

Draft Application Paper on public disclosure and supervisory reporting of climate risk

July 2024

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1 Introduction

1.1 Context and objective

1. Public disclosure and supervisory reporting of material climate-related risks can be particularly challenging given the multidimensional nature of climate-related risks. Yet, as the risks from climate change increase, it becomes increasingly important for insurers to effectively disclose material climate-related risks and for supervisors to integrate these risks into supervisory reporting requirements. This Application Paper provides advice to supervisors on how ICP 9 (Supervisory Review and Reporting) and ICP 20 (Public Disclosure) may be applied in the context of climate-related risks.¹
2. The IAIS acknowledges climate change is and will continue to be a driver of risk for insurers and therefore it is important that it be integrated into the traditional risk categories (eg underwriting, reserving, credit, market, liquidity risk etc). Climate-related risks will affect the assets and liabilities of insurers and evolve over time. Under ICP 20.2.5, insurers' disclosures should enable policyholders and market participants to form well rounded views of their financial condition and performance, business activities and the material risks related to those activities. In the case of climate-related risks, it is therefore important that climate-related risk disclosures be well explained so that they are meaningful and useful for policyholders and market participants in making decisions on insuring risks with and providing resources to, respectively, the insurer.

1.2 Scope and paper structure

3. This Application Paper sets out a pathway for addressing these issues and considers how supervisors may use the developments in climate disclosure standards and frameworks to ensure that the disclosure and supervisory reporting regimes they develop and use in their own jurisdictions are fit for purpose, align with the ICPs and properly incorporate climate-related risks. By publishing this paper, the IAIS aims to promote a globally consistent approach to addressing these issues. Application Papers do not establish new standards nor expectations, but instead provide additional advice to assist with the implementation of existing standards (in this case, ICPs 9 and 20) and provide examples of good practice.
4. It is important for supervisors to consider the issues of climate-related financial disclosure and supervisory reporting holistically to ensure that adequate information is shared with policyholders, market participants and supervisors. This Application Paper therefore considers these issues together and helps supervisors consider how approaches to addressing these matters may be tailored to the individual needs of their respective jurisdictions. Circumstances will vary by jurisdiction depending, amongst other things, on the characteristics of the insurance business written, how material financial risk from climate change is to insurers, and existing or planned climate disclosures in financial reporting.

¹ In subsequent references, "disclosure" relates to public disclosure of climate-related risks. Where a reference is to supervisory reporting, this is explicitly noted.

5. The issue of disclosure of climate-related risks is one that is developing quickly, with action in a number of different forums. As understanding on these issues develops there will necessarily need to be further evolution of disclosure practices to more effectively capture this risk, similar to the way in which more traditional disclosure practices have developed. The IAIS will continue to provide a platform for supervisors to share knowledge and best practice on these issues and develop the capacity of supervisors to understand existing climate disclosure regimes and, where and when they deem necessary, supplement those regimes or develop their own supervisory reporting regimes.
6. This paper covers the ICPs and standards set out in Table 1 in the following sections: Section 2 provides context on the development of climate-related risk disclosures; Section 3 is focused on public disclosure of climate-related risk; Section 4 is focused on supervisory reporting of these risks; Section 5 explores issues issued related to governance of disclosures; and Section 6 highlights the steps supervisors can take to address issues with these disclosures.

Table 1: Overview of ICP standards covered

ICP	Topic	ICP	Topic
9.1	Supervisory reporting requirements	20.2	Appropriate detail for disclosure
9.4	Supervisory reporting framework	20.3	Disclosure of insurer’s profile and external environment
9.5	Analysis of supervisory reporting	20.4	Corporate governance disclosure
9.7	Supervisory review	20.6	Disclosure of material information
		20.7	Financial instruments disclosure
		20.8	Investment risk disclosure
		20.10	Capital adequacy
		20.11	Liquidity risk
		20.12	Financial performance

1.3 Related work by the IAIS

7. Climate change is a source of financial risk, which has the potential to affect the resilience of individual insurers and financial stability. Climate change is a key strategic theme for the IAIS given its potential to affect the resilience of individuals and financial stability. In May 2021, the IAIS published an initial Application Paper on the supervision of climate-related risks in the insurance sector. Since then, the IAIS has closely monitored developments in global climate change mitigation efforts, climate science and how supervisory practices to manage climate-related risks have evolved. In 2022, the IAIS performed a gap analysis of existing IAIS supervisory material to assess how climate-related risk is already captured and to identify possible further work in terms of standard setting and/or providing further guidance on

supervisory practices. This is the fourth in a series of consultation documents, focusing on public disclosures and supervisory reporting.²

1.4 Proportionality

8. Application Papers should be read in the context of the proportionality principle, as described in the Introduction to the ICPs: “Supervisors have the flexibility to tailor their implementation of supervisory requirements and their application of insurance supervision to achieve the outcomes stipulated in the Principle Statements and Standards.”³ When reading the advice, illustrations, recommendations and examples of good practice provided in this paper, it is important to keep proportionality in mind. Where appropriate, this paper provides practical examples of the application of the proportionality principle, such as in Section 2.3.3.

2 Developing a disclosure regime

2.1 Climate-related risk financial disclosures: materiality and relevance

Context

9. Climate change is a source of financial risk which can negatively affect the safety and soundness of insurers. Given the limited progress on implementing international climate agreements, the likelihood of a delayed and divergent transition with correspondingly higher physical risk manifestations has increased. Therefore, it is critical for supervisors to strengthen their understanding of the types and magnitudes of climate-related risks and exposures of the insurance sector in order to effectively identify, monitor and reflect climate-related financial risks in their supervisory responsibilities.
10. ICP 20 provides the global insurance supervisory standard for effective disclosure to enhance market discipline. The standard requires that supervisors require insurers to “disclose relevant and comprehensive information on a timely basis in order to give policyholders and market participants a clear view of their business activities, risks, performance and financial position”. Since climate change is a driver of risks for insurers and these climate-related financial risks should be integrated with existing risk management practices, there is also a need for climate-related financial risks to be integrated into disclosures consistent with ICP 20. This section shows how climate-related financial disclosures are consistent with ICP 20 and the extent to which emerging climate disclosure standards can be used to meet the conditions set out in ICP 20.
11. Supervisors have provided feedback that insurers find some aspects of disclosure of climate-related financial risks difficult (see Section 6 for more details). This Application Paper seeks to provide advice to support effective disclosure of climate-related financial risks, in line with ICP 20,

² See [IAIS](http://www.iaisweb.org/activities-topics/climate-risk/) work on [climate](#) risk at www.iaisweb.org/activities-topics/climate-risk/.

³ IAIS, [Application Paper on the supervision of climate-related risks in the insurance sector, May 2021](#).

internationally agreed climate disclosure frameworks, and frameworks developed by jurisdictional standard setters.

12. Climate-related disclosures are relevant for insurers as they play a number of different roles:

- Preparers of climate-related disclosures where required by stock exchange listing rules and/or jurisdictional disclosure regulations;
- Preparers of product-level climate-related disclosures, such as in the design of investment-linked life insurance policies for retail customers where climate-related risks and opportunities are integrated into the investment strategies of underlying sub-funds;⁴ and/or
- Primary users of general purpose financial reports including climate-related disclosures, as asset owners.

2.2 Link to international standards

13. Given the many links between the insurance, capital markets and banking segments of the global financial services system, the Financial Stability Board (FSB), IAIS,⁵ International Organization of Securities Commissions (IOSCO) and Basel Committee on Banking Supervision (BCBS) have supported an international framework for climate-related financial disclosures.

14. International standards can provide a framework that meets the requirements set out in the ICPs and can provide greater convergence and comparability over time so climate-related risks are effectively reflected in disclosures in line with ICP 20.0.2. The IAIS recognises that international standards for climate disclosures are nascent, and a period of time will likely be needed before comparability can be achieved. ICP 20.0.7 also highlights the benefits of disclosing the methods and assumptions used for preparing information to aid comparability between insurers. This is especially useful in the case of climate-related disclosures given the data and modelling uncertainties.

2.3 Fundamental principles of a climate-related risk disclosure framework

15. This section considers the extent to which elements of ICP 20 support the development of climate-related financial disclosure frameworks.

2.3.1 *Materiality approach based on the information needs of users*

16. ICP 20.0.1 defines the users of disclosures as market participants⁶ and policyholders who make decisions on providing resources to and insuring risks with the insurer. Information should be meaningful, useful, relevant and comprehensive to provide a clear view on the insurer's business activities, risks, performance and financial position. ICP 20.0.10 cautions against unnecessary

⁴ See ICP 20.12.19: "For many life insurance policies, returns that policyholders receive are either directly or indirectly influenced by the performance of an insurer's investments. Disclosure of investment performance is, therefore, essential to policyholders and market participants."

