected as an independent risk type or as a distinct transmission channel. However, the PRA expects the approach taken to reflect the firm's business and risk profile, and promote consistency in how the firm identifies and assesses such risk. Where firms decide to treat litigation risk as a distinct transmission

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11 See PRA Climate Change Adaptation Report 2021 – **Climate-related financial risk management and the role of capital requirements**, October 2021.

12 The House of Commons Library's Research in Brief on **Electric vehicles** notes that, "Battery electric cars accounted for 16% of all new car registrations in 2023, an increase from 1% in 2018."

13 **The Vehicle Emissions Trading Schemes Order 2023**.

channel, the PRA expects firms to interpret references to transmission channels throughout this SS to include litigation risk, where relevant.

Characteristics of climate-related risks

2.6 Climate-related risks to firms have three characteristics which, when considered together, present unique challenges and require a strategic management approach:[14]

- **The risks are systemic.** To varying extents, they will affect every customer, every company, in all sectors of the economy and across all geographies. Their impact will likely be correlated, non-linear, irreversible and subject to tipping points. Over time, they are likely to occur on a greater scale than other risks that firms are used to modelling and managing.

- **The risks are uncertain in both scale and timing and yet foreseeable to some extent.** The exact combination of physical and transition risks that will emerge is uncertain, but either current emissions pathways will continue (or worsen) and result in greater physical risks or the pathways will improve as a result of reducing emissions, likely resulting in greater transition risks.

- **The size and distribution of future risks is likely to be affected by actions taken now.** Once physical risks begin to manifest in a systemic way, it may already be too late to reverse many effects through emissions reductions. Similarly, the longer that meaningful adjustment to a lower emissions path is delayed, the more disruptive a transition is likely to be.

2.7 The updated supervisory expectations are designed to help firms strengthen their climate risk assessment and management capabilities reflecting these climate change characteristics. They aim to help firms build resilience against climate-related risks and make informed strategic decisions that support their business interests, including through the provision of appropriate financial products that can promote sustainable economic growth.

[14] There is widespread consensus in the scientific community on the nature of climate change and climate-related risks, despite this being an area of ongoing research. See, for example, the **Intergovernmental Panel on Climate Change's Sixth Assessment Report**, especially the **Summary for Policymakers**. Figures SPM.1 and SPM.3 highlight the systemic nature of climate-related risk and its dependence on current human activity. Figure SPM.4 highlights both a) the range of uncertainty regarding future climate paths and b) the virtual certainty regarding the direction of change. Section B.3 discusses the risk of irreversible changes.

3: Implementation

3.1 This SS commences on 3 December 2025. Upon commencement of this SS, it replaces SS3/19 in its entirety.

3.2 The PRA expects firms to carry out an internal review of their current status in meeting the updated expectations set out in this SS. This should be completed within six months of commencement of the SS (ie by 3 June 2026). As part of this internal review, firms should identify the expectations that require further work for them to meet, and develop a plan for how they will address, any gaps.

3.3 To allow firms time to transition from SS3/19, supervisors will not ask for evidence of firms' internal reviews (eg internal assessments, gap analyses, action plans and other steps taken to meet the updated expectations), until at least after the six-month internal review period has elapsed (ie after 3 June 2026).

3.4 However, if asked to provide evidence of their internal reviews and action plans to supervisors, firms should be able to demonstrate that their timetable to address any gaps is both credible and ambitious.

3.5 Firms should regularly review, and where necessary, update their internal risk assessments and proposed climate actions.

Overarching considerations for the application of the expectations

3.6 The PRA expects all firms to manage the financial and operational risks to which they are exposed, including climate-related risks. These expectations aim to support effective risk assessment and risk management capabilities, better enabling firms to build resilience against climate-related risks and make informed decisions about their strategy to support their business interests.

3.7 The PRA expects firms to take a forward-looking, strategic and ambitious approach to implementing the expectations in this SS on an ongoing basis, which reflects development of understanding, capabilities and tools. The expectations in this SS continue to be set at a high level to provide scope for firms to take action, refine their approach and develop innovative solutions, best suited to their business models. In many cases, the expectations in this SS conform to existing regulatory expectations as regards risk management (for example, in relation to effective governance), but with clearer articulation of how they apply to climate-related risks specifically.

3.8 The setting of business strategy and risk appetite, with respect to climate-related risks, remains the responsibility of the firm. This includes making judgements in relation to the types of risks the firm deems material to their business model and relevant to their decision-making.[15] Such decisions and materiality assessments should be reasonable, proportionate, and subject to appropriate governance and oversight.

Proportionate application of expectations

3.9 Firms of any size may be significantly exposed to climate-related risks. The impact of climate-related risks on a firm is driven by a range of factors, in particular the firm's business model and the geographical concentration of its balance sheet. What matters most is the materiality of climate-related risk to a given firm.

3.10 The expectations in this SS are intended to be applied in a proportionate manner by firms. Firms should follow the two-step process set out below to ensure their approach to climate-related risk management appropriately reflects the materiality of the climate-related risks they face (see paragraphs 3.14–3.22). In step 1, all firms should carefully assess the potential impact of climate-related risks on their business model (paragraphs 3.15–3.18). In step 2, a firm that is materially exposed to climate-related risks would need to make a greater investment in monitoring and managing those risks compared to a firm that is less exposed (paragraphs 3.19–3.20). Firms should be able to evidence or explain how they have made any judgements that underpin the outcomes from steps 1 and 2 (paragraph 3.21).

3.11 It is in the interest of all firms to ensure robust assessment and monitoring of climate-related risks in a way that is proportionate to the firm's risk exposure and the size of the firm, in line with the approach they take for other material risks.

3.12 Where a firm has assessed that its business has a material exposure to climate-related risks, it may choose to tailor its response according to its size. Whereas a larger firm might be expected to use more advanced and detailed approaches to managing climate-related risks, smaller firms might deploy less sophisticated tools and less granular data proxies, provided the firm is aware of the limitations of those tools and makes a prudent interpretation of the information produced when informing decision-making.

3.13 The expectations set out in this SS should be considered in the context of **The PRA's approach to supervision of the banking and insurance sectors**, which sets out how the PRA's supervisory approach is proportionate, judgement-based, forward-looking, and focused on key risks.[16]

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15 Per paragraph 4.22 of the SS, firms should also consider whether their assessment of risk materiality is appropriate for the calculation of regulatory capital and liquidity requirements and expand their list of material risks for regulatory purposes as required.

16 The proportionate application of the PRA's supervisory approach, including for lower impact firms is set out in Section 5 of the **PRA's approach to supervision of the banking and insurance sectors**.

Two-step process for firms' proportionate application of expectations

3.14 As stated above, the PRA expects a firm's risk management response to be proportionate to the potential impact of climate-related risks on its business model. In considering the appropriate approach to managing climate-related risks, all firms should therefore apply the following two step process to ensure that its approach to climate-related risk management appropriately reflects the materiality of the climate-related risks it faces.

Step 1 – Risk identification, assessment and sign-off

3.15 Under the risk identification and assessment approach (see paragraphs 4.19–4.24), firms are expected to identify the material climate-related risks they are exposed to and understand how these risks could impact the resilience of their business model over relevant time horizons and under different climate scenarios.

3.16 The risk identification and assessment process should be supported by relevant scenario analysis that identifies, for example, the impact on the current balance sheet, the possible evolution of the balance sheet and future business model viability (see paragraph 4.56). Such scenario analysis should also include scenario-based sensitivity analysis or reverse stress testing (see paragraph 4.59). Firms may opt to use mathematically less sophisticated approaches to scenario analysis, including primarily narrative-based scenarios, quantified with expert judgement (see paragraph 4.49). The PRA expects firms to ensure the approach taken results in effective assessment of any material climate-related risks, and takes into consideration the limitations of the chosen approaches and tools.

3.17 A firm's risk identification and assessment process should be proportionate to the scale of the risks faced and their proximity in terms of both time horizon and likelihood. For risks that are likely to emerge over a longer time horizon, it is expected that more narrative-based scenarios, with lower precision and largely judgement-based quantification of impacts, will be more appropriate.

3.18 The firm's board should review and agree the material climate-related risks identified in this process and record them in the firm's risk register[17] along with an agreed timeline for future board review (see paragraph 4.7).

[17] A risk register is a document that identifies, and tracks risks that could impact the firm. It is the result of the risk identification process and is expected to be based on the firm's internal risk taxonomy, which is a categorisation of different risk types and factors within which any material climate-related risks are expected to be clearly defined.

Step 2 – Appropriate risk management response

3.19 The risk management response that a firm adopts should be proportionate to its assessed climate-related risk profile (see paragraphs 4.32–4.42), reflecting the vulnerability of a firm's business model to climate-related risk.

3.20 Where a firm has determined that there is a less material impact of climate-related risks on its business model, it may choose to scale its risk management response accordingly such as using less sophisticated tools and less granular data proxies, provided the firm is aware of the limitations of those tools and makes a prudent interpretation of the information produced when informing decision-making. The necessity and expectation for firms to use more sophisticated risk management tools will increase as the magnitude and likelihood of material risks to which they are exposed increases. As noted in paragraph 3.12, some smaller firms may also choose to adopt less sophisticated approaches even where they determine their risks to be material, though given limitations in these approaches, a more conservative calibration may be needed.

3.21 Firms should be in a position to evidence or explain, as part of supervisory dialogue with the PRA, how they have reached any judgements that underpin the outcomes from steps 1 and 2 above.

3.22 In line with paragraph 3.23, firms should remain vigilant to increases in the proximity, likelihood and scale of climate-related risks and continue to develop their risk management capabilities accordingly. For example, the speed of transition over the coming decade, will affect the scale of climate change and in turn the materiality of climate-related financial risks.

