



Reserve Bank  
of New Zealand  
Te Pūtea Matua

# Managing climate-related risks

Guidance for regulated entities

29 March 2023

## Contents

1	Introduction	2
2	Climate-related risks	5
3	Governance	8
4	Risk management	9
5	Scenario analysis	12
6	Disclosure	16

# 1 Introduction

1. This Guidance document on climate-related risk management (“the Guidance”) seeks to support the Reserve Bank of New Zealand’s (“Reserve Bank’s”, “our”, “we”) regulated entities (“entities”) in improving how they manage climate-related risks. We aim to help develop a shared understanding of what is needed and promote best practice management of climate-related risks. The Guidance is intended to inform and does not impose any enforceable requirements.

## Why is the Guidance needed?

2. A key part of our mandate is to protect and promote the stability of New Zealand’s financial system. This objective is framed within the purpose of the Reserve Bank of New Zealand Act 2021, which is to ‘promote the prosperity and well-being of New Zealanders and contribute to a sustainable and productive economy’. The impacts of climate change are already evident, triggering growing concern regarding the future implications of climate-related risks for the stability of the financial system.
3. Assessing entities’ material risks, and the financial system as an ecosystem, is at the core of meeting our financial stability objective. We see financial stability being best maintained when all relevant risks are adequately identified, priced, and allocated to those best able to manage them. To meet our financial stability objective, it is important for us to take account of the current and future impacts of climate change. This consideration is also set out in the [Reserve Bank Climate Change Strategy](#), in the context of understanding and incorporating the impact of climate change on our core functions.
4. In addition to meeting our own objectives and legislative requirements, developing guidance on managing risk for entities is recommended for central banks around the world by the Network for Greening the Financial System.<sup>1</sup> It is also specifically referenced in Action 10.4 of the National Adaptation Plan (NAP),<sup>2</sup> which was developed in coordination with us.
5. The Guidance has an additional benefit of providing structure for our supervisors as we increasingly integrate climate change considerations into our supervisory approach, as also set out in Action 10.4 of the NAP. As with other risks within our supervisory approach (set out in our [Statement of Prudential Policy](#)) our aim for supervising climate-related risks is to take a forward-looking, risk-based approach that is proportionate, collaborative and consistent.

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<sup>1</sup> As set out on page 39 of the NGFS Guide for Supervisors:

[https://www.ngfs.net/sites/default/files/medias/documents/ngfs\\_guide\\_for\\_supervisors.pdf](https://www.ngfs.net/sites/default/files/medias/documents/ngfs_guide_for_supervisors.pdf)

<sup>2</sup> As set out on page 162 of Adapt and Thrive: Building a climate-resilient New Zealand:

<https://environment.govt.nz/assets/publications/climate-change/MFE-AoG-20664-GF-National-Adaptation-Plan-2022-WEB.pdf>

<sup>2</sup> Managing climate-related risks

## Who is the Guidance for?

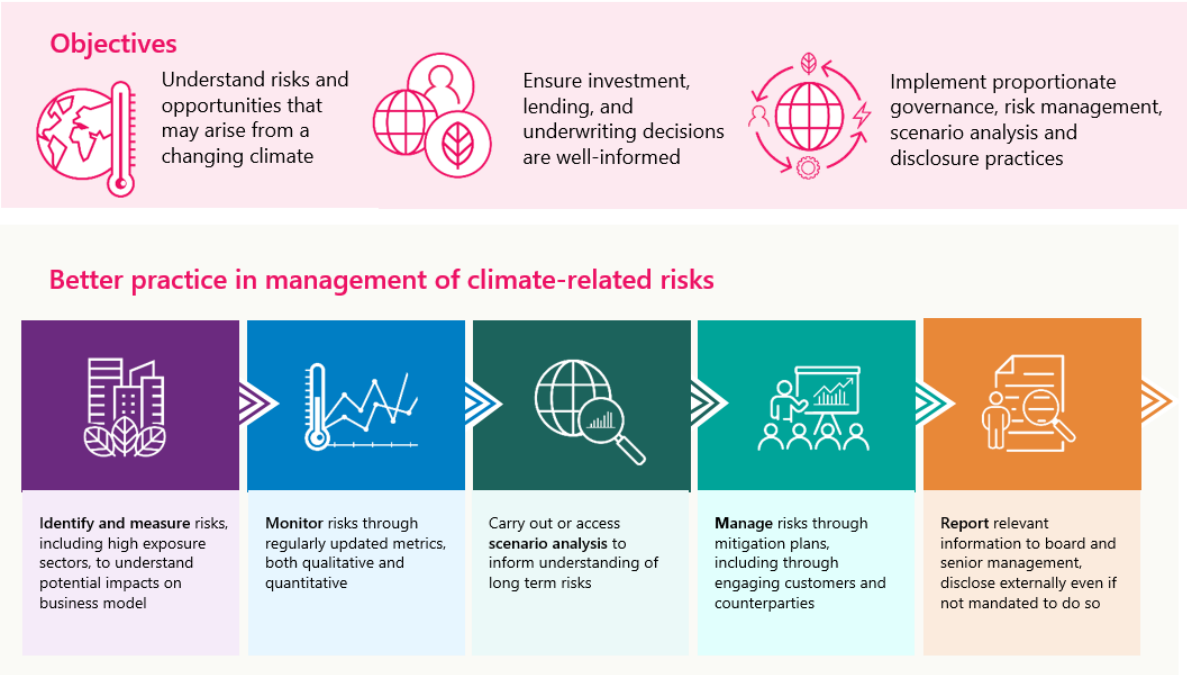
6. The Guidance is aimed at all entities regulated by the Reserve Bank, namely registered banks, licensed insurers, licensed non-bank deposit-takers, and operators of designated financial market infrastructures (FMIs). Current regulatory requirements, expectations and guidance on managing specific types of risk vary across the respective regulatory regimes. Regardless of those differences, it is our intention that the Guidance will inform and encourage all entities to develop and implement good practices in managing climate-related risks.
7. Entities vary significantly in size, business mix and complexity, and also in the extent to which they are, or may in future be, exposed to climate-related risks. Accordingly, we recommend that entities consider how this Guidance best fits their business model and activities. Not all of the practices in this Guidance will be relevant for every entity.