⁵ See IAIS, "[IAIS welcomes global climate-related financial disclosure standards](#)", August 2022.

⁶ Market participants are defined to include existing and potential investors, lenders and other creditors.

volumes of disclosure, which may obscure useful information. This principle applies equally for disclosures covering climate-related risks.

17. This approach to materiality assessment applies the materiality threshold to information needed by the users of the reporting entity’s general purpose financial reports, rather than to a wider stakeholder audience.

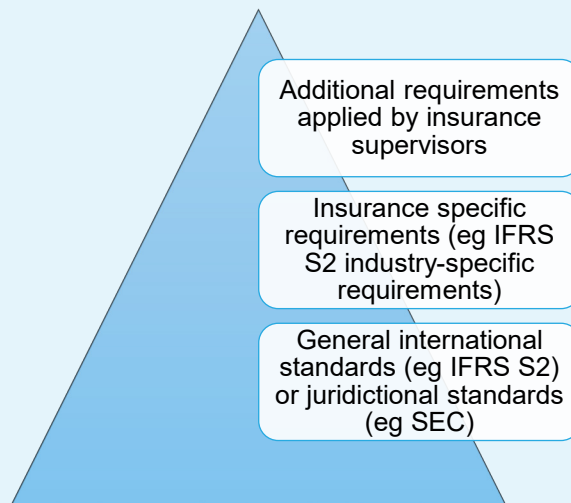
Box 1: The need for a specific climate-related risk disclosure regime for insurers

Disclosure is a policy area that is not the sole preserve of supervisors. General corporate disclosure regimes are typically developed by authorities such as accounting authorities, markets regulators or ministries of finance. Therefore, consistent with ICP 20, supervisors should consider the needs of market participants and policyholders and whether the existing disclosure framework in their jurisdiction is sufficient.

Supervisors should explicitly consider whether they need to supplement existing disclosure requirements with sector-specific measures. This may be relevant where:

- a. General disclosure regimes do not adequately capture climate-related risk or prove to be too generic to adequately meet the needs of users of insurers’ disclosures under ICP 20;
- b. Regimes with sectoral requirements fall short of meeting the requirements set out in ICP 20 to some extent and can be augmented by the supervisor; or
- c. Where insurers are not making sufficient clear disclosures such that they are consistent with ICP 20 and/or where users are unclear about the points being disclosed by insurers.

The International Sustainability Standards Board (ISSB) has developed a global baseline that provides a good basis for a framework consistent with the ICP 20.0.2. The framework could include the following elements:



If jurisdictions decide not to apply any additional disclosure requirements on top of the international standards, supervisors can still consider conducting thematic work to assess the disclosures by insurers and to ensure they are meeting the needs of market participants and policyholders (together, “users”).

2.3.2 Connectivity to financial reporting standards and extending reporting to a longer term horizon

18. ICP 20.2 requires disclosure of “appropriately detailed information” on a range of items, including financial performance, investment risk exposure and asset-liability management (ALM). ICP cash flow assumptions and ICP 20.6 stipulate disclosures should be made for reasonably foreseeable and material insurance risk exposures. Climate-related risk disclosures should seek to address how climate-related risks and opportunities may affect the resilience of an entity’s profit margins, operating cash flows and balance sheet for the current period as well as across the short-, medium- and long-term horizons. Forward-looking climate-related financial disclosures may help users understand reasonably foreseeable and material risks that may extend beyond the typical horizon as well as the recognition criteria of financial reporting due to the longer time horizons, non-linear nature and complex transmission channels through which climate effects may manifest. This is particularly relevant for insurers whose liabilities and assets tend to be longer in duration.

2.3.3 Application of the proportionality principle

19. ICP 20.0.5 requires supervisors to apply disclosure requirements in a manner that reflects the “nature, scale and complexity of insurers”⁷ while promoting market discipline and meeting user information needs. In-built proportionality mechanisms within a climate disclosure framework/standard will help avoid a one-size-fits-all approach that unduly burdens small private insurers, which have limited capabilities and resources for climate-related disclosures compared with larger publicly listed industry players. Supervisors will need to balance overriding principles of proportionality against several other considerations. For instance:

- Concentration risk: Consistent with ICP 20.6.6, where small insurers have concentrated exposures to certain climate perils either due to geographical or economic sector concentrations, which would be considered material by users, they will need to be disclosed. Equally, supervisors will want to assess whether such concentrated risks are relevant and should be disclosed.
- Different disclosure costs: Existing climate disclosure regimes acknowledge the fact that different disclosures come with different burdens. For instance, governance disclosures that set out how climate-related risk is integrated into governance frameworks are less costly to implement than those that require disclosure of scenario analysis results. Supervisors will want to consider these issues as they assess what disclosure is necessary and proportionate.

This is particularly the case for climate disclosure items that are (i) likely to have higher levels of measurement or outcome uncertainty due to the longer-term horizon, non-linear effects and feedback loops of climate change; and (ii) more complex and less familiar at this juncture, for example scenario analysis and anticipated financial effects of climate-related risks and opportunities. ICP 20.0.10 cautions against excessive disclosure requirements that will be burdensome for insurers without leading to effective disclosures, and this is pertinent to these climate items. ICP 20.2.4 also

⁷ See ICP 20.0.5: “The supervisor’s application of disclosure requirements will depend on the nature, scale and complexity of insurers. For example, it may be overly burdensome for a small, private insurer to meet the same requirements developed for large, publicly traded insurers. While disclosure requirements may vary, the outcome should promote market discipline and provide policyholders and market participants with adequate information for their needs.”

notes the need to “balance the interests of reliability against those of relevance or usefulness”, for example in preparing and disclosing information with a high degree of inherent estimation uncertainty. This may be particularly relevant for some climate-related disclosures.

Box 2: Example of an international climate disclosure standard - International Sustainability Standards Board (ISSB)

In June 2023, the ISSB, formed in November 2021 under the auspices of the IFRS Foundation, issued its inaugural sustainability standards IFRS 1 (General Requirements for Disclosure of Sustainability-related Financial Information) and IFRS 2 (Climate-related Disclosures). IFRS 1 provides general requirements for the disclosure of sustainability-related risks and opportunities that could reasonably be expected to affect an entity’s cash flows, access to finance, or cost of capital over the short, medium and long term. It includes requirements for content and presentation to ensure decision-useful information is produced. IFRS 2 specifies climate-related disclosures and is designed to be used with IFRS 1. IFRS S2 is structured around four areas: governance, strategy, risk management and metrics and targets.

Materiality approach based on information needs of users

The ISSB definition of materiality is set out in IFRS S1 Appendix A notes that “in the context of sustainability-related financial disclosures, information is material if omitting, misstating or obscuring that information could reasonably be expected to influence decisions that primary users of general purpose financial reports make on the basis of those reports, which include financial statements and sustainability-related financial disclosures and which provide information about a specific reporting entity.”

Connectivity to financial reporting standards and reporting over a longer-term horizon

The concept of connected information is embedded within the ISSB standards as a conceptual foundation, including as it relates to connections between sustainability-related financial disclosures and the related financial statements. Whilst the ISSB standards do not require the related financial statements to be prepared using IFRS accounting standards, those doing so benefit due to the design of the ISSB standards which includes shared concepts and terms. The ISSB standards (i) use common underlying concepts, such as materiality, and financial terms, such as carrying amounts of assets and liabilities, used in the IFRS accounting standards;; (ii) require disclosures on the current and anticipated quantitative impacts of climate on an entity’s financial performance, financial position and cash flows over the short, medium and long term; and (iii) require disclosures to be made such that users can understand the connections between climate-related financial disclosures and related financial statements.

Application of the proportionality principle

The ISSB standards incorporate proportionality mechanisms that apply to specific requirements⁸ that respond to the range of capabilities and preparedness of companies around the world to apply the requirements including allowing for the consideration of preparers’ skills, capabilities and resources. This includes that a preparer is only required to consider “reasonable and supportable

⁸ Disclosures related to on determination of anticipated financial effects, climate-related scenario analysis, assessment of Scope 3 GHG emissions, identification of risks and opportunities, determination of the scope of the value chain and calculation of metrics in some cross-industry categories.

information that is available at the reporting date without undue cost or effort” for specific requirements with high levels of measurement or outcome uncertainty and to ensure requirements are proportionate to an entity’s circumstances. The concept of supportable information aligns with ICP 20.2.4’s point on reliability versus relevance or usefulness of information disclosed. In addition, IFRS S2 includes reliefs in the first year of applying the standard such as permitting a company to: continue to measure its greenhouse gas (GHG) emissions with a method other than the Greenhouse Gas Protocol; not provide scope 3 disclosures; and not provide comparatives.