Evolution of climate-related risk measurement and understanding

3.23 The PRA expects firms to keep pace with the evolution of knowledge and capabilities relating to the measurement and management of climate-related risks in meeting the expectations outlined in this SS. As collective understanding of climate-related risks, data, tools and best practice evolves, firms are expected to refine and innovate their approach to better integrate climate-related risk management across their organisation.

3.24 While the PRA expects firms to be innovative in integrating climate-related risks into their risk management frameworks, it also recognises that existing tools and risk management techniques commonly used for other risk types will have relevance and application.

3.25 The PRA acknowledges that decision-making around climate-related risks involves significant uncertainty. Firms should apply judgement in combining tools and approaches that align with their risk appetite, recognising that decisions on both business strategy and risk appetite will need to evolve as models, data and understanding of the likelihood of future climate pathways continues to improve.

Role of the Climate Financial Risk Forum (CFRF) and other industry groups

3.26 The PRA acknowledges that the management of climate-related financial risks presents inherent challenges for firms, owing to the evolving and uncertain nature of these risks. To support firms in developing their capabilities and understanding in this area, the PRA notes the important contribution of the **Climate Financial Risk Forum (CFRF)** in continuing to provide practical guidance and tools.

3.27 Recognising that the consideration of climate-related risks was a novel undertaking for many firms, the Bank of England and the Financial Conduct Authority (FCA) jointly established the CFRF in March 2019. The Forum was designed to build capacity across the financial sector and regulatory community, and to promote the sharing of effective practices in managing climate-related risks.

3.28 The CFRF plays a key role in supporting firms' implementation of the PRA's supervisory expectations. The PRA will continue to collaborate with the CFRF as it advances its work programme, including the development of thematic guidance and scenario analysis tools, to help firms strengthen their approaches to identifying, assessing, and managing climate-related risks.

4: Supervisory expectations

Chapter 1: Governance

4.1 The PRA expects the boards and executive management of firms to run their business prudently, consistent with the firm's own safety and soundness and the continuing stability of the financial system. This includes expecting the board to monitor and control actual and prospective risks to the firm.[18] In line with these expectations, and in light of the potential for climate-related risks to affect firms (as described in section 2), the following chapter sets out the PRA's expectations for the governance of climate-related risks.

The board and executive management's role in relation to climate-related risks

4.2 The PRA expects the board to have a high-level understanding of the impacts of climate-related risks on the firm's business model over various time horizons and under different climate scenarios. This should support the board in exercising its oversight function in a timely way, ensuring such risks are effectively managed within the firm's overall business strategy and risk appetite.

4.3 The PRA expects the executive management to provide the board and its relevant sub-committees with timely information on the firm's exposure to and mitigation of material climate-related risks to enable the board to discuss, challenge and make decisions relating to the firm's management of these risks and the firm's climate-related risk strategy (see paragraphs 4.15–4.17).[19]

4.4 To inform the board's discussion on risk management and strategy, firms should have appropriate processes for identifying and assessing the impacts of transition and physical risks that can impact their business models over the short, medium and long term (see paragraphs 4.19–4.24).

Corporate governance structures

4.5 The PRA expects firms to define and assign responsibilities for the board, its relevant sub-committees, and executive management in managing climate-related risks. In doing so, firms may leverage existing governance structures.

4.6 The board and executive management should assign individual responsibility for identifying, assessing and managing climate-related risks at an appropriate level of seniority, such as to relevant existing Senior Management Function(s) (SMF), and reflect that in the

[18] PRA SS5/16 – **Corporate governance: Board responsibilities**, July 2018.
[19] Paragraph 5.7 of PRA Rulebook, General Organisational Requirements – **General Organisational Requirements**, November 2025.

SMF holder's/holders' statement of responsibilities or other relevant appointment terms. The individual(s) assigned should play a key role in implementing the firm's strategy in response to climate-related risks and ensuring the board has the appropriate information to facilitate decision-making. The board should ensure the assigned individual(s) have appropriate climate-related risk objectives and that performance against the objectives is reflected in the firm's appraisal and reward system, eg in variable remuneration. The PRA expects the executive management, including the relevant Senior Management Function (SMF) holder(s) or other senior individual(s) responsible, to support the board's oversight function. Executive management should demonstrate to the board how the firm's business strategy and risk management approach is responding to climate-related risks to its business model.

Risk appetite

4.7 The PRA expects the board to review and agree the material climate-related risks identified in the risk register (paragraph 4.20) periodically. The board should agree and approve the climate-specific risk appetite statements for these risks. A regular periodicity for the board to review this assessment of risk should be determined and agreed. It should also include a set of trigger criteria, which, if met, would require an earlier review of this determination than the set timeline.

4.8 The PRA expects firms to define a risk appetite hierarchy. Firms should set firm-wide risk appetite at the board level and business line risk appetite should reflect material risks identified for each business line. Risk appetite should be expressed in terms of limits against quantitative risk metrics (see paragraphs 4.33–4.38). Firms may apply their judgement whether to measure and manage risks in the risk register at the level of the individual climate-related risk transmission channel, across multiple climate-related risks, or in combination with non-climate-related risks.

4.9 The board's understanding of the setting of risk appetite metrics and limits should be informed by an analysis of the losses associated with a range of climate stress scenarios. The scenario analysis should consider the impact on the current balance sheet, the evolution of the balance sheet and future business model viability, including through the use of reverse stress testing or scenario-based sensitivity analysis (see paragraph 4.59).

4.10 The PRA expects firms to establish a two-way feedback process between firm-wide and business line risk appetite to ensure they are consistent and to identify any necessary adjustments.

4.11 The board should also set the appetite and tolerance levels for outsourcing and third-party arrangements[20] that may be exposed to climate-related risks or introduce climate-related risks to the firm through their activities, eg reputational risk. The board should

[20] PRA SS2/21 – **Outsourcing and third party risk management**, November 2024. This defines 'third party' as 'an organisation that has entered into a business relationship or contract with a firm to provide a product or service'.

understand the firm's reliance on these arrangements and ensure that the firm has appropriate and effective risk management systems and strategies in place to deal with risks arising through these arrangements.[21]

4.12 A firm's risk appetite statements should categorise risks by level of risk appetite. For example, one possible way a firm might categorise its risk appetite is as follows:

- ACCEPT – a risk present in the risk register hierarchy, which a firm decides to take on and not manage with climate specific limits.
- MANAGE – a risk present in the risk register hierarchy and monitored and managed through appropriate climate specific metrics and limits (see paragraphs 4.33–4.38).
- AVOID – a risk a firm decides to avoid, supported by appropriate exclusion policies.

4.13 Firms might wish to include additional qualitative detail in their risk appetite statements. For example, they might segregate managed risks into those that they have a preference to hold versus those they seek to avoid, to the extent possible within their established business model. Extending the example in paragraph 4.12 above, when new exclusion policies are introduced, a hybrid appetite such as MANAGE AND AVOID GOING FORWARD might be appropriate.

Business strategy

4.14 Reflecting the rapidly evolving nature of both climate-related risks and the tools used to manage such risks, the board should ensure mechanisms are put in place for the periodic review[22] of the firm's strategy for addressing climate-related risks, its risk appetite and risk management practices.

4.15 Where material risks are identified, the board should review the firm's business strategy under a range of climate scenarios (see Chapter 2: Risk management, especially paragraph 4.20, and Chapter 3: Climate scenario analysis). This analysis should identify the financial impact of climate events on the firm, including on future revenue, operating costs and profit, and potential trigger points for strategic change. The rationale for the range of scenarios selected should be clearly defined, with reference to the climate-related risks identified in the firm risk register (see paragraph 4.20) and agreed by the board.

4.16 Some firms have adopted climate goals or targets, such as adaptation or greenhouse gas reduction targets.[23] Implementing those goals may involve business transformation, a change in the makeup and risk profile of the balance sheet, and may create public expectations through disclosures of future action. Where a firm adopts goals or targets, the

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21 PRA SS2/21.

22 The frequency of the review should be determined by the climate-related risks the firm is exposed to, the firm's business model and the geographical concentration of its balance sheet.

23 The PRA does not require firms to adopt climate goals, for example net zero emission targets or adaptation goals. However, the PRA recognises that some firms have voluntarily adopted climate goals, and others operate in jurisdictions that have set national climate targets or where jurisdictions require firms operating in that jurisdiction to adopt specific climate goals or align their business to specific climate goals.

firm should be able to demonstrate, upon request, how its plan to meet those goals and targets, including the assumptions underpinning these plans, are integrated into a firm's overall strategy. Any risks associated with relevant business transformation, or as a consequence of missing targets, should be assessed and reflected in risk management.

4.17 When determining business strategy and/or delivery of climate goals, firms should consider the relevance for their business model of national climate policies including, where applicable, national climate targets such as the UK Government target to bring the net UK carbon account to zero or lower by 2050.[24]

Chapter 2: Risk management

4.18 Firms should have robust frameworks for risk management, including for financial and operational risks. A robust risk management framework enables firms to effectively identify, measure, monitor, manage and report risks. Controls should be commensurate with the nature, scale and complexity of their business model, and promote the firm's safety and soundness. Competent and, where appropriate, independent control functions should oversee these frameworks.[25] The following chapter sets out the PRA's expectations for the risk management of climate-related risks.

Risk identification and assessment

4.19 The PRA expects firms to regularly carry out risk assessments to identify the material climate-related risks the firm is exposed to.[26,27] Firms should understand how the risks will affect the resilience of their business model over relevant time horizons and under different climate scenarios (see paragraphs 4.2–4.4 and paragraph 4.21).