## What are the main features of the Guidance?

8. In preparing the Guidance, we have taken as our starting point the Prudential Practice Guide CPG229, Climate Change Financial Risks, issued by the Australian Prudential Regulation Authority (APRA) in November 2021. We have adapted the APRA document to take account of New Zealand-specific circumstances (e.g. aligning terminology with the disclosures standards developed by the External Reporting Board (XRB)). We have also considered the Principles for the effective management of climate-related risks published by the Basel Committee on Banking Supervision in June 2022.
9. The Guidance is set out in the following sections:
  - (2) Climate-related risks
  - (3) Governance
  - (4) Risk management
  - (5) Scenario analysis
  - (6) Disclosure
10. The section of the Guidance headed 'Climate-related risks' introduces the concept of climate-related risks, describes how those risks could impact upon entities, and identifies the distinct features that make it essential to give climate-related risks specific analytical consideration.
11. The section of the Guidance headed 'Governance' emphasises that climate-related risks are like any other risk in that the ultimate responsibility for its effective management rests with an entity's governance body.
12. The section of the Guidance headed 'Risk management' discusses how climate change manifests through conventional risks and should be managed within an entity's general risk management framework.
13. The section of the Guidance headed 'Scenario analysis' outlines our latest thinking about leading practice as entities develop their scenario analysis capability, and emphasises that, although this is an evolving area, entities should be starting work now.

14. The section of the Guidance headed 'Disclosure' refers to the new mandatory Climate-related Disclosure (CRD) under Part 7A of the Financial Markets Conduct Act 2013, and the related Aotearoa New Zealand Climate Standards developed by the XRB and administered by the Financial Markets Authority (FMA). Any entity that is subject to these requirements is known as a climate reporting entity (CRE). Many entities are CREs, but we also encourage those that are not to consider which elements of the disclosure requirements would be relevant for them, taking into account the nature and scale of their business.