Adoption of the ISSB standard

The ISSB is tracking the implementation of the global climate disclosure standard and supporting jurisdictions with capacity building to help them effectively implement the standard. It provides regular updates on implementation progress on its website.⁹

Box 3: Example of a jurisdictional climate disclosure standard – US SEC rules on climate-related disclosures

In March 2024, the US Securities and Exchange Commission (SEC) adopted rules to enhance and standardise climate-related disclosures by public companies and in public offerings.¹⁰ The rules require US public companies, including foreign private issuers, to include certain climate-related disclosures in registration statements and annual reports. Required disclosures include, amongst other things, climate-related risks that have had or are reasonably likely to have a material impact on a registrant’s business strategy, results of operations or financial condition; any oversight by the board of directors of climate-related risks and any role by management in assessing and managing the registrant’s material climate-related risks; whether and how any processes the registrant has for identifying, assessing and managing material climate-related risks are integrated into the registrant’s overall risk management system or processes; capitalised costs, expenditures expensed, charges and losses incurred as a result of severe weather events and other natural conditions, subject to applicable one percent and de minimis disclosure thresholds; and information about material Scope 1 and/or Scope 2 GHG emissions for certain filers. The rules do not mandate disclosure of Scope 3 emissions.¹¹

Although the SEC-adopted rules for climate disclosures are summarised below, these rules were indefinitely voluntarily stayed in response to several court filings. The timing of the court review, whether any component of the rules will be upheld and the timing of the required compliance with any upheld provisions is uncertain.

Materiality approach based on information needs of users

⁹ See www.ifrs.org/ifrs-sustainability-disclosure-standards-around-the-world/jurisdiction-consultations-on-sustainability-related-disclosures/

¹⁰ See SEC, *The enhancement and standardization of climate-related disclosures for investors*, 6 March 2024.

¹¹ Scope 1 are direct GHG emissions, Scope 2 are indirect GHG emissions from purchased electricity and other forms of energy, and Scope 3 are indirect emissions from upstream and downstream activities. Generally any reference to emissions in this paper refers to CO₂e emissions. The Intergovernmental Panel on Climate Change describes CO₂e as: “The amount of carbon dioxide (CO₂) emission that would cause the same integrated radiative forcing or temperature change, over a given time horizon, as an emitted amount of a greenhouse gas (GHG) or a mixture of GHGs... Water vapour (H₂O), carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄) and ozone (O₃) are the primary GHGs in the Earth’s atmosphere”.

The SEC climate disclosure rules specify that registrants should rely on traditional notions of materiality under the US securities laws when evaluating whether any climate-related risks have materially affected or are reasonably likely to have a material impact on the registrant, including on its business strategy, results of operations or financial condition. As defined by the Commission and consistent with US Supreme Court precedent, “a matter is material if there is a substantial likelihood that a reasonable investor would consider it important when determining whether to buy or sell securities or how to vote or such a reasonable investor would view omission of the disclosure as having significantly altered the total mix of information made available”.¹² The SEC notes that the final rules will provide “more complete and decision-useful information about the impacts of climate-related risks on registrants, improving the consistency, comparability and reliability of climate-related information for investors”.

Connectivity to financial reporting standards and reporting over a longer-term horizon

The SEC climate disclosure rules require registrants to make disclosures in their registration statements or annual reports, with appropriate captioning and electronic tagging to make them easy to find. Information on the financial impacts of severe weather events and other natural conditions will need to be included in a note to the financial statements.

The rules require a registrant to describe whether any material climate-related risks are reasonably likely to manifest in the short-term (ie the next 12 months) and separately in the long-term (ie beyond the next 12 months). This temporal standard is generally consistent with existing disclosure requirements, but in adopting the rule the Commission noted that “a registrant is not precluded from breaking down its description of risks reasonably likely to manifest beyond the next 12 months into components that may include more medium- and longer-term risks, if that is consistent with the registrant’s assessment and management of the climate-related risk”.

Application of the proportionality principle

The final rules will be phased in for all registrants, with the compliance date dependent upon the type of filer and the content of the disclosure. The final rule also provides several accommodations, including: additional phase-in periods for disclosures pertaining to material expenditures, GHG emissions, the requirement to obtain assurance regarding GHG emissions disclosures and the electronic tagging requirement; a safe harbour from private liability for climate-related disclosures (excluding historical facts) pertaining to transition plans, scenario analysis, the use of an internal carbon price, and targets and goals; an exemption from the GHG emissions disclosure requirement for smaller reporting companies and emerging growth companies (each as defined by SEC rules); and an accommodation that allows Scope 1 and/or Scope 2 GHG emissions disclosure, if required, to be filed on a delayed basis.

2.4 Recommendations

20. Consistent with ICP 20, supervisors should require that climate-related risks are effectively captured in public disclosure requirements where material.
21. Insurers should ensure connectivity between the information presented in their financial statements and their climate disclosures so that users can understand how climate-related risks

¹² Id, p 105.

can have an impact on insurers' business activities, risks, performance and financial position. Over time, insurers should consider integrating climate-related financial disclosures and financial statements within one document, including management discussion and analysis/commentary where possible and in line with jurisdictional reporting requirements. This holistic approach can provide a more comprehensive view of the risks facing insurers.

22. Consistent with existing disclosure, climate disclosures should be focused on ensuring indicators are relevant and meaningful for market participants and policyholders. Materiality assessments should be applied to determine whether climate-related information is considered material to users' decision-making processes, including voting and stewardship.

3 Public disclosure of decision-useful climate information

3.1 Climate information

Context:

23. ICP 20.2 requires that insurers disclose "appropriately detailed information on their: company profile; corporate governance framework; technical provisions; insurance risk exposure; financial instruments and other investments; investment risk exposure; asset-liability management; capital adequacy; liquidity risk; and financial performance". This should include climate-related risks where material and the assessment of materiality should be disclosed.
24. ICP 20.0.1 states that public disclosure is intended to provide "meaningful and useful information" to users. Including climate data and indicators¹³ in disclosures is consistent with this objective and ensures that disclosure is sufficiently comprehensive and therefore decision-useful.
25. ICP 20 sets a framework that includes both qualitative and quantitative disclosures to help users understand an insurer's risk exposures. Given the challenges of estimating the impacts of climate-related risk due to its forward-looking and unprecedented nature, insurers may consider using qualitative disclosures for reasonably foreseeable and material risks and should disclose the assumptions used for quantitative risk estimates.
26. Climate-related risks should be integrated into disclosures of existing risk categories. Over time, and subject to the caveats set out in the previous section, supervisors should expect climate-related risk to become increasingly reported and accounted for by insurers. Table 2 sets out examples of how climate risk can be integrated into the disclosures that are already required under the standards ICP 20.2–20.12:

¹³ The ICPs generally refer to the use of indicators; however, the term is broadly interchangeable with metrics.

Table 2: ICP 20 disclosure standard

ICP	Links to climate-related risk
20.2	The standard requires disclosure of various areas of information, including insurer profile, insurance/investment risk exposure, capital adequacy and corporate governance framework. Supervisors should consider how insurers are incorporating climate-related risks into these disclosures and ascertain that insurers have a robust process in place for making a proper and comprehensive assessment of risks for the purpose of these disclosures.
20.3	The standard requires disclosures on the “external environment” and “main trends” and “factors” (ICP 20.3.4) that will influence the business of the insurer. Supervisors should consider how insurers assess and disclose climate-related risk to the extent it is one of various factors that may influence insurers in the coming years.
20.4	The standard requires disclosures on the insurer’s corporate governance framework, including key features of internal controls and risk management. Supervisors should consider how insurers integrate climate-related risks into their enterprise risk management (ERM) systems.
20.6	The standard requires disclosures on “reasonably foreseeable and material insurance risk exposures” and their management, including models and techniques. Supervisors should examine how insurers assess and disclose the extent to which climate-related risks form such exposures, as well as the use of climate models, relevant risk concentrations and reinsurance where relevant. For instance, they may wish to set out an assessment of their ability to cede risk to reinsurers in the light of climate-related risks and how this mitigates their own risk exposure.
20.7	The standard requires disclosures about insurers’ financial instruments and investments. Supervisors should consider how insurers assess and disclose the extent to which their financial instruments may be exposed to climate-related risk at the individual instrument level and across their wider portfolio. Assessments of risks by sector and by geographic area may be needed. For example, insurers should disclose how they manage risks related to longer-dated instruments with significant exposure to carbon-intensive sectors or to jurisdictions with a higher geographic concentration of physical risks.
20.8	The standard requires disclosures on the insurer’s material investment risk exposures and their management. Investment risks are likely to increase because of the impact of both physical and transition climate-related risks on the collateral value, useful life and price of assets. Insurers should disclose how their investment risk exposure may change over time as climate change becomes an increasing driver of risks, using climate-risk scenario analysis where appropriate. The underlying assumptions and results of such analysis should be disclosed, in line with ICP 20.8.7.
20.10	The standard highlights the need to clearly disclose details about the insurer’s capital adequacy. This should include the impact of climate-related risks on capital adequacy if insurers expect their solvency to be materially affected.
20.11	The standard requires the insurer to disclose sufficient qualitative and quantitative information about its liquidity risks. Supervisors should consider how insurers assess and

disclose the impact on liquidity risks as climate-related risks crystallise over time and markets respond accordingly, where material.