4.20 To ensure that the approach to risk identification and assessment is appropriately structured, firms should consider the following non-exhaustive steps as part of the two-step assessment process for the proportionate application of expectations set out in paragraphs 3.9–3.22:

- **Identification of climate-related risks and their transmission channels:** assess the transmission channels[28] through which physical and transition risks impact firms' risk types (eg market, credit, liquidity, operational risk and resilience, as well as underwriting, reserving, reputational and litigation risks) and future revenue and profitability. The granularity with which transmission channels are considered should reflect the firm's business model and risk profile. For example, a mortgage lender

24 **Climate Change Act 2008**.
25 Paragraph 60 of the **PRA's approach to banking supervision** and paragraph 64 of the **PRA's approach to insurance supervision**, both July 2023.
26 Paragraph 3.1 of PRA Rulebook, **Conditions Governing Business**, November 2025.
27 Paragraphs 2.1A and 3.4(2) of PRA Rulebook, **Risk Control**, November 2025.
28 Key transmission channels relevant to financial firms are set out in the **PRA Climate Change Adaptation Report 2021 - Climate-related financial risk management and the role of capital requirements**.

might consider how the impact of climate change on flood risk might affect credit losses due to the cost of property damage and the associated impact on property values (see chapters 6 and 7 for examples of transmission channel and financial risk type combinations applicable to banks and insurers).

- **Risk assessment**: determine which combinations of transmission channel and risk type materially impact the firm's business model, identify which business lines are affected, and consider whether the impact is expected in the short or long-term (ie risk imminence).
- **Risk register:** include all material climate-related risks in the firm risk register and agree this at the board (see paragraph 4.7). Consistent with Chapter 1: Governance (paragraph 4.5), firms may leverage existing risk management structures where appropriate. Each entry in the firm risk register should be linked to an existing financial or operational risk type and the transmission channel should be clearly articulated. Firms should use their judgement as to whether the material climate-related risks should be incorporated in existing risk registers or within a supplementary sub-register. Where firms already recognise physical peril transmission channels in their risk register, a further segregation between present-day risk and the impact of future climate change is not expected. Firms should also provide risk categorisation (for example, risks that the firm intends to accept, manage or avoid (see paragraph 4.12) and risk imminence). Firms might also consider using a combination of financial risk type, climate-related risk transmission channel and business line to structure the climate entries within their register. Firms with more material exposure to climate-related risks could also consider including additional granularity by recognising geographic regions and economic sectors for high materiality risks.

In line with the approach to proportionality (see paragraphs 3.9–3.12), firms should exercise judgement in assessing the materiality of risks (see paragraph 4.104 for the expectations relevant to banks' Internal Capital Adequacy Assessment Processes (ICAAPs), and paragraphs 4.124–4.128 for the expectations relevant to insurers' own risk and solvency assessments (ORSAs).Firms should provide sufficient detail of their methodologies, underlying assumptions, data and proxies, and associated governance framework, to allow for effective challenge.

4.21 Firms should consider the appropriate time horizons for impact analysis by considering at least the following factors:

- the impact of market expectations of future climate-related events on asset values;
- the maturities and holding periods of financial instruments that the firm either holds or expects to hold;
- business model adaptation timescales;
- counterparty refinancing risks; and
- the expected run-off of insurance liabilities.

4.22 Firms should also consider whether their assessment of risk materiality is appropriate for the calculation of regulatory capital and liquidity requirements (see paragraphs 4.103–

4.104, 4.105–4.107, 4.124–4.128) and expand their list of material risks for regulatory purposes as required.

4.23 As some climate-related risks are already materialising and are expected to grow over time (see Section 2), firm risk identification and assessment should be subject to periodic review to ensure that the assessment of materiality is up-to-date and based on the latest scientific evidence, and that no material risks go unrecognised. In addition, firms should consider going beyond using only historical data to inform their risk identification and assessment and include forward-looking tools such as scenario analysis and stress testing as appropriate (see Chapter 3: Climate scenario analysis).

4.24 Outcomes of the risk identification and assessment process and the resulting risk register should be reported to the board responsible for setting enterprise-wide risk appetite (see paragraph 4.7) and firms should ensure that all enterprise-wide material risks are appropriately captured in risk appetite statements (see paragraphs 4.7–4.10). Business line-specific material risks should be considered by business line management and their independent risk management functions and reflected in business line risk appetite statements, where relevant (see paragraphs 4.8–4.10).

Client, counterparty, investee and policyholder risk identification and risk assessment

4.25 To inform their risk identification and assessment, the PRA expects firms to understand the risks arising from relationships with clients, counterparties, investees and policyholders and to identify only those relationships that have a material impact on their climate-related risk profile (‘material relationships’). This will include the credit risk associated with lending and re-insurance activities, the market risk associated with holding securities and the reputational or litigation risk introduced by all relationships.

4.26 Firms should develop an understanding of the climate-related risks relating to their exposures to specific geographic regions and sectors. These assessments should form the basis for those carried out for material individual relationships.

4.27 Firms should clearly define and document the materiality criteria (see paragraph 4.20) that determine which relationships are subject to an individual assessment that explores idiosyncratic risks. These criteria should also be in line with the approach to proportionality (see paragraphs 3.9–3.22).

4.28 Firms should develop consistent risk assessments across material relationships with clients, counterparties, investees and policyholders. These risk assessments should be structured to provide a common assessment across the firm with clear guidelines for assessors supported by appropriate analysis. The below is a non-exhaustive list of the elements a firm should consider in their assessments as appropriate to their business model:

- exposure of the client, counterparty, investee and policyholder's sector(s) to transition risk;
- exposure of the client, counterparty, investee and policyholder's operations to physical risks;
- the client, counterparty, investee and policyholder's vulnerability to climate-related risks of the sector in which the client, counterparty, investee and policyholder operates, the credibility of the client, counterparty, investee and policyholder's transition plan and its positioning versus competitors;
- the client, counterparty, investee and policyholder's plans to adapt to future climate change including the direct exposure of the counterparty's operations, the vulnerability of its supply chain, the impact on its markets, the credibility of the plan and its positioning versus competitors;
- how access to required funding impacts the client, counterparty, investee and policyholder's ability to transition or adapt its business model;
- how the degree of reliance on emerging technologies impacts the credibility of a client, counterparty, investee and policyholder's transition and adaptation plans;
- the degree of alignment between the client, counterparty, investee and policyholder's transition plans and transition scenarios on which the firm's own transition plans are based; and
- liability, litigation and reputational risk arising from the relationships.

4.29 The role of climate-related risk assessments of client, counterparty, investee and policyholders in decision-making should be clearly defined. For example, risk scoring might be used to limit client, counterparty, investee and policyholder exposures and transaction sizes, or to exit relationships.

4.30 Firms should consider how the outcomes of client, counterparty, investee, and policyholder risk assessments interact with the risks identified in the firm risk register and ensure that interactions and potential amplification channels are reflected appropriately.

4.31 Where data gaps exist, firms should have a plan for assessing the materiality of those gaps, for addressing them and for managing the associated risks (see paragraphs 4.74–4.76). Where firms do not have the necessary information from clients, counterparties, investees and policyholders, and where this information is considered material to a firm's own risks, firms should seek to obtain this information where possible (eg during client onboarding or annual reviews). Firms could also consider using data from publicly available sources, working together with external experts to collect (asset-level) data (see paragraph 4.77) or using data proxies (see paragraph 4.76). Client, counterparty, investee and policyholder engagement strategies could outline how firms deal with challenges related to data collection.

Risk measurement and monitoring

4.32 Firms should consider all material risks and their categorisation within their risk register. For example, where firms have chosen to use a categorisation such as ACCEPT, MANAGE, AVOID (see paragraph 4.12):

- for risks they intend to avoid, firms should adapt/develop suitable business exclusion policies; and
- for risks they intend to accept or manage, firms should develop a range of quantitative risk metrics and limits relevant for their business model, to enable monitoring of their exposure to material climate-related risks, to assess whether they are within their set risk appetite and to monitor progress against their climate-related risk strategy over time.

4.33 When developing quantitative metrics and limits, firms should consider factors including, but not limited to:

- the relevant time horizons (see paragraph 4.21)
- the range and granularity of metrics and limits necessary to monitor their exposure to climate-related risks (see paragraph 4.35); and
- the role of model and data uncertainty in the interpretation of the metrics and limits employed (see paragraph 4.38).

4.34 When considering the appropriate range and granularity of metrics used, the PRA expects firms to consider, in line with the approach to proportionality (see paragraphs 3.9–3.22):

- the potential impact of climate change on the firm's business model, reflecting the nature, scale and complexity of its business, both as it is currently and as it may develop in the future; and
- the level of understanding of climate-related risks that impact the firm's business model (ie firms with limited understanding might use less granular but more conservative metrics and limits).

4.35 In developing more granular metrics and limits, firms should consider the evolving nature of climate-related risks and their vulnerability to these risks, eg by including more advanced client/counterparty/investee/policyholder risk assessments (see paragraphs 4.25–4.31) that consider individual exposures.

4.36 In line with the approach to proportionality set out in paragraphs 3.9–3.22, firms should consider the use of results of scenario analysis (including scenario-based sensitivity analysis and/or reverse stress testing) to better understand the risks they consider within appetite and to set appropriate risk metrics and limits (see paragraphs 4.56–4.59).

4.37 The metrics and limits should be monitored and subject to periodic review (see paragraph 4.7) by the firm and updated as necessary reflecting the developing understanding and best practice within firms and the rapidly evolving nature of climate-related risks and the

tools to manage these risks. Firms should develop triggers/early warning indicators to review their climate-related risk strategy, and/or their risk appetite.

4.38 The PRA recognises that there are areas where data, models or risk measurement tools are not yet adequate to measure risks accurately or to calculate reliable metrics. In such cases, the PRA expects firms to use appropriate proxies and assumptions to estimate these risks and not leave any material risks unrecognised (see paragraph 4.76). Where model or data uncertainty is material (see paragraphs 4.74–4.75), firms should perform sensitivity analysis for the impacted metrics and consider the results when defining their risk appetite.