Figure 1. Overview of RBNZ climate-related risk management Guidance



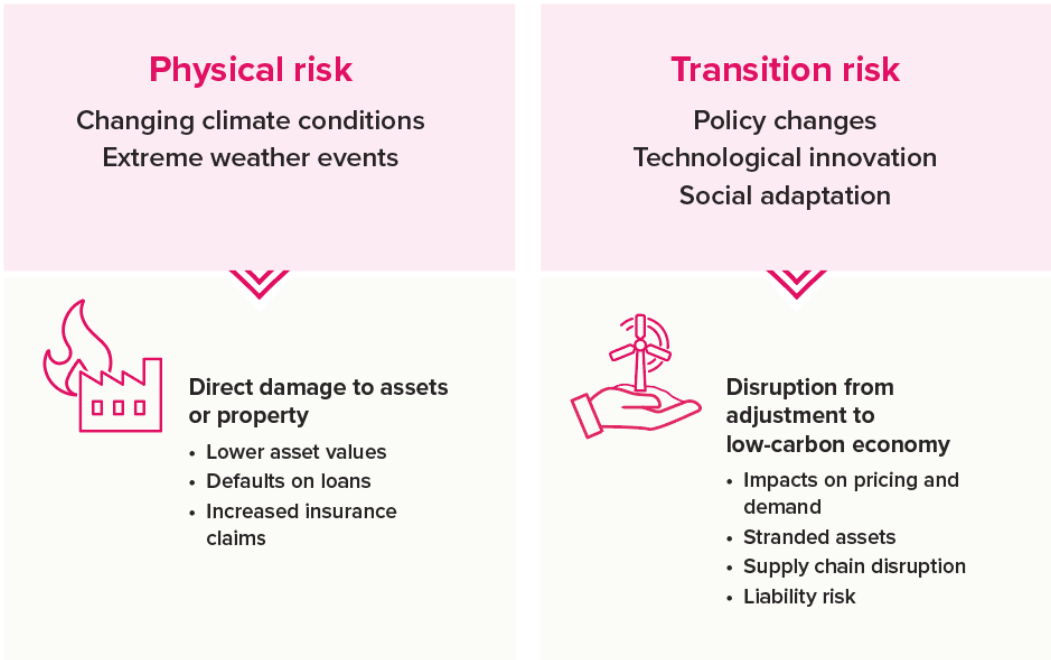
**Maintenance of the Guidance**

15. We will update this Guidance as appropriate to reflect the evolving nature and maturity of risk management practices, and also in light of our experience with drawing on the Guidance and other sources in our supervision of climate-related risks. We will keep under review whether it remains sufficient for there to be no enforceable requirements for managing climate-related risks, or whether we should build on some aspects of the Guidance to develop standards for the respective industry sectors. Our approach to supervising climate-related risks will also evolve, among other things because of potential legislative changes such as the expected Deposit Takers Act.

## 2 Climate-related risks

16. Climate-related risks are defined as the potential negative impacts of climate change on an entity. Climate-related risks can be classified as physical risks and transition risks.
17. Physical risks are those related to the physical impacts of climate change, and can be split into acute and chronic. Acute physical risks refer to those that are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, or floods. Chronic physical risks refer to longer-term shifts in climate patterns (e.g., sustained higher temperatures) that may cause sea level rise or chronic heat waves.
18. Transition risks are those related to the transition to a low-emissions, climate-resilient global and domestic economy, such as policy, legal, technology, market and reputation changes associated with the mitigation and adaptation requirements relating to climate change. One such example of transition risk is insurance retreat, which can include higher premiums, reduced quality, and ultimately loss of access to insurance.
19. The above are only illustrative examples of climate-related risks and makes no claim to be comprehensive. Understanding of the wide range of physical and transition risks, and feedback loops between them, will increase over time in light of continuing research and experience of crystallised risks.

Figure 2. Classifications of climate-related risks

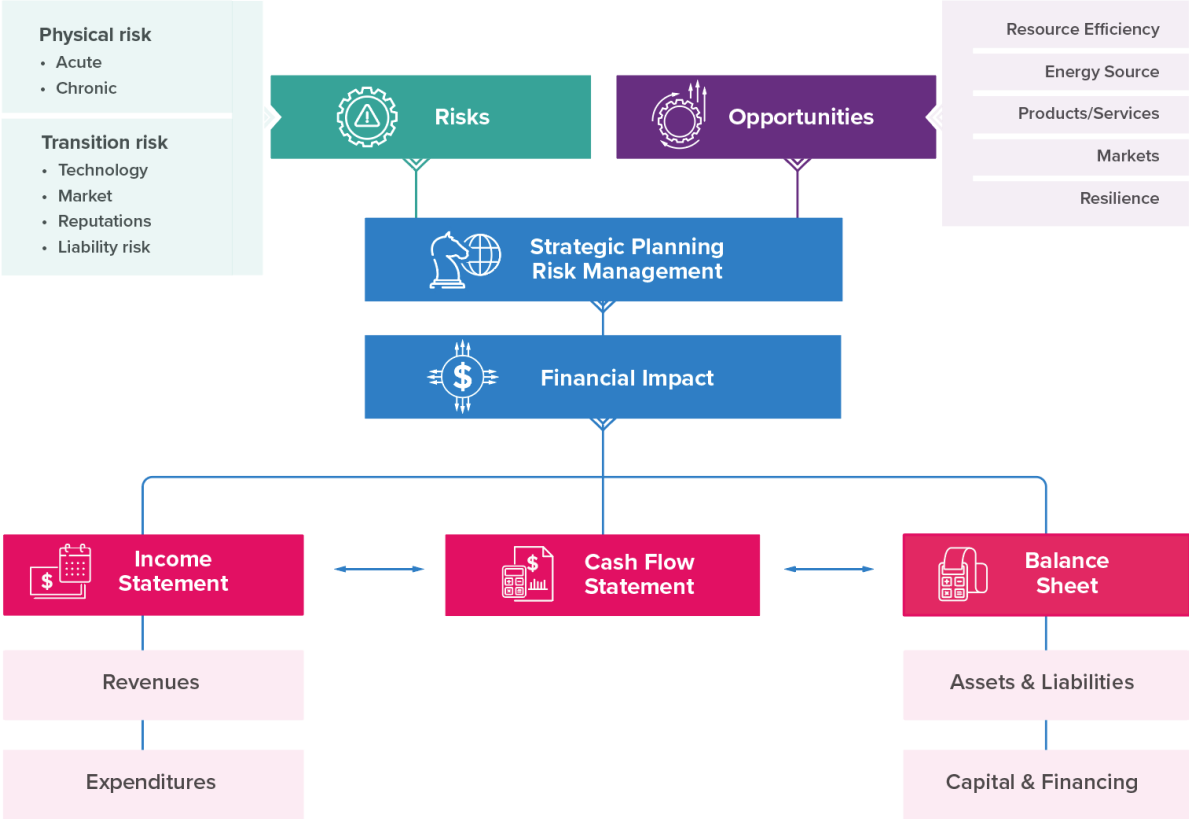


20. We encourage entities to take a strategic and risk-based approach to managing the various opportunities and risks arising from climate change, recognising the unique nature and far-reaching potential impacts of a changing climate. As part of this, we recommend that every entity maintains a transition plan, which sets out targets with associated actions, showing how the entity will change its business model and strategy to ensure its business remains resilient to physical and transition risks over the medium to long term.