20.12 The standard requires disclosures on the insurer's financial performance. Supervisors should consider how insurers disclose the extent of any material impact of climate change on earnings, claims experience, pricing or investment performance. To address uncertainties regarding the assessment of such impacts, insurers should disclose underlying assumptions and climate scenarios used.

Box 4: Climate-related risk indicators for public disclosure and supervisory reporting

Consistent with their use in public disclosure and supervisory reporting of non-climate-related risks, indicators can provide relevant and reliable information on climate-related risks and how these risks are integrated into existing risk frameworks. Consistent with ICP 20.6, indicators can help insurers to more effectively communicate their exposures. Consideration should be given to using the most relevant indicators for different business lines.

Climate-related risk indicators are measures used to quantify and communicate the nature, scale and complexity of specific risks posed by climate change to an insurer. They can be designed to capture various dimensions of climate-related risk and can be helpful for internal risk management, supervisory reporting, and external reporting and compliance.

Ultimately the aim should be to integrate climate-related risk into the financial indicators used by insurers to disclose information on material risks. In the near to medium term, a range of other indicators will likely be used, often as proxies, to highlight insurers' climate-related risk exposures due to the difficulties set out in Section 6.

Indicators enable users to compare and benchmark the climate-related risk exposure and performance of different insurers within and across sectors over different time horizons. Additionally, as noted in ICP 20.0.7, "meaningful comparisons can be made only where there is adequate disclosure of how information is prepared", so that market participants understand the methods and assumptions underlying indicators and their inherent limitations.

Consistent with broader financial indicators, climate-related risk indicators can be used by insurers to set measurable risk management targets and track and communicate their progress.

Climate-related risk indicators enable insurers to demonstrate their ability to mitigate climate-related financial risks and maintain the resilience of their business models, including in their product development, customer distribution and information sharing with customers and reinsurers.

Climate-related risk indicator typology

In integrating climate-related risk into existing risk taxonomies, it is important to consider how physical and transition risks have an impact on both assets and liabilities. Indicators currently used typically relate to physical, transition or governance risks. The following examples, while not comprehensive, are illustrative of indicators that could be useful and will likely evolve over time.

Examples of physical risk indicators

These indicators help to evaluate the potential impact of physical climate-related events on insurer assets and underwriting:

Asset and underwriting risks

- Frequency and severity of natural disasters and chronic weather-related changes: indicators measuring the incidence and impact of events like hurricanes, floods, wildfires and droughts as well as the incidence and impact of weather-related changes such as heat stress, humidity and increase in vector-borne diseases;
- Geographical risk exposure: assessing the vulnerability of geographic areas to climate events for life and non-life exposures;
- Different physical risk scenarios that can be used to produce a range of potential impacts on insurance liabilities and investments; and
- Projected financial impact of an increase in frequency and severity of weather events: estimating how frequent and how severe weather-related events (like hurricanes, floods, droughts) might become under different warming scenarios and how they may affect financial outflows for insurers for life and non-life business, as well as necessary premium changes for business continuity.

Examples of physical risk indicators used by insurers are the annual average loss (AAL) and probable maximum loss (PML) metrics.

The AAL is commonly used to estimate the average expected loss in any year due to catastrophic events like floods, or storms. The basic formula for the Annual Average Loss is:

$$AAL = \sum (P_i \times L_i)$$

Where:

P_i = Probability of a particular event occurring in a given year (eg, a flood of a certain severity)

L_i = Losses associated with that event if it occurs (eg, the cost of damage from the flood)

The PML is commonly used to estimate the worst loss at different return periods (eg 1 in 100) from catastrophic events like floods or storms. The basic formula for the PML is:

$$F(L) = \text{Probability } (l \leq L)$$

$$PML (1 \text{ in } 100) = F^{-1}(0.99)$$

Where:

$F(L)$ is the cumulative distribution of losses (l), ie the probability that the maximum loss from an event in a given year will be less than L . The PML at a defined return period (eg 1 in 100) is then the largest loss than one could expect at the defined percentile (eg 99th percentile).

Asset risks

Asset-specific risk assessments: evaluating the susceptibility of individual assets, asset categories (eg equities, corporate or sovereign debt) and/or economic sectors to climate-related risks (eg real estate exposure).

Examples of transition risk indicators

These focus on the risks associated with the transition to a low-emission economy. Key indicators may include:

Asset and underwriting risks

- Legal and regulatory risks: assessing the potential for litigation or regulatory penalties associated with the transition;
- Exposure to high-carbon industries: assessing the proportion of the investment portfolio (eg long-term bonds) or underwriting activities (eg financed emissions) linked to fossil fuels or other high-carbon sectors;
- Different scenarios: analysing the potential impact of various transition risk scenarios (eg orderly transition versus delayed response) on insurance liabilities and investments, particularly those in carbon-intensive industries, as well as the sensitivity of impacts to different carbon prices; and
- Technological developments: for example, projected financial impact of technological improvements or innovations and shifts in supply and demand for certain commodities, products, and services: estimating how these changes might occur under different transition scenarios and how they may affect financial outflows for insurers for life and non-life business.

Asset risks

- CO₂e emissions footprint or intensity of investments: measuring the current and forecast GHG emissions (absolute or intensity) associated with an insurer's investment portfolio;
- Portfolio alignment indicators, such as alignment to the Paris Agreement, which may be relevant in some jurisdictions especially where this transition is embedded in statutory provisions;
- Stranded asset risk: evaluating unforeseen loss of asset value due to abrupt changes in market dynamics, regulation or technological advancements; and

Investments in climate resilience: measuring the extent of investments in climate adaptation, as well as the adequacy of portfolio companies' capital expenditure on adaptation measures.

3.2 Disclosure of scenario analysis results

27. Scenario analysis can be a useful tool for assessing the impact of climate-related risks. Scenario analysis exercises are not intended to present a definitive assessment of the extent to which climate will be a driver for risks faced by insurers. Rather, they are intended to be used by supervisors from both a micro- and/or macroprudential perspective and by insurers to understand

the impacts of climate change on insurers' strategy and the medium- and longer-term risks an insurer faces.¹⁴

28. Where a scenario analysis is conducted and the conclusions from the exercise are material, consistent with ICP 20 and with legal requirements in general, supervisors should consider requiring the disclosure of these results and how scenario analysis is used in governance and senior management decision-making processes. Insurers that perform climate-related scenario analysis on their activities should disclose a description of the climate-related scenarios used, including the critical input parameters, assumptions and considerations, and analytical choices. Indications of the quality of the scenario analysis should also be provided. Insurers should also indicate how the assumptions and parameters align with their risk appetite and strategic business direction. Insurers should also convey the uncertainty in the assumptions or scenarios so that users understand how they should consider the disclosures. Existing guidance from ISSB and the Task Force on Climate-related Financial Disclosures (TCFD) provides a general approach to the disclosure of scenario analysis exercises. However, where existing disclosure frameworks being used by supervisors do not include guidance, supervisors may consider using the following indicators:

Climate scenario-conditional projections (every five years until 2050):

Asset-related indicators (impact of transitional only, physical only and both)

- Credit ratings by sector and region;
- Equity valuation by sector and region;
- Value of real estate that could be uninsurable; and
- Real estate valuation by region.

Underwriting-related indicators

- Natural catastrophe (NatCat) losses by peril and region;
- NatCat climate-adjusted premium level by peril and region;
- Proportion of market becoming uninsurable by peril and region;
- Mix of technologies in given sectors (eg electric vs ICE vehicles);
- Expected legal liability claims by region; and
- Life and health reserve strengthening by region and line of business.

Corporate indicators

- Earnings impact by line of business; and
- Capital impact.

29. Supervisors requiring disclosures on the use and extent of scenario analysis exercises may consider implementing “comply or explain” approaches. In a number of jurisdictions, scenario analysis requirements are driven by a materiality assessment, which is especially important in the area of indicators and targets explored in Section 3. Supervisors should consider the extent to which insurers are required to disclose their approach to climate-related scenario analysis and

¹⁴ See Scenario Analysis Application Paper for more details.

how it drives internal decision-making, and whether qualitative and/or quantitative outputs are required. Supervisors may also consider other scenario analysis specifications such as using specific scenarios and risks, how scenario analysis outcomes can be disclosed, and scenario analysis limitations. Due to confidentiality concerns, supervisory reporting may be more appropriate for quantitative outputs, method specifications, outcomes and decision-making derived from scenario analysis, with only a high-level summary required for public disclosures.