Internal risk reporting

4.39 Firms should implement an appropriate internal climate-related risk reporting infrastructure, if not already in place for the internal reporting of other risks, that will allow for regular, periodic reporting as well as ad-hoc reporting (eg in cases where a risk appetite limit for a certain material risk is breached, and/or a review of risk appetite appropriateness is necessary).[29]

4.40 Firms should ensure that the frequency of reporting and engagement with the board and its relevant sub-committees is appropriate to the materiality of climate-related risks to the firm's business model. This should be in line with the approach to proportionality (see paragraphs 3.9–3.22) and in line with the frequency of reporting for other risks of similar materiality. For example, a mortgage lender with significant exposures to properties in high flood risk areas would be expected to provide management information at a higher frequency than a firm with no material climate impacted exposure.

4.41 Regular management information and reporting of exposures to climate-related risks should include, as appropriate:

- utilisation of risk appetite limits and any unexpected changes in the utilisation;
- changes to the firm risk register (ie identification of new material risks, and/or material risks becoming immaterial);
- analysis of the interaction of climate and non-climate events; and
- scenario-based sensitivity analysis and/or reverse stress tests to understand how risks that firms consider within risk appetite are evolving.

4.42 Climate-related risks should also be incorporated into internal control frameworks across the firm's three lines of defence.

Operational resilience

4.43 Changing climate conditions can give rise to risks to firms' operational resilience.[30] For instance, they can have direct and indirect impacts on a firm's business continuity

[29] Paragraph 3.2 of the PRA Rulebook, **Risk Control**, November 2025.
[30] PRA Rulebook, **Operational Resilience**, November 2025.

contingency planning and disaster recovery, infrastructure (both in the UK and globally), operations, and outsourcing and third-party arrangements (which may be an intragroup arrangement) (see paragraph 4.11).

4.44 Firms should assess the impact of climate-related risk drivers from the perspective of both their general operations and their ability to continue providing important business services, including those supported by outsourcing and third-party arrangements, in severe but plausible scenarios. Firms should also ensure that climate-related risk drivers, where material, are incorporated into their business continuity and contingency planning.

4.45 Firms should be aware of, and have suitable means in place to assess, the extent to which their operational resilience may be negatively impacted by changes in physical climate-related risk. The PRA considers firms to be operationally resilient if they can manage and mitigate disruption to the extent practicable; adapt systems and processes to continue to provide services and functions in the event of an incident; return to normal running promptly when a disruption is over; and learn and evolve from both incidents and near misses. Disruptions may include, but not be limited to, natural hazards, damage to the firm's physical infrastructure, and disruption to its material third-party service providers. The frequency and severity of such disruptions are likely to be a function of changes in the climate.

Chapter 3: Climate scenario analysis

Role of scenario analysis

4.46 Reflecting the characteristics of climate-related risks (see paragraph 2.6), it is not possible to rely on historic data series and experience available for other risks. Climate scenario analysis (CSA) is therefore a key tool to enable firms to identify, quantify and manage climate-related risks. This chapter details the PRA's expectations relevant to all firms.

4.47 As set out in paragraphs 3.9–3.22, firms that are materially exposed to climate-related risk are expected to take greater action than those less exposed to climate-related risks. This is particularly the case for the use of CSA, where design options may vary and include both qualitative and quantitative approaches. Such design choices should be proportionate to the materiality of climate-related risks to which a firm is exposed. The necessity and expectation for firms to use more sophisticated CSA tools should increase in line with any increases in the magnitude and likelihood of material risks to which they are exposed. As noted in paragraph 3.12, even when risks are judged to be material, some smaller, lower impact firms may also choose to adopt less sophisticated approaches. In all cases, firms should be aware of the limitations of the CSA tools used and make a prudent interpretation of the information produced when informing decision-making. Firms should also be able to evidence or explain how they have reached any judgements that underpin the outcomes of the approach taken for CSA.

4.48 The PRA expects firms' use of CSA to enable an assessment of the impact of climate change and climate-related risks on the firm's business model (see paragraph 4.2). CSA should have clear objectives[31] with the rationale for the range of selected scenarios clearly defined and agreed by the board (see paragraph 4.15). Firms should adequately document and demonstrate the objectives of their exercises, how their scenario selection fulfils these objectives[32] and how the results inform their decision-making (see paragraph 4.71).[33]

4.49 Firms should match their CSA capabilities with the potential impact of climate change on their business model, in line with the approach to proportionality set out in paragraphs 3.9–3.22. For example, by using a mix of narrative-based scenarios quantified by expert judgement, and more mathematically sophisticated approaches, to best inform decision-making. The climate scenarios used by firms may be either externally or internally developed according to the materiality of the risk and the level of internal expertise.

4.50 CSA supplements standard scenario analysis and stress testing toolkits[34,35] to account for the characteristics of climate-related risks (see paragraph 2.6). Firms should consider climate-related impacts under a range of plausible future outcomes relevant to the firm's business model and risk appetite, including 'central case' scenarios that are considered the more likely outcomes.

4.51 CSA should seek to capture all material climate-related risks that are relevant to the firm's business model. This is in line with the approach to proportionality (see paragraphs 3.9–3.22), and expectations on risk identification and assessment processes (see paragraph 4.20). The PRA expects that the majority of these material risks will be covered, at least at a high-level, in narrative-based scenario analysis. However, the PRA expects that larger firms with material risk exposure are likely to require more mathematically sophisticated methods of assessment. Firms' initial materiality assessment (paragraph 4.20) will also typically rely on less sophisticated CSA than the CSA that is subsequently developed for those risks identified as material.

4.52 The PRA expects firms to use conceptually sound models and toolkits in their CSA supported by relevant published scientific, technological, and economic research.[36] Reflecting the ongoing progress in those fields, firms should be able to justify the selection of

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31 **BIS: The role of climate scenario analysis in strengthening the management and supervision of climate-related financial risks**.

32 **NGFS scenarios: Purpose, use cases and guidance on where institutional adaptations are required**.

33 PRA letter to CEOs of PRA-regulated firms – **Letter from Sam Woods 'Thematic feedback on the PRA's supervision of climate-related financial risk and the Bank of England's Climate Biennial Exploratory Scenario exercise'**, October 2022, notes: "Firms should by now be able to satisfy supervisors that they have embedded scenario analysis into their risk management and business planning processes and are able to demonstrate how the results are being used in practice, including their impact on strategic and business decision-making."

34 Chapter 3 of PRA SS31/15 – **The Internal Capital Adequacy Assessment Process (ICAAP) and the Supervisory Review and Evaluation Process (SREP)**, February 2025.

35 Chapter 8 of PRA SS19/16 – **Solvency II: ORSA**, November 2024.

36 Principle 3.1 of PRA SS1/23 – **Model risk management principles for banks**, May 2023.

the sources they relied on.[37] Firms should be aware of the limitations of the climate scenarios and models they use, which may not capture the full range and scale of climate-related risks, such as non-linearities and potential tipping points,[38] and they should account for these limitations in their use of the results (see paragraph 4.68).

Scenario selection and use cases

4.53 The PRA expects firms to select and match scenarios, their time horizons, frequency and balance sheet assumptions to use cases[39] in line with their identified CSA objectives (see CSA use cases in paragraph 4.48). Firms should recognise that they will likely need to conduct distinct CSA exercises for each objective. The number and type of CSA exercises should be commensurate with the firm's level of climate risk exposure and its size. For small firms and firms with lower material exposure to climate-related risks, this would involve an exercise assessing the potential impacts of a plausible future climate scenario on the firm's business model and risk exposure, as well as conducting scenario-based sensitivity analysis). Larger firms and firms with higher exposure to material climate-related risks are expected to undertake multiple CSA exercises to address different objectives, and also consider scenario-based sensitivity analysis and/or a reverse stress test (see paragraphs 4.47 and 4.59).

4.54 Scenario selection should be relevant to the risk profile of the firm and the positioning of chosen scenarios in the distribution of potential outcomes should match their respective use cases. For example, firms should adjust the intensity of scenarios[40] where a firm's objective is to assess severe but plausible stress scenarios. Scenarios should explore a range of plausible future outcomes and include materialisation of different combinations of transition risk outcomes and levels of physical risk impacts.

4.55 When developing climate scenarios, firms should consider the role of national or international climate change commitments, such as emission reduction targets, where such targets exist and are applicable in the jurisdictions relevant for the firm's exposures (see paragraph 4.53). For the assessment of physical risks, which over the longer term will be affected by the level of global emission reduction efforts, firms should also, as appropriate, consider the role of international climate change mitigation commitments.

4.56 Firms' CSA should inform business decision-making and help firms to understand the impact of climate-related risks on their solvency, liquidity, and, for insurers, their ability to pay

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37 Credible sources of evidence could include, for example, international scientific bodies such as the Intergovernmental Panel on Climate Change (IPCC), established climate and weather forecasters such as the Met Office or the National Oceanic and Atmospheric Administration (NOAA), the International Energy Agency (IEA), and independent advisory bodies such as the Climate Change Committee (CCC) and the UK Climate Change Risk Assessment.

38 **NGFS scenarios: Purpose, use cases and guidance on where institutional adaptations are required**.

39 Firms may use CSA for a variety of use cases, including risk identification, risk management processes, internal and supervisory capital and liquidity assessments and assessment of business model resilience and business strategy.