21. We think it is important for entities to understand the interaction between climate-related risks and their business activities, as well as the compounding effect climate-related risks may have on their other business risks, including:
- (a) credit risk – through a potential increase in defaults on loans by businesses and households that may be affected by adverse climate events, as well as the potential for assets used as collateral to decline in value;
  - (b) market risk – through the impact of potential re-pricing of financial instruments and corporate debt affecting the value of securities held on an entity's balance sheet;
  - (c) operational risk – including the risk of supply chain disruption and forced facility closures;
  - (d) underwriting risk – through a potential increase in insured losses as a result of more frequent and/or extreme weather events;
  - (e) liquidity risk – through increased demand for liquidity to respond to extreme weather events or the difficulties that an entity may face in liquidating assets negatively impacted by climate-related risks;
  - (f) reputational risk – including an entity's ability to attract and retain customers and employees due to changing employee and community expectations;
  - (g) strategic risk – from the need to adapt the entity's business model to reflect a more rapidly changing world, and from increased uncertainty about the possible states of the world the entity's strategy will need to be ready for; and
  - (h) legal risk – including climate-related litigation across both physical and transition risks.
22. We consider that entities can manage climate-related risks within their broader risk management framework, and we view this as best practice, as set out further in Section 4. However, climate-related risks have several elements that distinguish them from other risks and make it essential to give them specific analytical consideration. These elements include:
- (a) the non-linear nature of climate-related tipping points and the potential for irreversible changes in climate, leading to impacts that may not be easily mitigated or reversed;
  - (b) the far-reaching impact that climate-related risks pose to all parts of the financial system, including different business types, geographical locations and economic sectors, as well as the potential for risks to manifest across multiple lines of business at the same time, potentially disrupting financial stability;
  - (c) the uncertain and extended time horizon over which climate-related risks may materialise (which is likely to extend beyond typical business planning cycles); and
  - (d) the unprecedented nature of climate change, meaning that traditional risk assessment methods that rely solely on historical data have the potential to systematically underestimate the impacts of climate-related risks. This is because of the complex dynamics of interconnected lines of business, non-linear and unprecedented levels of disruption, and compounding of risk when multiple climate impacts collide.

23. While the exact form and extent to which climate-related risks will materialise is uncertain, there is a high degree of certainty that climate change will have some financial impacts on entities (see diagram below). An entity can mitigate the magnitude of these financial impacts through action, particularly directed at improving understanding of climate-related risks. Investing in better risk management will also allow entities to identify and benefit from opportunities that arise from the transition to a low-carbon economy, including meeting increasing investor demand for sustainable finance and identifying customers that are well-positioned to respond to climate change.

**Figure 3. Climate-related risks, opportunities and financial impact**





### 3 Governance

24. Responsibility for the sound and prudent management of an entity's business operations rests with its governance body. We view good governance as essential for all entities.
25. The XRB's Climate Standard CS1 requires a CRE to disclose information on the role that its governance body plays in overseeing climate-related risks (and opportunities). We recommend that the governance bodies of all entities, not just those of CREs, play a role in overseeing climate-related risks (and opportunities).
26. We therefore encourage the governance body of any entity to understand the climate-related risks that affect the entity, now and into the future.
27. Our view is that climate-related risks can be managed within an entity's broader risk management framework, and furthermore that this is best practice. As with other risks if they are identified to be material, we recommend that a board is able to evidence its ongoing oversight and management of climate-related risks and its testing and challenging of the reporting it receives on these risks.
28. The governance body of an entity may delegate certain functions of the management of climate-related risks but, as with other risks, it is advisable for the governance body to maintain mechanisms for monitoring the exercise of this delegated authority. Governance body-level engagement is important to ensure that work on climate-related risks holds sufficient standing within an entity and gives the governance body the requisite entity-wide insights to respond to risks strategically.
29. To ensure that climate-related risks are adequately managed, we consider it prudent for the governance body of an entity to undertake the following oversight roles:
  - (a) ensuring an appropriate understanding of, and opportunity to discuss, climate-related risks at the governance body and sub-committee levels, which may include appropriate training for governance body members;
  - (b) setting clear roles and responsibilities of senior management in the management of climate-related risks, and holding senior management to account for these responsibilities;
  - (c) periodically re-evaluating the risks, opportunities and accountabilities arising from climate change, and considering these risks and opportunities in approving the entity's strategies and business plans;
  - (d) taking a short, medium and long-term view (which may be beyond the entity's regular business planning horizon) when assessing the impact of climate-related risks and opportunities; and
  - (e) where climate-related risks are found to be material, ensuring that the entity's risk appetite framework incorporates the risk exposure limits and thresholds for the risks that the entity is willing to bear.