3.3 Key criteria to improve the decision usefulness of indicators

30. Consistent with the definition set out in ICP 14 (Valuation), decision usefulness means the usefulness in making judgments about climate-related risks to which insurers are exposed.
31. The selection of indicators may be driven by the regulator (through requirements imposed on corporates in general or insurers in particular), the supervisor (in the context of supervisory reporting or ad hoc requests made for the identification of idiosyncratic or systemic risks), the markets (influence of third parties such as rating agencies and data providers) or the insurers themselves (voluntary disclosures).
32. When choosing which indicators insurers should be asked to disclose, supervisors may use the following criteria:
 - **Relevance and reliability:** Relevance implies that the information can influence the decision-making process by helping users assess past, present or potential future events. Reliability means the information accurately reflects the insurer's performance and strategy and the underlying data used to generate indicators is reliable.
 - **Timeliness:** Timeliness refers to the disclosure of the most up-to-date information as well as the promptness and frequency of the disclosure in order to enable users to factor information into decision-making processes.
 - **Fair presentation:** Public disclosures should present a fair view of the insurer's performance and financial position. This includes not only adhering to accounting standards, but also ensuring that the overall presentation does not obscure the true nature of financial activities.
 - **Understandability:** Information should be presented in a clear, concise and coherent manner.
 - **Transparency:** Disclosures should extend to the key components of data (eg source, limitations, proxies, assumptions) and method (eg scope, formula) used to compute the indicators.
 - **Forward-looking perspective:** Forward-looking information may be more relevant for climate-related financial risks than for other types of risk, given the unprecedented nature of climate risks and the longer time horizon over which they manifest. Providing insights into future prospects and reasonably foreseeable and material risks and management's plans can significantly enhance the decision usefulness of disclosures.
 - **Cost-benefit considerations:** Decision usefulness should encompass an element of cost-benefit assessment consistent with the ICP principles on proportionality so as to account for the cost and accessibility of data.

3.4 Climate adaptation

33. Climate adaptation refers to actions to prepare for and adjust to the current and future impacts of climate change, for instance increased use of flood barriers or different building codes to reduce the impact of wildfires. Insurers can require that repairs carried out in response to a claim, for instance for flooding, be designed to reduce exposure from future perils (often referred to as “building back better”). These measures have the potential to significantly reduce exposure to climate risks. Insurers should clarify whether the information presented takes into account adaptation measures, especially where this results in a material difference to risk exposure.

3.5 Recommendations

34. Integrating climate considerations into disclosure regimes: supervisors should consider revising expectations or providing guidance to clarify how material climate-related risk exposures should be disclosed to meet the ICP 20 requirements, as for any other material risk.

35. Due to differences in legal and regulatory frameworks, comparability of jurisdictional disclosure regimes may not be easily achieved. Nonetheless, supervisors should encourage the development and adoption of standardised indicators and disclosure formats for climate-related risk, which will need to recognise different business models. When supported by robust disclosure of the methods and assumptions used, a more standardised set of indicators will help users to better understand insurers’ disclosures on the elements in ICP 20 (see Table 2) and enhance the comparability of information between insurers as well as with other financial institutions.

36. Transparency and consistency of indicators: supervisors should guide insurers to be transparent and consistent in their use of data sources and methods to calculate climate indicators (ICP 20.0.7). This includes disclosure of clear explanations of the methods used and any changes thereof.

37. Forward-looking information: supervisors should encourage the use of forward-looking indicators to capture reasonably foreseeable and material risks, set either by authorities, where relevant, or by individual insurers to ensure insurers disclose decision-useful information that reflects the evolving nature of climate-related risks.

38. Regular updates and reviews: supervisors should review and update processes for climate-related indicators to ensure that the most updated and robust climate-related data, methods and indicators are integrated into reporting.

4 Considerations for supervisory reporting of climate-related risks

Context

39. ICP 9 sets out broad requirements for supervisors to use off-site and on-site inspections to examine the business of each insurer; evaluate its financial condition, conduct of business, corporate governance framework and overall risk profile; and assess its compliance with relevant

legislation and supervisory requirements. Since climate-related risk is a driver of risks within existing risk categories, it is important that this risk also be disclosed in supervisory reporting. While many elements of ICP 9 are relevant, this section in particular highlights how:

- ICP 9.1 (with a focus on ICP 9.1.6, 9.1.7 and 9.1.8) and ICP 9.4 (including ICP 9.4.3), which set out specific supervisory reporting requirements, should be interpreted in order to integrate climate-related financial risks; and
- ICP 9.5 and 9.7 are relevant to the extent that climate-related risks need to be integrated into governance processes for supervisory reporting.

40. Supervisory reporting: ICP 9.4 sets out the framework supervisors should have in place to gather relevant quantitative and qualitative information from insurers in order to understand the risks to which they are exposed. Since climate-related risk is a driver of existing risk categories (eg underwriting, reserving, credit, market, liquidity risk etc) it is important that issues related to climate change be adequately captured as part of supervisory oversight of the insurer's approach to managing risk, where material.

41. Supervisory reporting is complemented by insurers' public disclosures. In both instances, information provided could be qualitative and/or quantitative depending on the nature of the risk and the intended audience. Additionally, public disclosure and supervisory reporting often include metrics, to the extent these are useful, and comparable indicators of risks.

42. With climate-related risks, the creation of the TCFD was a forerunner to broad adoption of supervisory reporting. While the IAIS has welcomed the work of the TCFD, which culminated with the June 2023 publication of the ISSB standards,¹⁵ this does not negate the need to consider whether – and if so, what – information should be collected as part of supervisory reporting. Additionally, there is the potential for an iterative process on supervisory reporting to highlight what data and/or metrics may be used for disclosure (recognising the fact that the audiences for supervisory reporting and disclosure are different).

4.1 Understanding different climate-related risks

43. Supervisors should ensure that climate-related risks are adequately captured in the information they receive from insurers, where material. Depending on their mandate, supervisors should look to undertake supervisory reporting that captures micro/macprudential risks and conduct risks.

- Prudential: Supervisory reporting can help supervisors understand whether insurers have embedded sufficiently robust risk management, compliance and governance processes that are consistent with regulatory requirements and provide for effective assessment of climate-related risks. Equally, supervisory reporting enables supervisors to assess the adequacy of insurers' capital resources to cover these risks, consistent with ICP 9.1.7.
- Conduct: Supervisory reporting can help supervisors understand the extent to which policyholders may be exposed to greater risks. Conduct regulators should seek to understand

¹⁵ See [IFRS, "IFRS Foundation welcomes culmination of TCFD work and transfer of TCFD monitoring responsibilities to ISSB from 2024"](#).

how these risks can negatively affect consumer outcomes if coverage is removed. ICP 9.4 requires insurers “to report on any material changes or incidents that could affect their condition or customers”. Consumer outcomes may be affected if climate change results in changes in pricing, perils underwritten or the geographic availability of coverage. Insurers should be reporting claims information at a sufficiently granular level so that supervisors can analyse the loss trends. One use of this data would be to enable supervisors to receive information prior to insurers pulling out of a market, so that they can understand the reasons behind these changes and assess the likely market impact, as well as have more time to determine supervisory actions. Rational decisions by insurers to reduce their exposures from a prudential perspective could have a negative impact on the market in general (ie collective action problems).¹⁶

4.2 Supervisory reporting examples

44. This section considers approaches supervisors should consider when developing their reporting framework. Consistent with ICP 9.4, there are three broad categories of reporting:

- **Quantitative:** Consistent with the need to determine the insurer’s overall risk profile (ICP 9.1.6), supervisors should ensure they capture available data points on the exposure and likely risk profile of certain assets/underwriting exposed to climate-related risk.
- **Qualitative:** Supervisory reporting should also consider qualitative elements about exposure to climate-related risk, for instance a narrative description on how the risks the insurer underwrites are expected to change over time.
- **Governance:** the extent to which climate-related risk is being embedded in governance processes. ICP 9.1.6 notes that the supervisory reporting framework should include reporting on “the systems of risk management and internal controls; organisational structure; and compliance with supervisory requirements”. This applies equally for climate-related risk and should include the extent to which risk committees have discussed and integrated climate-related risks into risk governance frameworks, as well as the expertise in place to address any gaps in skills and capabilities. Equally, ICP 9.1.6 flags the need for disclosure to reflect changes to “business objectives and strategies and business models”, which should capture any climate change-driven changes, for instance the extent to which insurers will no longer underwrite certain perils (eg flooding) or provide cover in certain geographic locations (eg coastal properties).