40 **NGFS scenarios: Purpose, use cases and guidance on where institutional adaptations are required**.

out claims to policyholders.[41,42] Firms should calibrate their scenarios, including the severity, time horizons and frequency (see Table 1 and paragraphs 4.57–4.58), accordingly. In line with the approach to proportionality (see paragraphs 3.9–3.22), firms should use CSA to inform their:

- **Business strategy:** firms should assess the impact on the business strategy over relevant time horizons and under a range of climate scenarios and associated management responses (see paragraphs 4.21 and 4.73). Firms should assess impacts on their future revenues and profitability under relevant 'central case' scenarios (see paragraph 4.50) to evaluate the build-up of risks over time and identify triggers for strategic change.
- **Risk management:** Firms should use CSA for identification and assessment of material climate-related risks (see paragraphs 4.20–4.24), in particular assessing the resilience and vulnerabilities of the firm's business model to a range of climate scenarios, including severe but plausible outcomes. CSA should also be used to incorporate material climate-related factors into sensitivity analysis and/or reverse stress testing (see paragraph 4.59) as part of the ICAAP and ORSA, to support risk appetite setting and development of loss limits (see paragraphs 4.12 and 4.32–4.38).
- **Capital setting:** Scenario analysis is a key tool that the PRA expects firms to use as part of internal assessments of capital adequacy (ICAAP for banks and ORSA for insurers).[43,44] Firms should use CSA to provide sufficient information to understand the link between climate-related risks and capital, including under stressed scenarios with severe tail risks materialising. Firms should demonstrate how they have adequately mitigated any material climate-related risks identified in CSA and have appropriately capitalised risks not otherwise mitigated (see paragraphs 4.103–4.104 and 4.124–4.128).
- **Valuation:** Banks may use CSA to support their assessment of the impact of climate-related risks for financial reporting (see paragraph 4.89) and to inform prudent valuation of their positions measured at fair value.[45] Insurers may use CSA in order to include climate considerations when assessing the market-consistent valuation of assets and liabilities (see paragraphs 4.138–4.140).

Within the ICAAP for banks (see paragraphs 4.103–4.104) and the ORSA for insurers (see paragraphs 4.124–4.128), firms should adequately document and be able to demonstrate how CSA was applied to inform any identified objectives, and how the results of the analysis informed their decision-making.

41 Paragraph 3.4 of PRA SS31/15.
42 Paragraph 5.2 of PRA SS19/16.
43 Chapter 3 of PRA SS31/15.
44 Sections 5, 7 and 8 of PRA SS19/16.
45 Article 105 of the PRA Rulebook, **Trading Book (CRR)**, November 2025.

Table 1: Examples of CSA use cases and considerations for scenario time horizons, frequency and calibration

CSA use case	Scenario time horizon	Frequency	Calibration
Business strategy	Medium to long-term, to capture impacts on the firm's business from longer term developments that may require action now	At least annually review whether the most recent long-term CSA still meets its objective, and consider updating in the case of a sudden change in external circumstances	Plausible 'central case' while recognising some climate-related impacts will materialise in all scenarios
Risk management	Typically short-term, but longer-term if relevant for firm's exposures	In line with the firm's risk management strategy	Should capture severe but plausible tail risks
Capital setting	In line with the firm's ICAAP/ORSA		Should capture severe but plausible tail risks
Valuation	In line with relevant accounting standards		Reflecting a range of selected scenarios and in line with relevant accounting standards

4.57 The time horizons selected for CSA should correspond to the firm's use cases for CSA (see Table 1), reflecting a firm's business strategy and risk appetite. For example, firms could consider longer time horizons to inform their business strategy. The scenario horizons used in ICAAPs and ILAAPs may similarly be aligned with the standard timeframes used in those processes (see also paragraph 4.21 which sets out the key factors for considering the appropriate time horizons for impact analysis). Firms should explain how they have considered plausible climate-related events in the future that might materially impact market developments and expectations relevant for their business planning and risk management.

4.58 Firms should conduct CSA with a frequency appropriate for their use cases, for example in line with the ICAAP or the ORSA for capital adequacy assessments. For objectives such as business strategy, which require longer term time horizons, firms should conduct CSA as warranted by changes in internal plans and external circumstances, which could be less frequent than annually (see Table 1).

4.59 The PRA expects firms to conduct scenario based-sensitivity analysis to support their awareness of business model vulnerabilities and help identify emerging risks. Firms that are exposed to material climate risks should consider whether reverse stress-tests (ie exercises that identify the point of failure of a firm solely due to climate-related risks) should also be conducted as a useful additional component of sensitivity analysis. The chosen use of scenario-based sensitivity analysis and/or reverse stress testing should be appropriate to the size of the firm's business and the materiality of the firm's exposure to climate risks. Where

using reverse stress testing, firms should identify a range of adverse climate-related impacts that would cause their business model to become unviable[46,47] so that the board may satisfy itself that such scenarios are considered sufficiently unlikely.[48] For example, firms should consider transmission channels from climate-related events to their specific exposures, such as impacts of severe flooding on their property assets or liabilities or impacts of government transition policies on their sectoral lending/underwriting. Where reverse stress testing reveals that a firm's risk of business failure is unacceptably high, the firm should devise realistic measures to prevent or mitigate the risk of business failure.

4.60 The nature of CSA exercises (including reverse stress tests) may vary from primarily narrative-based scenarios, quantified by expert judgement, to more mathematically sophisticated approaches, as appropriate (see paragraphs 4.47–4.49). For more remote risks, both in terms of time and likelihood, narrative-based scenarios, with largely judgement-based quantification, are likely to be more appropriate than mathematically sophisticated approaches.

4.61 Where firms are unable to conduct appropriate CSA, or where a decision has been made not to develop advanced CSA capabilities in line with the approach to proportionality (see paragraphs 3.9–3.22), they should demonstrate an alternative approach to understand future climate-related risks.

Scenario design and calibration

4.62 The PRA expects firms to understand the design, application and limitations of the climate scenarios they use, and regularly review and, as relevant, update their models and toolkits (see paragraphs 4.14, 4.53, 4.68 and 4.69).

4.63 The PRA expects firms to explore a range of narratives in the initial risk identification phase. Firms' initial materiality assessment (paragraph 4.20) will typically rely on less mathematically sophisticated CSA. In line with the approach to proportionality (see paragraphs 3.9–3.22), firms will then be expected to develop more granular quantitative CSA for material risks as appropriate (see paragraphs 4.12 and 4.32).

4.64 Firms should take a structured approach to assessing each component of a climate scenario, considering the development of the narrative, the use of expert judgement-based quantification and mathematical models. This includes externally produced climate scenarios that consist of a complex chain of models combining projections for transition and physical risks under different emissions pathways for example, by the United Nations International Panel on Climate Change (IPCC) or Network for Greening the Financial System (NGFS). Firms should understand how the modelling assumptions, model dynamics and calibration

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46 Paragraph 15.2 of the PRA Rulebook, **Internal Capital Adequacy Assessment**, November 2025.
47 PRA SS19/16.
48 IAIS suggests including the identification of a climate-related risk scenario that could potentially cause insolvency.

position the output of that component in terms of severity and likelihood, and whether a given output reflects a less adverse, more central or a tail case. Firms should then assess the coherence of the components with the scenario narrative, and the severity and the relative likelihood of the overall scenario among the range of plausible scenarios. Firms should document and be able to communicate how they have assessed scenario components and justify how the selection and calibration choices they have made match their objectives and use cases (see paragraph 4.71).

4.65 In assessing the impacts of climate-related risks, firms should:

- **For physical risks:** assess their exposures at a sufficient level of geographic granularity to capture physical impacts – such as property-level exposures to flooding – that may not be adequately reflected in macro-level scenarios. This should include the impacts of climate change-related increases in frequency and intensity of acute climate driven natural hazards such as hurricanes, floods, droughts and heat waves, as well as longer-term climate change impacts, such as long-term changes in precipitation and average temperatures. Firms should use toolkits that incorporate models appropriate for assessing physical impacts such as natural catastrophe (NatCat) models.[49] Firms should further consider their exposures to cross-border spillovers of physical impacts (eg via the impact on supply chains or reduced global demand). Firms should, as appropriate, incorporate additional analytical tools that draw on external modelling and scientific expertise.
- **For transition risks:** assess their exposures at a sufficient level of sectoral and, as appropriate, counterparty-level granularity (see paragraph 4.28), to capture risk dynamics and potentially severe impacts that may not be reflected in macro-level variable pathways. Firms should also consider concentration risks of their exposures to transition-sensitive sectors and counterparties.

4.66 Firms should seek to tailor their scenarios, in line with the approach to proportionality (see paragraphs 3.9–3.22), for risk identification of novel, complex and systemic threats such as assessing second-order climate-related impacts or compound risks.[50]

Scenario governance, controls and review

4.67 Given the rapidly evolving nature of climate-related risks and the tools to manage these risks, including CSA models, CSA toolkits should be subject to challenge and periodic review by the firm (see paragraph 4.14). Through the review and challenge process, firms should consider the up-to-date scientific evidence, modelling advancements[51] and evolving industry practice,[52] as relevant.

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49 **IAIS and SIF set out key recommendations for insurance supervisors to strengthen efforts to address climate-related risks**.

50 **BIS: The role of climate scenario analysis in strengthening the management and supervision of climate-related financial risks**.

51 **BIS: Principles for the effective management and supervision of climate-related financial risks**.

52 This could, for example, include considering recommendations from relevant industry-led groups such as the Climate Financial Risk Forum (CFRF) or the international bodies such as the BCBS, IAIS and NGFS.

4.68 The board should understand the capabilities and limitations of the models and toolkits being used.[53] Where appropriate, the PRA expects firms to conduct sensitivity analysis to understand the materiality of model choice and calibration.

4.69 Firms should consider model and input data uncertainty, such as in models and data from external suppliers (see paragraphs 4.74–4.77), when interpreting the results of CSA. Where data proxies and assumptions are used in CSA (see paragraph 4.76), firms should document and be able to communicate (see paragraph 4.71) the rationale for using and selecting particular assumptions and proxies. Firms should recognise that while providing a key means of assessing climate-related risks, current CSA toolkits do not capture the full range of those risks, and firms should be aware of and account for the remaining uncertainties (see paragraphs 4.52 and 4.68).

4.70 Firms should ensure the board has an adequate understanding of the CSA exercises (see paragraph 4.2), including inputs, assumptions, design, outputs, application and sources of uncertainty, to ensure it interprets scenario outputs with appropriate understanding of context and caveats. The board should understand how scenario analysis results are being used in practice, including their impact on decision-making.