30. In light of the governance body roles above, we expect that an entity's senior management would typically be responsible for:
- (a) utilising an entity's risk management framework to assess and manage climate-related risk exposures on an ongoing basis, including developing and implementing appropriate policies;
  - (b) regularly reviewing the effectiveness of the framework, policies, tools and metrics, and making appropriate revisions;
  - (c) providing recommendations to the governance body on the organisational objectives, plans, strategic options and policies as they relate to climate-related risks that are assessed to be material. This will include the establishment and use of relevant tools, models and metrics to monitor exposures to climate-related risks and enable the governance body to make informed decisions promptly; and
  - (d) ensuring that adequate resources, skills and expertise are allocated across the entity to managing climate-related risks, including through training and capacity building amongst staff at all levels.

## 4 Risk management

31. The governance body of an entity is ultimately responsible for both the entity's risk management framework and the oversight of its operation by management. We recommend that the entity's senior management monitors and manages all material risks consistent with the strategic objectives, risk appetite statement, and policies approved by the governance body.
32. We consider that it is good practice for climate-related risks to be managed within an entity's broader risk management framework, including the governance body-approved risk appetite statement, risk management strategy and business plan.
33. We encourage each entity to seek to ensure that its arrangements to identify, measure, monitor, manage, and report on its exposure to climate-related risks are operated in a manner appropriate to the entity's size, business mix and the complexity of its business operations. We consider it good practice for an entity to embed such arrangements appropriately across all three lines of defence.

### Risk identification

34. We consider that it would be prudent for an entity to seek to understand climate-related risks and how they may affect its business model and strategy, including identifying material climate-related risks and assessing the potential impact on the entity. Scenario analysis, with both a short- and long-term time horizon, is a valuable tool for informing the risk identification process (see further discussion on scenario analysis in Section 5).
35. We view it as good practice for an entity to seek to identify lending sectors with higher or lower exposures to physical and transition risks. It is important to understand counterparties' vulnerabilities to these kinds of threats for identifying and quantifying the risk borne by the entity, not just at the sectoral level but also at the individual counterparty/collateral level. The risk criteria for this identification may include a range of factors, such as:
- (a) vulnerability to extreme weather events (including whether these are insured and will continue to be so);

- (b) the level of greenhouse gas emissions and potential exposure to changes in the level of emissions pricing;
  - (c) potential exposure to changes in climate-related policy or technology;
  - (d) vulnerability to climate-related supply chain changes or disruption;
  - (e) vulnerability to climate-related disruption of business activities; and/or
  - (f) linkages to unsustainable practices.
36. An entity may use the assessment of economic sectors to develop sector-specific policies and procedures for when it is undertaking business engagements (such as investing, insuring or lending) with that sector. Good practice would see an integrated approach to climate-related risks taken across different business lines (such as underwriting, investment, product development and lending functions).

## Policies and procedures

37. We consider that prudent practice would be for an entity to evidence the management of climate-related risks within its written risk management policies, management information, and governance body risk reports. Climate-related risks are material, which may require updating existing risk management policies and procedures.
38. As a matter of good practice, the policies and procedures developed under the risk management framework would include a clear articulation of the responsibilities of business lines and risk functions concerning managing climate-related risks.

## Risk monitoring

39. Better practice in monitoring climate-related risks means incorporating both a qualitative and quantitative approach, including developing metrics to measure and monitor climate-related risks appropriate to an entity's size, business mix and complexity of business operations and appropriate to the availability and quality of data on relevant risks. Such metrics might typically be used, for example, to assess portfolio exposures to geographical areas and economic sectors with higher or lower climate-related risk.
40. More advanced quantitative risk metrics may take a variety of forms, such as:
- (a) direct and indirect emissions (usually classified into scope 1, scope 2 and relevant scope 3 emissions);<sup>3</sup>
  - (b) exposure to physical risks, monitoring potential impacts to core business metrics such as credit risk, losses or investment returns;
  - (c) modelling the impact of climate scenarios on project returns; and/or
  - (d) quantifying the impact of adaptation measures.

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<sup>3</sup> These terms are defined in the XRB's climate-related disclosure standard <https://www.xrb.govt.nz/standards/climate-related-disclosures/aotearoa-new-zealand-climate-standards/aotearoa-new-zealand-climate-standard-1/>.

41. Quantitative metrics help entities understand the potential current and future impacts of climate-related risks on their customers, counterparties, and other organisations to which the entities have exposure. Where an entity does not have the necessary information to assess these impacts, it is appropriate for the entity to engage with customers and counterparties to understand the extent to which the impacts may be material to the entity's risks.
42. We consider it likely that an entity will need to use data from both publicly available and proprietary sources, and potentially seek assistance from external experts where necessary (including academics, specialist consultants, and scientific bodies). This would help it better understand the possible impacts of climate change on its operations as well as those of its customers, counterparties, and other organisations to which it is exposed.
43. Given the evolving understanding of climate change, we encourage entities to ensure that their climate-related risk data and metrics are updated regularly to support decision-making by their governance bodies and senior management. We also recommend that an entity consider the circumstances that might trigger a review of its strategy or engagement with customers and counterparties.
44. Limitations on quantitative information mean it may also be necessary to incorporate additional qualitative information. The quality of climate data and information is improving over time, but it is important to make progress with whatever is currently available.
45. Better practice in risk monitoring extends to monitoring the impacts of climate-related risks on outsourcing arrangements, service providers, supply chains, and business continuity planning.