4.3 Supervisor-level data issues

45. ICPs 9.5 and 9.7 taken together highlight the need for supervisors to monitor insurers by using “analysis [of] information provided through supervisory reporting” to take “preventive or corrective” actions to address identified issues. Supervisors should engage with insurers to better understand their climate-related risk exposures and discuss how these disclosures and/or supervisory reporting barriers can be addressed.

¹⁶ Conduct issues related to issues such as greenwashing are explored in an earlier Application Paper.

Table 3: Solutions to address disclosure challenges

Issue	Supervisory solutions
<p>Lack of granularity of exposures: Reported information on climate-related risks often lacks the required granularity to translate the reported data into risks as set out in ICP 9.1.6 to understand the insurer’s risk profile.</p>	<p>To address these issues, supervisors could require the following information as part of supervisory reporting:</p> <ul style="list-style-type: none"> • More granular information on insured losses for weather-related perils, attributed to specific catastrophes; • More detailed information for classification of investments into sectors (eg four-digit NACE codes); • Geolocation data for assets and liabilities to understand physical risks to a much higher spatial resolution; and • Information on how prevention measures affect risks such as through risk exposures, insured losses and modelling.
<p>Inability to translate collected data into risks: Gaps in data, unclear assumptions, unclear relationships between climate-related risk data and financial data, and many other data issues can also prevent translation of reported information into risks. For example, supervisors note that there is no established way to translate GHG emissions into prudential risks to insurers, as climate scenario analysis and stress testing methods are still evolving.</p>	<p>While climate-related risk data gaps exist, supervisory reporting regimes can at least identify the gaps and what insurers are doing to address these so supervisors can assess insurers’ overall risk profile (ICP 9.1.6). Initial qualitative reporting on the gaps and difficulties in understanding climate-related risks will help supervisors engage with these issues, understand cross-sector trends, identify best practices and set a clear path to removing barriers to assessing climate-related risk.</p>
<p>Assessing climate-related risk has notable differences to the approaches that insurers use to assess other risks. For instance, assessments need to be longer-term to capture the full effects of climate-related risks, historical data is considerably less reliable for assessing risks, and risk measurement methods are evolving quickly.</p>	<p>Supervisors should ensure that uncertainties in disclosure and supervisory reporting are effectively communicated by insurers where issues are identified. Such uncertainties already exist in relation to traditional modelling (eg on economic variables), so insurers can integrate climate-related risk elements into existing disclosures on such uncertainties.</p>

4.4 Group versus entity level reporting

46. In setting expectations, it is important to explore: (i) whether supervisory reporting will be required at the local entity level; (ii) if consolidated reporting encompassing a number of local and foreign entities will be permitted; and (iii) in instances where the local entities follow the expertise and guidance of a group domiciled in another jurisdiction, if the group's reporting may be deemed as an adequate substitute. In assessing such possibilities, it is important to consider whether such requests would still ensure compliance with local regulatory requirements and provide sufficient insights into local entities.

4.5 Supervisory actions in response to information received

47. Given the rapid evolution of climate-related risk management and consistent with ICP 9.7, clear two-way communication between supervisors and supervised entities is essential. This will help supervisors to assess an insurer's "enterprise risk management framework for the identification and quantification of risks" consistent with ICP 9.1.7. Such communication enables supervisors to better understand and develop long-term solutions to overcome the challenges faced by insurers. Supervisors typically use a combination of sector-wide and insurer-specific communication approaches to increase awareness and promote transparency around the supervisor's expectations of the insurer's approach to climate-related risks. The supervisor may also host workshops for the financial and/or insurance sector to exchange information and promote awareness.

48. Consistent with supervisory reporting requirements more generally, supervisors should consider how to enhance the utility of climate risk-related supervisory reporting as well as their own ability to analyse the reported climate-related risk data.

Use of data

- Supervisory discussions: Supervisory reporting will allow for tailored discussions with insurers about their climate-related risk exposure and the prioritisation of supervisory resources. For instance, consistent with proportionality principles, supervisors may wish to engage in the first instance with insurers that have material exposure to carbon-intensive industries to understand the extent to which this might pose a financial risk.
- Benchmarking and emerging practices: Supervisory reporting can be used to benchmark insurers and to share examples of emerging best practice, which can be useful for advancing the sector's capabilities.
- Data gaps: Supervisory reporting can be used to identify data gaps across the insurance sector and enable supervisors to facilitate or encourage efforts to address these gaps.

Resourcing

- A wide range of experts can contribute better to understanding climate-related risk. Climate scientists, economic modellers and others could be engaged to the extent they can provide a useful challenge for climate-related risk assessments in a manner that may not be required for other analysis of supervisory reporting. Supervisors should consider how they can engage

and develop such expertise and in-house knowledge to improve their supervisory reporting capabilities.

4.6 Recommendations

4.6.1 *Clearly communicate the supervisory reporting strategy*

49. Climate-related risk should be fully integrated into supervisory reporting where material, and supervisors should clarify how these risks will be monitored on an ongoing basis (ICP 9.5) as well as the process for discussing findings (ICP 9.7) from supervisory reporting.

50. Supervisors should take a holistic view of what information needs to be disclosed to market participants and policyholders in public disclosure and what information needs to be reported in supervisory reporting. These expectations should be clearly communicated to all users. This might include the following considerations:

- Use for assessing risk: Climate-related risk disclosures have traditionally been largely qualitative in nature, although jurisdictions are starting to develop climate disclosure frameworks that capture quantitative data. Supervisors will need more detailed, granular quantitative information to fully understand insurers' risk exposures and adequately meet the expectations in ICP 9.4. Such information is best provided on a confidential basis to supervisors in order to address insurers' concerns around commercial sensitivity and client confidentiality. Additionally, climate disclosure has mostly focused on proxies for financial risk such as GHG emissions (absolute and intensity). Over time, there will be significant benefits in developing and focusing on the integration of these risks into existing financial metrics, ie those aligned with ICP 9.4.
- Scope of disclosure: TCFD reporting in the insurance sector remains relatively low, especially in key areas such as disclosures on scenario analysis results. Where disclosure is low, supervisors may wish to seek additional information in supervisory reporting. Disclosure levels will increase in a number of jurisdictions in the coming years given the move towards mandatory climate reporting.

4.6.2 *Undertake gap analysis*

51. If climate-related risk is not integrated into supervisory reporting, supervisors may receive an incomplete and misleading impression of insurers' risk exposures and struggle to meet the requirements set out in ICP 9.

52. Supervisors can consider adding a specific question or attestation into supervisory reporting in order to ascertain the extent to which climate-related risk has been integrated into the submitted data, ie the extent to which climate-related risks have been explicitly factored in. Consistent with ICP 9.5, as part of business as usual supervision, supervisors should communicate with insurers about their findings on climate risk integration. Where there are common issues that emerge in supervisory reporting across insurers, the supervisor may wish to engage with the sector as a whole to understand the relevant issues.

53. Supervisors should undertake a gap analysis of the information available to understand insurers' exposure to climate-related risk. Information needs will vary by jurisdiction, not least since the

impact of physical and transition climate-related risk will vary by jurisdiction. Supervisors should consider whether existing disclosure, supervisory reporting or other mechanisms such as Own Risk and Solvency Assessments (ORSAs) or ad hoc scenario analysis exercises are providing them with the information they need to assess climate-related risks.

4.6.3 Evolving supervisory reporting frameworks

54. Existing supervisory reporting frameworks reflect decades of experience in processes to identify established risks. As climate-related risk measurement methods are rapidly changing in line with scientific advancements, and consistent with ICP 9.1.12, supervisory reporting requirements for climate-related risk are expected to evolve over time. This could mean that it might be difficult to collect longitudinal data, that the costs of reporting regimes to assess this risk may be relatively high, and that supervisors and insurers should look to develop a relatively agile and flexible/adaptable reporting framework.

4.6.4 Supervisory training

55. Like any risk assessment, the reporting of climate-related risks requires the use of some assumptions. Supervisors may be less familiar with the assumptions used for assessing climate-related risk (eg how evolving climate change will affect certain perils). Consistent with ICP 9.0.2, supervisors should, when needs be, provide their staff with the tools and training to understand how to interpret and challenge assumptions presented in the reporting of climate-related risks.

56. For instance, supervisors will need to acknowledge the time lag between emerging climate science and how quickly this is integrated into economic and financial models and used by insurers. Therefore, in analysing data, supervisors will need to be alert to the impact such lags may have on the accuracy of risk assessments and the risks from these lagging indicators.