4.71 Firms should communicate, internally to the board, to the PRA (such as in the ICAAP or the ORSA), and in relevant public-facing disclosures, the rationale for their scenario selection and calibration and how these meet their objectives. Firms should also clearly communicate any uncertainty and limitations when presenting their CSA results.

4.72 The board should ensure adequate resources are dedicated to address capability gaps[54,55] and continue to develop adequate CSA capability and expertise as part of prudent management of climate-related risks (see paragraphs 4.2–4.4).

4.73 Where a firm relies on management actions to mitigate the climate-related risks assessed by CSA, it should identify actions that should be taken in advance as precautionary measures.[56] For other management actions, or those that would be relevant or desirable only if the scenario emerges, firms should consider/identify whether these are realistic, credible and consistent with regulatory expectations, and achievable.

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53 PRA SS1/23.

54 PRA letter to CEOs of PRA-regulated firms – **Letter from Sam Woods 'Thematic feedback on the PRA's supervision of climate-related financial risk and the Bank of England's Climate Biennial Exploratory Scenario exercise'**, October 2022.

55 **Bank of England report on climate-related risks and the regulatory capital frameworks**, March 2023.

56 PRA statement of policy 5/15 – **The PRA's methodologies for setting Pillar 2 capital**, July 2015.

Chapter 4: Data

4.74 Data and model uncertainty is an integral part of the climate-related risks firms must manage. Firms should identify and assess any data gaps (see paragraph 4.31) to understand the extent of uncertainty and reflect this when setting risk appetite and developing risk management tools. This includes data gaps that exist either because the firm has not yet invested in the necessary data tools, frameworks and capabilities, or because appropriate and reliable data and disclosures for climate-related risk management are not yet available.

4.75 The PRA expects firms to identify significant data gaps on an ongoing basis. Where further investment in data tools is needed, firms should demonstrate plans to manage and remedy these gaps with processes in place to ensure that developments in data and tools will be identified and incorporated accordingly into their approach.

4.76 Where reliable or comparable climate-related data are not available, firms should have contingency solutions using appropriate proxies, approximations and assumptions. Firms should document and be able to communicate the rationale for using and selecting particular assumptions and proxies. Where used, firms should also be able to demonstrate how these contingency solutions have been applied in order to meet the expectations set out in this SS, particularly with regards to ensuring effective risk management practices. In line with paragraph 4.74, firms should interpret data based on proxies and approximations in an appropriate manner that reflects the embedded uncertainty.

4.77 In order to produce better estimates of climate-related risks in their portfolios over time, firms should continue evolving their climate-related risk assessment capabilities (see paragraphs 3.23–3.25), both by focusing on their internal modelling and data capabilities over the short and long term and doing more to scrutinise data and projections supplied by external data suppliers. Firms should also balance appropriate use of data from external suppliers with the appropriate development of in-house capabilities over the short and long term. There should also be an effective system of governance to oversee and integrate any data from external suppliers, including understanding any limitations (see paragraph 4.11).[57]

4.78 Firms should also consider actively engaging clients, counterparties, investees and policyholders in order to fill any material data gaps (see paragraph 4.31).

4.79 A firm's risk data aggregation capabilities should include climate-related risks to facilitate the identification and reporting of risk exposures, concentrations and emerging risks. Firms should have systems in place to collect and aggregate climate-related risk data across the firm as part of their overall data governance and IT infrastructure in line with the approach to proportionality (see paragraphs 3.9–3.22). Firms should also put in place processes to ensure that the aggregated data are accurate and reliable. Firms may consider investing in

[57] In relation to their use of third-party data providers, firms may wish to consider PRA SS2/21. In particular, requirements around the risk assessment are detailed in paragraph 5.21. Additionally, paragraphs 4.4 and 14a provide detail on the governance of third-party arrangements.

data infrastructure and enhancing existing systems where appropriate to make it possible to identify, collect, cleanse and centralise the data necessary to assess material climate-related risks.

Chapter 5: Disclosures

4.80 Banks and insurers have existing general requirements to disclose information on material risks (Article 432(1), DIS rules) within their institution's disclosures,[58,59] and on principal risks and uncertainties in their Strategic Report (as required under the **UK Companies Act 2006**).

4.81 When meeting these existing general disclosure requirements, the PRA expects firms to make disclosures where these are necessary to enhance transparency on the approach to managing climate-related risks, in line with the expectations set out in this SS. In particular, firms should disclose how climate-related risks are integrated into governance and risk management processes, including the process by which a firm has assessed whether these risks are considered material or principal risks.

4.82 The PRA expects firms to develop and maintain an appropriate approach to disclosure, reflective of the characteristics of climate-related risks. Firms should look to evolve their disclosures to make these as insightful as possible, and in particular, should ensure they reflect the firms' evolving understanding of climate-related risks. Firms should recognise the increasing possibility that disclosure will be mandated in more jurisdictions and prepare accordingly.

4.83 The PRA expects firms to engage with wider initiatives on climate-related risk disclosures, including UK Sustainability Reporting Standards, and to consider the benefits of disclosures that are comparable across firms. The PRA expects firms to consider engaging with other industry and regulatory initiatives in developing their approach to climate-related disclosures.

4.84 In addition, firms would benefit from greater disclosure in respect of climate-related risks across the wider economy and are in a strong position to encourage it through their ownership of financial assets.

Chapter 6: Banking-specific issues

4.85 This chapter only applies to banks.[60] It covers accounting considerations and the internal capital adequacy and internal liquidity adequacy processes (ICAAPs and ILAAPs). It

58 Article 431 of the PRA Rulebook, **Disclosure (CRR)**, November 2025.
59 Paragraph 3.3c of the PRA Rulebook, **Reporting**, November 2025.
60 Collective term 'banks' includes banks, building societies, and PRA-designated investment firms.

also includes the transmission channels through which climate-related risk affects the bank risk categories.

Financial reporting

4.86 Accounting values are fundamental to the banking capital framework. The PRA expects that banks will be able to demonstrate that they have sound practices for climate-related risks that support timely recognition of such risks in their financial statements, in accordance with applicable accounting standards. High quality and consistent accounting practices for climate-related risks are important for ensuring the safety and soundness of PRA-authorised banks.

4.87 In line with the approach to proportionality, the PRA expects banks' risk management responses to be proportionate to the potential impact of climate-related risks on its PRA-regulated activities (see paragraphs 3.9–3.22). The PRA also expects that firms should meet the expectations set out in this SS in a way that supports the timely recognition of climate-related risk in financial reporting. When considering the practices that are needed to result in timely recognition of climate-related risk in their financial statements, banks should give due consideration both to the application of materiality in applicable accounting standards and how climate-related risks may evolve and impact their business models and financial statements in the future. (As opposed to considering the potential impact of climate change solely based on the financial statement's position at the reporting date.)

4.88 Banks should review and assess their own climate accounting capabilities periodically in the following four key areas:

- governance and financial reporting risk assessments;
- controls for use of forward-looking data in financial reporting;
- quantifying the impact of climate-related risks on balance sheets and financial performance; and
- quantifying the impact of climate-related risks on Expected Credit Losses (ECL).[61]

Governance and financial reporting risk assessments

4.89 The PRA expects banks to have appropriate and well documented processes to ensure the timely capture of climate-related risk for financial reporting purposes, subject to effective governance.

4.90 Effective governance should include clear allocation of responsibilities for oversight, including within the finance function (see paragraph 4.5). Banks should ensure identified climate-related risks, including those within the bank's sustainability reporting, are integrated within the judgements and estimates which support financial reporting.

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[61] The expectations on quantifying the impact of climate risks on expected credit losses (ECL) apply only to firms using an ECL accounting model (ie those applying IFRS or using IFRS 9 through FRS 102).

4.91 Effective governance should also include oversight of the sufficiency, integrity and relevance of: (a) the quantitative analysis used to ensure climate-related risk is captured in a timely way, including use of CSA (see Chapter 3 on CSA); and (b) management information used to understand the implications of limitations in data and models and to provide challenge to how the bank has responded to those limitations (see paragraph 4.71).

Controls for use of forward-looking data in financial reporting

4.92 The PRA expects banks to have appropriate processes and controls in place to source, manage and enhance the data needed to factor climate-related risk into balance sheet valuations (see paragraphs 4.74–4.79).

4.93 Banks should make use of a wide range of information, including forward-looking information used for risk management and capital adequacy purposes. Banks should use their experience and judgement in determining the range of relevant information that should be considered, and to ensure that relevant data available throughout the organisation are captured.

Quantifying the impact of climate-related risks on balance sheets and financial performance

4.94 The PRA expects banks to have sound practices and policies for assessing and measuring the impact of climate-related risk for their financial statements in accordance with accounting standards.

4.95 Banks' risk assessments should ensure that climate-related risk drivers that have the potential to materially affect balance sheet valuations are properly identified on a regular basis and assessed using robust quantitative analysis.

4.96 Banks should have robust controls over the policies and processes used to factor climate-related risk into balance sheet valuations. These should ensure complete, consistent and accurate capture of material climate-related risk in accordance with accounting standards.

4.97 Banks should also ensure climate-related risk is sufficiently considered in accounting practices and policies for new and existing products, including tracking the materiality of the banks' aggregate exposure to instruments with climate-linked terms.

Quantifying the impact of climate-related risks on ECL

4.98 The PRA expects banks to have sound practices and policies for assessing and measuring the impact of climate-related risk on lending exposures, which result in

appropriate and timely recognition of climate-related risk within ECL in accordance with applicable accounting standards.

4.99 Banks should have well defined and documented processes to quantify exposure to borrowers most at risk, and to quantify the impact of specific climate-related risk drivers on ECL for those borrowers most at risk. This should include processes to identify the climate-related risk drivers that could influence ECL for loan portfolios that have the highest sensitivity to climate-related risk.