### Risk appetite

46. Where it has identified material climate-related risks, we consider it prudent for an entity to establish and implement plans to mitigate these risks and manage exposures in line with the governance body - approved risk appetite. The entity would regularly review and assess the effectiveness of those plans. For example, an entity might develop strategies to manage concentrations in its portfolio to specific geographic or economic sectors with higher climate-related risks, and this could include setting climate-related exposure limits at counterparty or sector level.

### Capital adequacy

47. We require some entities to complete an Internal Capital Adequacy Assessment Process (ICAAP).<sup>4</sup> Any such entity that has identified climate-related risks as material within its Pillar 2 assessment should measure those risks and consider whether or not to determine an internal capital allocation against it in line with the requirements for 'other material risks' set out in Part D of BPR100. Entities that determine their Pillar 1 risk-weightings using the internal ratings-based approach may also choose to incorporate climate change considerations within their internal modelling.

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<sup>4</sup> This currently applies to New Zealand-incorporated registered banks, under [BPR100, 'Capital Adequacy'](#).

## Risk reporting

48. To facilitate well-informed decision-making, we encourage an entity to establish procedures to routinely provide relevant information on its material climate-related risk exposures, including monitoring and mitigation actions, to the governance body and senior management.
49. This information would allow the governance body and senior management to understand and review the activities and make decisions consistent with the entity's overall risk appetite and management approach.
50. The extent and frequency of reporting may be tailored to the nature and magnitude of the risks to which the entity is exposed.

## Providing products and services

51. In most cases, we envisage that an entity would choose to work with customers, counterparties and organisations that face higher climate-related risks, to improve the risk profile of those entities. Providing finance to assist customers to adapt to climate change is an important function of the financial system. Where the entity considers this engagement will not result in a customer adequately addressing the climate-related risks it faces, the entity may need to consider mitigation options, such as:
  - (a) reflecting the cost of the additional risk through risk-based pricing measures;
  - (b) applying limits on its exposure to such a customer or sector; or
  - (c) where the risks cannot be adequately addressed through other measures, considering the entity's ability to continue the customer relationship.

## 5 Scenario analysis

52. We consider it prudent for an entity to develop capabilities in climate-related scenario analysis and stress testing, or have access to external scenario analysis and stress testing capabilities while internal capacities are developed, to inform its understanding of the resilience of its business model and strategy in both the short and long term.
53. In CS1, the XRB defines scenario analysis for this purpose as 'A process for systematically exploring the effects of a range of plausible future events under conditions of uncertainty. Engaging in this process helps an entity to identify its climate-related risks and opportunities and develop a better understanding of the resilience of its business model and strategy.'
54. We define stress testing as 'A tool that subjects financial institutions to severe but plausible scenarios (and sensitivities) that are deliberately chosen for their potential to threaten the viability of their business model.' By quantifying the impact of these scenarios on balance sheets and profitability, stress tests can help to both measure and manage the risks facing an institution, which can include climate-related risks.

55. A CRE will be required to disclose the resilience of its business model and strategy to climate-related risks and opportunities over the short, medium and long term. As part of that disclosure, it must describe different scenarios it has used to assess that resilience. We consider it prudent for all entities to use scenario analysis to assess the resilience of their business model and strategy to climate-related risks and opportunities.
56. We recommend that the use of scenario analysis and stress testing for climate-related risks is proportionate to an entity's size, business mix and complexity. In general, we would expect larger and more complex entities to have more advanced analytical capability. For smaller firms, simplified scenarios may be appropriate. A smaller entity may be highly concentrated in a particular market, sector or geographical location that is exposed to material climate-related risks. It may also be appropriate for the entity to seek assistance with scenario analysis and stress testing to assess the impact of climate-related risks on its risk profile and business strategies and explore its resilience to financial losses under a range of outcomes.
57. Climate-related risk scenario analysis and stress testing is a developing area, and we expect approaches to evolve and mature over time. Nevertheless, we encourage any entity that has not started work on climate-related risk scenario analysis to do so now. Scenario analysis is a vital starting point for any assessment of the climate-related risks facing an entity over the longer term. The XRB has not provided any first-time adoption provisions for CREs' disclosure of material relating to their scenario analysis: so a CRE will need to have something ready to disclose when it publishes its first climate statement.
58. We are aware of external organisations developing sectoral scenarios for both banks and insurers, which could assist entities in their first disclosures while they develop their internal capabilities. Should an entity use such a scenario(s), we encourage the entity to justify why that scenario(s) is appropriate for its business model.
59. An entity in the early stages of climate-related risk analysis is likely to begin by understanding the material risks to which it is exposed, including identifying industries and regions with particular risks within the entity's portfolio. A range of analytical approaches, from simple to complex, are available to support an entity's understanding of their material climate-related risks; entities should choose methods appropriate to their circumstances.
60. An entity that lacks the data, resources, or expertise to conduct scenario analysis with appropriate quantitative assessments will still benefit, in most cases, from narrative-driven scenario analysis. Qualitative scenarios can still provide insights into the operations and channels of risk transmission, and entities can reflect findings from such an assessment in business plans, strategies and risk management practices.
61. We consider that prudent practice is for an entity to seek input as needed from external experts such as academics, scientific bodies and/or specialist consultants, while maintaining appropriate internal knowledge and oversight to ensure that the results of any outsourced analysis are credible, realistic and understood by the entity. In all cases, we consider it important for the entity to participate in and understand the process followed to carry out the scenario analysis, rather than relying entirely on external experts. The process can have at least as much value as the results in helping the entity to understand the implications of climate change for its future.