Box 5: Supervisory reporting in Canada

In Canada, the Office of the Superintendent of Financial Institutions (OSFI) has implemented a set of climate risk regulatory returns to collect institution-specific climate risk data to enable evidence-based policy development, regulation and supervision. Reporting is expected to start from fiscal year 2024. OSFI conducted a data gap analysis and concluded that direct data collection from financial institutions through specialised templates was essential to address existing data gaps. Deposit-taking institutions and insurers are required to provide physical risk and transition risk data through four separate data returns: two each for deposit-taking institutions and insurers, one on physical risk and one on transition risk. The physical risk returns focus on financial assets and underwritten exposures subject to physical risk by geophysical location. The transition risk returns focus on absolute Scope 1, 2 and 3 GHG emissions.

5 Governance for climate-related risk disclosure

Context

57. This section focuses on the expectations and requirements supervisors should consider in setting (i) disclosure requirements for governance of climate-related risks and (ii) expectations around governance processes for climate-related risk disclosures. Other Application Papers

have considered the extent to which governance frameworks should integrate climate-related risk.¹⁷

58. ICP 20.4 sets out requirements about the disclosure of an insurer's corporate governance framework. Aligned with these requirements, this section provides advice for supervisors and insurers on the extent to which such disclosure should describe how climate-related risk is integrated into governance processes.
59. To contextualise the governance processes around climate-related risks, supervisors should also consider requiring the disclosure of ERM processes used in identifying, measuring, monitoring and managing climate-related risks. This will enable insurers to offer a comprehensive view of their corporate governance framework.

5.1 Setting regulatory governance expectations and exploring governance structures

60. In setting regulatory requirements for climate-related risk governance disclosures, supervisors should consider any existing expectations around governance (such as dedicated rules, guidance or insurance codes) and risk management (such as standalone or climate-specific risk management guidelines or rules) and advise on how they relate and are meant to be factored into any new disclosure expectations, if those are drafted separately.
61. Disclosures on governance provide information on the oversight and management of climate-related risks and how climate-related risks are incorporated into insurers' risk management frameworks and decision-making processes. Supervisors assessing the adequacy of an insurer's corporate governance framework should refer closely to ICP 7 (Corporate Governance) and ICP 8 (Risk Management and Internal Controls) in deciding which components to include in climate disclosure requirements.
62. Supervisors should consider establishing disclosure requirements for how climate-related risks and/or opportunities are overseen and managed, including responsibilities of the board, senior management and internal committees, as well as setting expectations around the governance processes for climate-related risk disclosures.
63. At a minimum, governance disclosures should demonstrate the adequacy and effectiveness of an insurer's corporate governance framework as it relates to climate-related risk and should indicate how responsibility for climate-related risk has been incorporated into the risk management system by the board and senior management. This may include information on the involvement of individual roles and functions, inclusive of committees; how adequacy of oversight is ensured and measured; and how climate-related issues are internally reported and escalated. Where climate-related considerations are embedded into existing risk processes, this needs to be distinctly highlighted in disclosure. Users should have information to understand whether and how climate-related risks affect or change insurers' risks.

¹⁷ See IAIS, *Climate Risk Consultation Package 3 – [Proposed supporting material to reflect climate risk, March 2024](#)*.

64. Insurer senior management may enhance climate-related risk management and disclosure capabilities by embedding climate-related risk management and information systems across the different functions of the business. They may allocate responsibilities to operating units and process and control owners, while ensuring that training, guidance and education are provided across the organisation. Disclosure requirements should be set for how various senior management roles and functions are overseeing the process of identifying, assessing and managing climate-related risks that are “reasonably foreseeable and material”, in line with ICP 20.6.
65. The various roles that control functions can play in producing climate-related risk disclosures, while not exhaustive, are listed below:

Table 4: Role of control functions in developing climate-related risk disclosure

Control function	Role in climate-related risk disclosure
Risk management	The risk management function is responsible for all climate-related risks and for ensuring that they are integrated into existing risk management frameworks. Disclosures should make clear how climate risks are integrated into ERM.
Actuarial	The actuarial function plays a vital role in identifying, measuring, managing and reporting on climate risks, including but not limited to areas such as technical provisions, insurance risk exposures and ALM; thus, it can accelerate the development and production of high-quality disclosures.
Internal audit	As the internal audit function has a holistic view of risks across an organisation, it has a vital role in ensuring the effectiveness and efficiency of underlying process and operations relating to disclosures.
Legal and compliance	The legal and compliance function has a multi-faceted role to play in monitoring and assessing regulatory risk associated with climate risk disclosures, as well as bringing independent challenges to the various business units’ and control functions’ operational integrity and governance. It should ensure that all relevant legal and regulatory disclosures are being made.

5.2 Recommendations

66. Supervisors should assess the essential climate governance elements that necessitate public disclosure and the level of detail and granularity of the disclosures necessary to provide meaningful and useful information to users. They should integrate climate-related risk governance disclosure requirements with existing local requirements for corporate governance.

67. In setting climate governance disclosure expectations, supervisors should consider that the market may benefit from further details on the governance processes of insurers for identifying, measuring, monitoring and controlling climate-related risks. Supervisors may further consider how these have been incorporated into the broader risk management framework and processes of insurers, as well as how climate-related risk considerations affect insurers' business, strategy and financial performance.

6 Data issues and limitations in climate-related risk disclosures

68. Disclosing climate-related risk information involves collecting, processing and reporting data and information beyond traditional financial reporting. Supervisors could support the disclosure and supervisory reporting of climate-related risks given the important role this has to play in reducing risks to the insurance sector. The quality and usefulness of climate-related reporting and disclosures can be significantly affected by issues in the sourcing and presentation of the data. Disclosure of "traditional" risks has also had to evolve over time as the ability of insurers to better assess risks has developed. While it is important to recognise the limitations of disclosure, it is also important to continue to support efforts to improve climate-related risk disclosure.

69. Should any of the data issues and limitations expounded below compromise the decision usefulness of climate-related disclosures, supervisors should consider the extent to which disclosure requirements should be retained to prevent incorrect information or assessments. If disclosure requirements are retained, insurers should be required to disclose the data challenges to aid users of the climate-related disclosure.¹⁸

6.1 Data issues in climate-related risks

70. Climate-related risk disclosures and supervisory reporting are affected by data issues that limit their utility for supervisors. These issues can occur because of the lack of granularity, confidence or usability of the underlying data, and they can equally affect the insurer preparing and the supervisor using the disclosures. In other cases, the format, level and/or comparability of disclosures differ across insurers, which affects the usability for supervisors but does not represent an issue with the underlying data. The former cases are characterised as "insurer-level data issues" and the latter cases are categorised as "supervisor-level data issues".

6.2 Insurer-level data issues

71. Data gaps and quality issues at the insurer level may arise for a variety of reasons, such as:

- Insufficient capacity or resources: Smaller insurers may not have sufficient personnel, expertise or resources to collect and process climate-related risk data.

¹⁸ The Draft Application Paper on climate scenario analysis in the insurance sector recommends disclosure of data quality challenges to improve the transparency of disclosures.

- Expense to purchase data: Much of the data required to develop climate-related disclosures, especially financial data, is expensive to purchase, which may limit use by insurers, especially small insurers. Insurers may need to rely on proxy data or incomplete data sets.
- Incomplete value chain information: Data in certain categories, including indirect (Scope 3) emissions and detailed property information, relies on information from various stakeholders in the value chain who may not be subject to the same climate-related disclosure regulations and may not record and report the necessary information. These gaps in data lead insurers to use assumptions that may be inaccurate or unreliable. Limited geospatial and asset-level information may restrict the ability of insurers to assess and disclose the extent of physical risk exposure.
- Incomplete information from national governments: Jurisdiction-specific data is required for effective disclosure. In certain jurisdictions, limited national data, such as incomplete information on national carbon footprints or energy mix projections, can amplify uncertainties for insurers that are disclosing forward-looking information.
- Limited information to quantify exposure: Insurers may be aware of exposure to climate-related risk but lack sufficient information and reliable methods to quantify the extent of the exposure and translate the exposure into financial impact. Insurers may be hesitant to publicly disclose quantifications due to uncertainties.
- Differences between data providers: Data sets from different providers vary in quality and are not necessarily consistent with one another. Insurers may acquire relevant data but have limited confidence in its accuracy. For instance, estimates on projected GHG emissions by different methods may affect a range of metrics.
- Lack of data flow governance: Insurers may lack the necessary governance structures and data infrastructure to ensure the flow of credible data and information to those within the organisation responsible for reporting.
- Uncertainty of forward-looking information: Forward-looking information has inherent uncertainties since long-term projections must account for assumptions on GHG emissions, policy changes and socioeconomic development. Insurers may have conducted forward-looking scenario analysis or projections but lack sufficient confidence to publicly disclose such information.