4.100 Banks' assessment policies should ensure quantitative analysis of the impact of climate-related risk drivers occurs not just at the individual lending exposure level but also at the collective portfolio level, to support challenge of the ECL calculation and inform use of Post Model Adjustments (PMAs).[62]

4.101 Banks' practices should not be static and should be reviewed periodically (see paragraph 4.14) to ensure that relevant data available throughout the organisation are captured and that financial reporting systems and processes are updated as banks' underwriting or business practices change or evolve over time. This periodic review should identify the requirements for data and models to factor climate-related risk drivers into loan-level ECL estimates and should consider how economic scenarios and weightings used for ECL calculations should be adapted to incorporate climate-related risk drivers.

4.102 Banks should use credit judgement based on experience to incorporate climate-related risk into the measurement of ECL, especially in the robust consideration of reasonable and supportable forward-looking information, including macroeconomic factors, and use of PMAs.

Internal Capital Adequacy Assessment Process (ICAAP)

4.103 As part of effective risk identification and assessment (paragraphs 4.19–4.24) and risk measurement and monitoring (paragraphs 4.32–4.38), the PRA expects banks to develop processes to identify, quantify and evaluate the solvency impact of climate-related risks that may materialise within their capital planning horizons. This includes as part of the Internal Capital Adequacy Assessment Process (ICAAP)[63] and stress testing programmes. As noted in paragraph 4.56, the PRA expects banks to use CSA as a key tool for these capital adequacy assessments.

4.104 As part of their ICAAP, banks should include at a minimum:

- An assessment of how they have determined the material exposure(s) to climate-related risks in the context of their business. Banks should be able to evidence that the material climate-related risks included in the firm risk register (see paragraph 4.20) are appropriately capitalised. Where a bank has identified climate-related risks as not being material, if asked, it should be able to provide evidence of how that judgment

62 Principle 5.1 of PRA SS1/23.
63 Chapter 3 of PRA SS31/15.

was made.[64] Banks should provide sufficient detail of their methodologies, scenarios used, underlying assumptions, judgements and proxies (see paragraph 4.22).

- An assessment of all material exposures over relevant time horizons (see paragraph 4.21) relating to climate-related risks that may negatively affect a firm's capital position (ie through their impact on traditional risk categories). This includes, where appropriate, incorporating material physical and transition risks that are relevant to a firm's business model, exposure profile and business strategy into their stress testing programmes in order to evaluate the bank's financial position under severe but plausible scenarios.

Internal Liquidity Adequacy Assessment Process (ILAAP)

4.105 As part of effective risk identification and assessment (paragraphs 4.19–4.22) and risk measurement and monitoring (paragraphs 4.32–4.37), the PRA expects banks to develop processes to identify, quantify and evaluate climate-related risks that may materially impair their liquidity and funding positions over relevant time horizons[65] and incorporate these in their internal liquidity and funding management systems and processes. This includes the Internal Liquidity Adequacy Assessment Process (ILAAP).[66,67]

4.106 Banks should assess whether climate-related risks could cause net cash outflows or depletion of liquidity buffers, assuming stressed scenarios (considering severe yet plausible scenarios) (see paragraphs 4.50–4.52).

4.107 As part of ILAAP, banks should include at a minimum:

- An assessment of how they have determined the material exposure(s) to climate-related risks in the context of their business. Firms should be able to evidence that any exposures subject to material climate-related risks included in the firm risk register (see paragraph 4.20) are appropriately funded. Banks should provide sufficient detail of their methodologies, scenarios used, underlying assumptions, judgements and proxies (see paragraph 4.22).
- An assessment of the impact of any material climate-related risks on net cash outflows (eg increased drawdowns of credit lines, accelerated deposit withdrawals) and the value of assets comprising their liquidity buffers. These assessments should inform the level of liquidity they should hold to meet the PRA's Overall Liquidity Adequacy Requirement.[68]

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64 Paragraph 2.3 of PRA SS31/15.
65 For liquidity, these time horizons may be limited to 30 days depending on expectations for cash flows and liquidity positions (eg overnight or intraday liquidity exposures) across a range of conditions.
66 Paragraphs 2.21–2.22 of PRA SS24/15 – **The PRA's approach to supervising liquidity and funding risks**, December 2023.
67 PRA Rulebook: **Internal Liquidity Adequacy Assessment**, November 2025.
68 PRA Rulebook: **Internal Liquidity Adequacy Assessment**, November 2025.

Risk types

4.108 The PRA expects banks to identify the transmission channels for, and the impact of, physical and transition risks on their traditional risk types and exposures (see paragraph 4.20).

4.109 Banks should clearly articulate their assumptions when considering these impacts and transmission channels, for instance, the role of insurance and government intervention in relation to the identified risks. Assumptions could include:

- the withdrawal of property insurance from physically exposed regions and any assumptions with respect to government backstops (eg Flood Re);
- assumptions around publicly funded adaptation measures such as coastal defences to combat sea-level rise; and
- government subsidies and cross-border taxes, where relevant to specific credit exposures.

4.110 Where such climate-related risks have been identified as impacting credit, market, litigation, operational and other risks, banks should consider the full range of options to adequately mitigate the risk.

4.111 Taking individual exposures in the aggregate, banks should assess and monitor the concentration of their exposures to geographies and sectors with higher climate-related risk (see paragraph 4.26), accounting for the way interactions between different risk drivers can work together to amplify the overall risk faced by the bank.

Credit risk

4.112 Banks should have a clear process for identifying, measuring and monitoring the channels through which climate-related risks impact credit risk (including counterparty credit risk and the effects of credit risk mitigation), as well as policies for mitigating identified risks on a timely basis.

4.113 Banks should integrate climate-related risks for both their own credit risk assessment and for due diligence performed on external ratings on an ongoing basis. At the level of individual exposures, banks should assess climate-related risks across the complete credit life cycle and evaluate the extent to which these risks may affect the borrower’s overall default risk or the bank’s ability to fully recover the value of the loan in a timely manner.

Market risk

4.114 The emergence of new climate-related risks can result in negative price shocks and increased volatility and may reduce the effectiveness of hedges used to manage risk by changing historical trends and introducing new correlations between existing risks.

4.115 Banks should therefore use both long and short-term scenarios under different levels of stress to assess market risk in relevant portfolios (see paragraph 4.54). Banks should monitor the extent to which the prices of traded instruments in their portfolios vary with changes in climate-related risk drivers and manage the resulting market risk with appropriate policies and mitigants.

Reputational risk

4.116 The PRA expects firms to manage reputational risks that can arise when a bank's position on climate change results in adverse customer sentiment and loss of future revenue. Although reputational risk is commonly associated with supporting activities that contribute to climate change, withdrawing support from these activities may also have negative consequences. As a result, banks may face strategic tensions, particularly if they have broad product offerings and geographical coverage.

Chapter 7: Insurance-specific issues

4.117 This chapter sets out specific expectations for insurers.[69] The expectations in respect of risk management frameworks and risk appetite (which build on Chapter 2: Risk management), apply to all insurers within the scope of this SS. The subsequent expectations on investments, own risk and solvency assessment (ORSA) (which build on Chapter 3: Climate scenario analysis), Solvency Capital Requirements (SCR) and the preparation of the balance sheet under Solvency II, apply only to those insurers subject to those obligations.

4.118 Climate-related risks could be a driver of underwriting, reserving, market, credit, liquidity and operational risks faced by insurers as well as reputational and litigation risks. There is potential for these risks to be interrelated and thus magnified, and to increase over a longer time horizon (see paragraph 2.6).

Risk management

4.119 The PRA expects insurers to be able to identify, assess, monitor, mitigate and report climate-related risks where material (see paragraph 4.20).[70] Insurers should manage climate-related risks, that might emerge over short, medium and long-term horizons. The PRA expects insurers to manage their exposures to stay within their set risk appetites.

4.120 Further to paragraph 4.21, insurers are expected to assess the potential for financial losses on the contracts of insurance they have underwritten or expect to underwrite over the next 12 months, including the potential for losses to develop on the Technical Provisions (TPs)[71] or assets. Insurers with long tail exposures would need to consider the potential for

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69 Collective term 'insurers' includes UK insurance and reinsurance firms and groups, ie those within the scope of Solvency II including the Society of Lloyd's and managing agents ('Solvency II firms') and non-Solvency II firms.

70 Paragraph 3.1 of the PRA Rulebook, **Conditions Governing Business**, November 2025.

71 PRA Rulebook, **Glossary 'Technical Provisions'**, November 2025.

financial losses over a longer time horizon than insurers with predominantly short tail exposures. Insurers are also expected to manage non-financial risks including reputational risk and risks to their business models over multiple time horizons.

4.121 Insurers should consider climate-related risks in their asset and liability management,[72] considering risks on both sides of the balance sheet as well as their interrelationships, where relevant. While risks may be greater for assets matching liabilities of longer duration, transition risks might be sudden and occur at a shorter time horizon. If climate-related risks are material, insurers should allow for the risk of individual assets or sectoral exposures being impaired over the period when the assets are intended to be held.

Risk appetite

4.122 Further to paragraphs 4.7–4.13, insurers should express their risk appetite statements consistently with how they measure and monitor risks to enable effective management of the underlying exposures. Where insurers have existing risk appetites that are subject to climate-related risks, they should include the impact of climate-related risks in their risk modelling. For example, non-life insurers often manage their exposures to weather perils such that their modelled Probable Maximum Losses at a defined return period (eg 1 in 250 years) are less than their risk appetite (eg £x million), and both life and non-life insurers often manage their asset risk such that the loss on an asset class is no more than their risk appetite (eg £y million) at a defined tolerance level (eg 1 in 100 years). When setting risk appetite, insurers should include their views of the impact of climate-related risks, reflecting the results of CSA where appropriate.[73] Insurers are expected to be more prudent in their underwriting or investment where they are less able to assess the risk reliably (see paragraphs 4.74–4.77).