62. When conducting a more advanced quantitative climate-related risk analysis, an entity would typically seek to develop and simulate scenarios that are both plausible and relevant to the entity's operations. Not all entities will have the capability to undertake best practice analysis. However, in developing their capability, we encourage entities to have regard to leading practice, which entails:

- (a) a short-term assessment of the entity's current climate-related risks, in line with current business planning cycles;
- (b) medium and long-term assessments of the entity's plausible future climate-related risks based on different climate-related scenarios, potentially extending to 2050 or beyond;

Key considerations when building such scenarios include:

(i) The physical risk landscape:

- the extent of global temperature rises<sup>5</sup> (for example, rising by 1.5°C by 2100<sup>6</sup>, consistent with the Paris Agreement, reducing the magnitude of long-term physical risks, or rising over 3°C, leading to more significant physical risks); and
- how the different global temperature rises impact upon the climate in New Zealand e.g. drought prevalence, precipitation levels, sea level rise, etc.

(ii) Economic transition pathway:

- an orderly transition to a lower-emissions economy, with policies and activities to address climate change being introduced early and gradually becoming more stringent, minimising both physical and transition risks; or
- a disorderly transition to a lower-emissions economy, with delayed action or divergent policies across countries or sectors to reduce emissions leading to an increase in acute transition risks.

(iii) Integrated analysis:

- scenario analysis that incorporates the effects of physical and transition risks in synthesis, given all plausible future circumstances will feature elements of both. The timing and scale of transition-related impacts will influence the extent to which an entity can prepare for and respond to the physical impacts of climate change, and vice versa.

(c) incorporating both qualitative and quantitative factors into the scenarios used to project the future financial conditions of an entity;

(d) assessing both physical and transition risks within each scenario used;

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<sup>5</sup> For disclosure purposes, CREs are required to cover, at a minimum, one scenario with a temperature rise of 3°C or more, one scenario with a temperature rise of 1.5°C, and at least one other scenario.

<sup>6</sup> It is standard practice for temperature pathways to refer to a level of average global warming by the year 2100, relative to a 1850-1900 baseline: as such, a 3°C temperature scenario in 2100 would generally correlate with a lesser temperature rise in 2050. We do not expect entities to conduct long-term assessments out to 2100.

- (e) measuring the impact of climate-related risks on a range of business obligations and considerations, including solvency, liquidity, and the ability (as appropriate) to meet obligations to depositors and policyholders;
  - (f) incorporating forward-looking information into its scenario analysis by considering future trends in catastrophe modelling, technology innovation, or policy development; and
  - (g) ensuring any scenario is internally consistent.
63. When selecting inputs into its climate assessments, an entity seeking to adopt better practice would have regard to:
- (a) the time horizon of datasets used, including the need for appropriate long-term timeframes as well as sufficient frequency for the risks assessed (for example, some physical risks might require seasonal data, while annual or decadal data may be appropriate for other risks);
  - (b) geographic specificity, ensuring that local extreme weather events and locations to which an entity may be exposed are represented;
  - (c) the impact of an extreme weather event and a high-risk economic environment arising concurrently, leading to non-linear effects; and
  - (d) the range of global emissions pathways included in a dataset and the capacity for a model to evaluate simulations and projections, noting that testing scenarios at the extreme ranges is more likely to identify risks.
64. Useful guidance on conducting scenario development and analysis to assess the impacts of climate-related risks in New Zealand continues to be produced by other New Zealand organisations. Although some of this guidance, including the XRB's, is aimed specifically at the required disclosure around scenario analysis, it includes helpful advice on the whole process of carrying out climate scenario analysis.<sup>7</sup> Useful international guidance has been published by the Task Force on Climate-related Financial Disclosures (TCFD)<sup>8</sup> and the Network for Greening the Financial System<sup>9</sup>.
65. For any entity required to complete an ICAAP, we consider a narrative-driven process a useful approach to considering climate-related risk scenario analysis and stress testing, in order to assess potential risk exposures and available capital resources.

<sup>7</sup> The XRB's guidance is available at <https://www.xrb.govt.nz/standards/climate-related-disclosures/resources/>.