4.123 Under the Prudent Person Principle (PPP), where insurers bear the investment risk, insurers must diversify their assets to avoid excessive accumulation of risk in the investment portfolio.[74] Solvency II insurers should therefore consider whether there is an excessive accumulation of climate-related risks. Mitigants should be identified if risk accumulation is found to be excessive.[75]

Own risk and solvency assessment (ORSA)

4.124 As part of effective risk identification and assessment (see paragraphs 4.19–4.24) and risk measurement and monitoring (see paragraphs 4.32–4.38), the PRA expects insurers to develop processes to consider the impact on capital levels of reasonably foreseeable adverse scenarios (including material climate-related risks) in their capital management

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72 PRA legacy SS1/13 – **Asset and liability management: suggestions for greater effectiveness**, April 2013.
73 Paragraph 2.3 of PRA SS4/18 – **Financial management and planning by insurers**, November 2024.
74 Paragraph 5.2 (3) of PRA Rulebook, Investments – **Investments**, November 2025.
75 Paragraph 3.23 PRA SS1/20 – **Solvency II: Prudent Person Principle**, November 2024.

plans,[76] and as part of the ORSA.[77] Where a firm decides to accept a material risk, the PRA expects the ORSA to explain why that was considered appropriate.[78]

4.125 As part of the Stress and Scenario Testing (SST) component of their ORSAs, insurers should include CSA unless the impact is immaterial (see paragraph 4.56). Insurers should consider the latest climate science and advances in climate scenario modelling.[79]

4.126 Further to the expectations set out in the Chapter 3 on CSA, the PRA expects insurers to build on the scenarios selected for their SSTs to explore the climate-related risks to their business model over relevant time horizons (see paragraph 4.21). The PRA expects insurers to make assumptions and build scenarios sufficiently granular to stress for the risks they face (eg tropical storms, flooding, non-natural catastrophes, longevity risk, mortality risk, credit risk, equity risk, lapse risk). This analysis should build on the parameters and outputs of the scenarios that the insurer considers relevant (eg sea surface temperatures, precipitation, GDP, inflation, interest rates, unemployment rates). The approach may include a mix of narrative-based scenarios, quantified by expert judgement, and more mathematically sophisticated approaches.

4.127 Insurers should specify in their ORSA the management actions they would take in different circumstances, describing what would trigger those actions.[80] Sufficient detail should be provided to enable the PRA to form a view of the reasonableness of each action. For example, management actions might include changes to underwriting (eg increased deductibles or reduced limits for flood exposures) or to investment strategy (eg reduced exposure to some economic sectors or subsectors). Insurers should consider and establish suitable trigger points at which they would intend to implement any planned management actions.[81] Insurers should be prudent in making any assumptions on market availability, liquidity or price levels (eg in respect of reinsurance), bearing in mind the possible systemic nature of the scenarios and the potential for other insurers or market participants to act in a similar way.

4.128 In conducting the ORSA, insurers should consider the climate-related reputational risks arising from their investment and underwriting strategies, their historical underwriting activities as well as from their wider engagement on climate change and the transition to net zero. Insurers, especially those who are large institutional investors or large commercial underwriters, might be exposed to litigation or to a loss of future business. Where insurers have made climate-related public commitments or offer sustainability branded products, there are additional risks that these are perceived as misleading if unclear, or not adequately followed through, leading to claims of ‘greenwashing’. Although reputational risk is commonly

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76 Paragraph 3.1 of PRA SS4/18.
77 To be considered as part of PRA SS19/16, and for non-life firms together with PRA SS26/15 – **Solvency II: ORSA and the ultimate time horizon - non-life firms**, October 2018.
78 Paragraph 6.3 of PRA SS19/16.
79 Rule 3.1 (2A) of **Conditions Governing Business** Part of the PRA Rulebook.
80 Paragraph 6.3 of PRA SS19/16.
81 Paragraph 3.8 of PRA SS4/18.

associated with insurers supporting real economy activities that contribute to climate change, withdrawing support from these activities could also lead to adverse effects. As a result, insurers may face strategic tensions, particularly for complex insurers with broad product offerings and geographical coverage.

Solvency Capital Requirement (SCR)

4.129 As part of the SCR calculation,[82] insurers should reflect the impact of all material climate-related risks. Insurers using an Internal Model (IM) to calculate their SCR should consider the impact of climate change on the underwriting risk, reserving risk, market risk, credit risk and operational risk components of their IM, where material. As part of their assessment of whether the Standard Formula (SF) calculation is appropriate for their risk profile, insurers using the SF should consider whether the impact of climate-related risks leads to a change in their assessment.

4.130 In line with the SCR Rules,[83] insurers must capture within the SCR how their view of the risks, including climate-related risks, over the lifetime of their liabilities may change over a one-year period. This is particularly relevant for insurers with substantial long tail liabilities eg annuities or Periodical Payment Orders.

Underwriting and reserving risk

4.131 From an underwriting risk perspective, non-life insurers should consider the impact of climate change on their natural catastrophe risk. Insurers should assess whether the impact of climate change has been sufficiently factored into quantitative tools (which may include a mix of narrative-based scenarios, quantified by expert judgement, and more mathematically sophisticated approaches) used for assessing either present day or future weather-related perils (eg tropical cyclones, flooding, droughts, wildfires). Insurers should also make any adjustments needed to reflect their own view of such impact where it is material. For all weather perils, insurers should consider how climate change might lead them to incur larger claims than might have been expected from analysing historical experience only. In their model validation, insurers should explicitly consider how the impact of climate change is reflected in the modelling of the climate-related perils that make a significant contribution to SCR.

4.132 Non-life insurers should consider the potential for climate change to lead to an accumulation of claims under the liability insurances they underwrite (eg Directors and Officers, Product liability, Public Liability), considering the pattern of emergence of claims under these contracts. Insurers should allow for the possibility of claims to emerge under multiple contracts and underwriting years where applicable. Where the exposures to these types of claims are large, their modelling of non-natural catastrophes should include an allowance for climate claims.

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82 Rule 3.3 of the PRA Rulebook, **Solvency Capital Requirement - General Provisions**, November 2025.
83 Rule 3.4 of the PRA Rulebook, **Solvency Capital Requirement - General Provisions**, November 2025.

4.133 Life insurers should consider the impact of climate change on their mortality and morbidity assumptions, eg from the impacts of an increase in extreme weather events or a change in the incidence of respiratory or water borne diseases. Life insurers should consider how lapse rates may change under the economic and social circumstances they assume under different climate scenarios.

4.134 Insurers should ensure effective information sharing between functions dealing with reserving, claims, underwriting, exposure management and risk management to understand feedback loops relevant to climate-related claims or potential claims and corresponding exposures.

Market risk

4.135 When setting parameters for market risk, insurers should consider that the distribution of future returns may be more variable than historical experience due to climate-related risk, with the potential for variations at granular levels (eg for different sectors, subsectors or geographies) and sudden increases. Insurers should understand whether and how external models used such as Economic Scenario Generators factor in climate-related risk.

Credit risk

4.136 The approach to modelling credit risk for an insurer's internal model applies similar considerations as for market risk. An insurer's approach might be informed through understanding the extent to which the methodologies of the external credit ratings they use allow for climate-related risk. Where appropriate to an insurer's internal model approach, insurers should consider the impact of climate-related risk on the cost of downgrades, probability of default and loss given default, where climate constitutes a material risk.

4.137 When considering their counterparty exposures (see paragraphs 4.25–4.31), including to major reinsurers across multiple classes of business or to banks and other financial institutions for their derivative exposures, insurers should engage with their major counterparties to understand their exposures to climate-related risk, and how their business model would change in response. Where the exposure is collateralised, insurers should consider to what extent the underlying assets could be impaired, as a result of climate-related risk, where material.

Regulatory balance sheet

4.138 The approach to balance sheet valuations is set out in the Valuation Part of the PRA Rulebook.[84] Insurers' valuations should reflect the assumptions that market participants would use when pricing, including assumptions about climate-related risk.

84 PRA Rulebook, **Valuation**, November 2025.

4.139 Rule 7.2(1) of the Matching Adjustment Part of the PRA Rulebook[85] requires an insurer, in respect of its internal credit assessments, to consider all possible sources of credit risk, both qualitative and quantitative,[86] and understand how these types of credit risk may interact.[87] The PRA expects insurers to include climate-related risks as possible sources of credit risk, where material. In addition to the minimum requirements set out in Matching Adjustment 7.2, the PRA expects insurers to consider the extent to which climate-related risks are factored into credit rating methodologies used by credit rating agencies (CRAs) when assessing their own internal rating methodologies. Where an insurer considers that its internal credit ratings may not make sufficient allowance for risks, including climate-related risks, the PRA expects the insurer to make an appropriate adjustment, either to the internal credit rating or to the Fundamental Spread as part of the MA attestation.[88]

4.140 Non-life insurers should ensure that their TPs include expected losses from climate-related risks under policies already underwritten. Where there are exposures, unearned premium reserves should allow for the impact of climate-related risk on expected weather losses, considering that past experience may not necessarily be indicative of future experience. Life insurers should ensure that their best estimate mortality, morbidity, lapse and expense assumptions are appropriate given the potential impact of climate change. Where climate-related risk is significant, the impact on the risk margin calculation should be commensurate given the considerations outlined in the SCR section (see paragraphs 4.129–4.130).

85 Rule 7.2 (1) of the PRA Rulebook, **Matching Adjustment**, November 2025.
86 Rule 7.2 (1) of the PRA Rulebook, **Matching Adjustment**, November 2025.
87 This paragraph is relevant to UK Solvency II firms and the Society of Lloyd's and its managing agents only, where they are applying for, or have, permission to use the MA. See PRA's rules in the Solvency II Sector of the PRA Rulebook.
88 July 2018: SS7/18, paragraphs 5.31–5.41: **Solvency II: Matching Adjustment**.