<sup>8</sup> See *Technical supplement: the use of scenario analysis in disclosure of climate-related risks and opportunities* (TCFD, June 2017) available [here](#).

<sup>9</sup> See *NGFS Climate Scenarios for Central Banks and Supervisors* (NGFS, September 2022) available [here](#), and *Guide to climate scenario analysis for central banks and supervisors* (NGFS, June 2020), available [here](#).



66. We consider it good practice for an entity to maintain appropriate documentation of the methodology, process and results of its climate-related risk scenario analysis and stress testing.<sup>10</sup> Material results would be communicated to the entity's governance body and senior management. We encourage the entity to use the results of the scenario analysis, and more broadly lessons learned from carrying out the exercise, to set and review its overall climate-related risk management approach. We also encourage each entity to use the results of the scenario analysis to inform its business model and strategy setting, and to update the transition plan aspects of its strategy as necessary, covering actions and associated targets needed to maintain a resilient business model over the medium and long term.
67. A prudent entity would communicate its scenario methodology to internal and external stakeholders in a clear, accessible way that meets their needs without diminishing clarity with excessive detail.

## 6 Disclosure

68. The disclosure of forward-looking climate-related risk information allows interested stakeholders to assess an entity's resilience to climate-related risks and make decisions based on those assessments. Disclosure can facilitate:
- a) Changes to entities' behaviour by directing attention to climate-related risks – 'you manage what you measure'.
  - b) Changes to investors' behaviour to reflect the climate-related risks and opportunities of investment, thus helping investors to avoid stranded assets and incentivising low-emission investment. Disclosure can help ensure climate change is considered in business decisions.
69. Many entities are subject to the new regime for the mandatory climate-related disclosures regime that is being implemented in New Zealand.<sup>11</sup> Reporting is against standards issued by the External Reporting Board (XRB). The XRB developed these standards broadly in line with the recommendations of the TCFD, and was cognisant of the new global standards being developed by the International Sustainability Standards Board.
70. Like the TCFD recommendations, the XRB's key reporting standard 'Climate-related Disclosures' (NZ CS1) is structured around four thematic areas that represent core elements of how organisations operate:
- a) Governance;
  - b) Strategy;
  - c) Risk Management; and
  - d) Metrics and Targets.

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<sup>10</sup> For more information, refer to the FMA's initial monitoring approach for record keeping: [Climate-related-disclosure-Record-keeping-initial-monitoring-approach.pdf \(fma.govt.nz\)](https://www.fma.govt.nz/Climate-related-disclosure-Record-keeping-initial-monitoring-approach.pdf)

<sup>11</sup> The coverage of the regime includes all registered banks, credit unions, and building societies with total assets of more than \$1 billion, and all licensed insurers with greater than \$1 billion in total assets under management or annual gross premium income greater than \$250 million. These thresholds also apply to overseas-incorporated entities operating in New Zealand, based on the value of their business in New Zealand.

71. These thematic areas are a little different from the section headings in this Guidance, given the different remits of the organisations and the respective purposes of each document. NZ CS1 frames climate-related scenario analysis in the context of strategic resilience, and the requirement that a CRE's climate statement must include a description of the climate scenario analysis the CRE has undertaken falls under the thematic area of 'Strategy'. The Guidance frames climate-related scenario analysis in a similar context, but given its importance for the purposes of managing climate-related risks we have given it its own section. Also, the Guidance discusses metrics and targets within the section on risk management rather than as a separate thematic area.
72. We consider the mandatory CRD regime that has been introduced in New Zealand to be a sound basis for producing information that is useful for an entity's stakeholders. We do not intend for the Guidance to create any conflicts with the CRD regime.
73. Mandatory disclosure applies for financial years starting from 1 January 2023, so the first required climate reports will be published by April 2024. We encourage entities that are CREs to prepare for the new regime in good time. This means developing in-house skills and frameworks to understand the requirements, prepare disclosures, and develop systems to ensure climate-related records can be adequately captured and maintained.
74. Read more about the implementation of the new regime, and the roles and responsibilities of the different government agencies, along with a timetable [here](#).
75. Beyond any statutory or regulatory requirements, we consider that it would be prudent for an entity to consider whether additional, voluntary disclosures could benefit the entity by enhancing transparency and giving confidence to the broader market in the entity's approach to measuring and managing climate-related risks.
76. We encourage entities that are not CREs to consider nevertheless disclosing existing and forward-looking climate-related risk information to demonstrate their resilience to climate-related risk to their investors. We recommend that an entity considers which elements of the mandatory regime would be relevant for its own climate-related risk disclosure, depending on the nature and scale of its activities. With increasing demand from investors and other stakeholders for disclosure on climate-related risks, a lack of absolute certainty about the future impacts of climate-related risks should not be considered a reason to avoid disclosure of exposure to these risks.
77. We anticipate that the demand for reliable and timely climate-related risk disclosure will increase over time. We consider that it would be prudent for an entity to continually evolve its own disclosure practices and regularly review disclosures for comprehensiveness, relevance, and clarity to ensure it is well prepared to respond to evolving expectations in relation to CRD.