6.3 Disclosure constraints

72. The ability to prepare and use disclosures on climate-related risks is subject to several constraints and concerns.

6.3.1 Volume of disclosure

73. Supervisors should consider the extent of disclosure required to ensure that the volume does not hinder the ability to have a clear understanding of an insurer's climate-related risks and impact. ICP 20.0.10 explicitly cautions against excessive disclosure requirements. Not all jurisdictions require disclosure of certain elements, such as governance; risk management; scenario analysis; and Scope 1, 2 and 3 GHG emissions, regardless of materiality. How materiality is considered and thresholds, if applicable, will affect the volume of disclosures.

6.3.2 Commercially sensitive information

74. Inputs and assumptions on climate-related risks can be commercially sensitive. Supervisors should consider ICP 20.0.12 and ICP 9.1.3 when establishing reporting and disclosure requirements.

6.3.3 Disclosure litigation risk

75. Climate disclosures can be subject to litigation risks, which can influence how transparent insurers want to be. While an upward trend in general climate litigation has been observed in recent years, it is important to recognise that litigation may occur with too much or too little disclosure, as well as with disclosures that give false or unrealistic representations.

6.3.4 Interoperability/alignment with jurisdictional disclosure initiatives

76. ICPs 20.0.2, 20.0.7 and 20.2.1 highlight the importance of policyholders' and market participants' ability to compare disclosures between insurers. Achieving consistency and comparability within and between jurisdictions will take time, but this can be enhanced to the extent there is interoperability or alignment between jurisdictional and international climate-related disclosure standards and IAIS' standards. This will avoid creating an excessive reporting burden, especially for insurers operating across multiple jurisdictions who may be subject to different prudential disclosure regimes.

77. IOSCO has assessed that the ISSB standards are aligned with corporate reporting norms and include "sufficient precision and application of definitions and concepts to form a robust foundation for interoperability with jurisdiction-specific requirements".¹⁹

6.4 Possible actions from supervisors to address data issues

78. Some supervisors are mandated to increase reporting from financial institutions and non-financial corporates, provide open source information and models, ensure adequate data governance, standardise scenarios or timeframes, build capacity within companies and across supervisor peers, and provide guidance on areas of uncertainty. Supporting insurers to address data gaps can be relevant in certain jurisdictions.

79. Supervisors may seek to further reduce data gaps at the insurer level by making data more usable and accessible. In Japan, the Financial Services Agency, together with other ministries, plays a facilitation role between governmental organisations (as data owners) and financial institutions as well as non-financial companies (as data users) for discussions to enhance the utilisation and user-friendliness of specialised data for the assessment of risks and opportunities, disclosures and adaptation measures. Supervisors could also work with government to ensure that data, such as geolocation information, is easily accessible for insurers. In addition, supervisors could work to standardise data sets, where appropriate (eg IOSCO has developed

¹⁹ IOSCO, *IOSCO endorsement assessment of the ISSB Standards for sustainability-related disclosures*, July 2023.

good practices designed to reduce inconsistencies between information published or sold by data providers).

80. In addition, supervisors can play a greater role in ensuring that insurers adopt the governance structures and lines of reporting for data flows that will contribute to improving the quality of information reported.
81. Supervisors can further address data gaps by improving capacity and industry expertise through industry forums, public-private partnerships, sharing of best practices and distribution of models to support smaller insurers. For example, the European Insurance and Occupational Pensions Authority (EIOPA) is seeking to improve collaboration with and between stakeholders including insurers, supervisors in other jurisdictions, academics, risk modelers and research centres.

6.5 Possible actions from supervisors to address disclosure constraints

82. In the light of the climate litigation risks, supervisors should:

- Monitor cases that either have or could set important legal precedents (eg establishing that insurers and their directors can be sued and held liable for climate-related disclosures or failure of disclosure);
- Understand how litigation/reputation risk is being incorporated into insurers' risk management functions; and
- Take data quality concerns along with litigation risk into account when designing climate-related risk disclosure requirements.

83. Disclosure issues are likely to vary, with certain elements specific to individual insurers, their business models and their disclosures. It is therefore helpful for supervisors to understand these issues and how they affect the insurers they supervise.

84. One example of how litigation risk is taken into account with disclosure requirements is the use of safe harbour provisions, where certain jurisdictions provide limited protections for (i) forward-looking disclosures; (ii) scenario analysis disclosures; and (iii) transition plan disclosures. Such protections are limited to enforcement actions (eg the SEC and the California Climate Corporate Data Accountability Act (SB-253))²⁰ and do not protect against lawsuits from investors or customers. As such, concerns over potential negative repercussions based on climate-related disclosures are valid, and supervisors should appropriately balance the need for disclosures by ensuring that only verifiable and relevant disclosures are required publicly.

²⁰ Although the SEC adopted its climate-related rules on 6 March 2024, on 4 April the SEC voluntarily stayed the issuance until completion of the judicial review of the consolidated eighth circuit petitions. These court cases are expected to go on for quite some time. If/when the final SEC rules go into effect, as initially adopted, the SEC disclosure requirements provide a safe harbour for liability from forward-looking climate related disclosures (excluding historical facts) relating to transition plans, scenario analysis, the use of an internal carbon price, and targets and goals unless the disclosures were made without a reasonable basis or in other than good faith. In October 2023, California climate disclosure bill SB-253 was signed into California legislation. It also provides safe harbour for Scope 3 emission disclosures, but the scope of the safe harbour is only limited to protection from penalties imposed by the state.

85. Additionally, securities law in some jurisdictions includes provisions that provide exemptions for good faith disclosures. In instances where an insurer can show it has disclosed in good faith and taken appropriate steps to ensure, to the best of its ability, appropriate disclosure, then it would not be legally liable. Supervisors, working with securities regulators, should consider whether such legal provisions exist in their jurisdiction in order to encourage climate-related disclosures.
86. Finally, regulations that require insurers to assess and disclose their exposure to litigation are currently established across various jurisdictions. Supervisors should leverage existing regulations when reviewing insurers' disclosure of contingencies and litigations and evaluate whether the current regulations should be subject to revision to incorporate nuances related to climate-related litigation.

6.6 Assurance of climate-related risk disclosures

87. Climate-related risk disclosures are increasingly subject to assurance, but mostly to limited assurance rather than reasonable assurance, which is where the engagement risk is reduced to an acceptable level.²¹ This level of assurance is different than that which would be required under an audit. The value of third-party assurance is to ensure that disclosures are presented fairly and in conformity with the applicable disclosure standards. Without assurance, it might be difficult for users to rely on disclosures to assess the potential exposure from climate change. However, the nature and the quality of available underlying data relating to climate-related risk disclosures might differ from those in financial statements. This should be taken into account when deciding on the value and the need for third-party assurance. While recently finalised or proposed climate disclosure frameworks have points of alignment, there are differences across these frameworks that may be challenging to navigate for preparers and users of these disclosures as well as assurance providers. Examples of possible challenges include:

- Deciding which disclosure frameworks insurers need to comply with in a given jurisdiction;
- Assessing who is qualified to provide assurance on the disclosures and the engagement standards they are required to follow;
- Differences in the location of disclosures under different reporting frameworks, including possible disclosure in financial statements and notes to the financial statements or other reports; and
- Assessing the sufficiency of data quality and availability for preparers to produce reliable estimates for disclosure and for assurance providers to opine on the disclosures.

6.6.1 Climate-related risk assurance

88. While there may be some overlap with audit firms, it is likely that non-audit professionals will also provide assurance on climate-related risk disclosures. It remains an open question as to what qualifications will be deemed necessary in order to be considered sufficiently qualified to opine

²¹ The IAASB defines a reasonable assurance engagement as “an assurance engagement in which the practitioner reduces engagement risk to an acceptably low level in the circumstances of the engagement as the basis for the practitioner’s conclusion.” See IAASB, [Proposed International Standard on Sustainability Assurance 5000 – General Requirements for Sustainability Assurance Engagements, p 8.](#)

on the disclosures as well as what standards will apply when providing assurance. Qualifications for providing assurance services will likely be jurisdictionally based, while new assurance standards are being developed by the International Auditing and Assurance Standards Board (IAASB), which sets international standards for auditing and assurance. In coordination with IAASB, the International Ethics Standards Board for Accountants (IESBA) is also finalising standards to provide (i) a clear framework of expected behaviours and ethics provisions for use by all sustainability assurance practitioners; and (ii) an ethical framework to guide practitioners in evaluating the suitability of external experts. It is important for assurance practitioners to have expertise in climate-related risks, although there may be a higher level of reliance on external experts in the short term while assurance practitioners build up in-house expertise.

89. The location of climate-related risk disclosures could affect how assurance would be accomplished as well as the type of opinion that could be issued. If climate-related risk disclosures are required to be included in the notes to the financial statements, they would be subject to the same audit requirements as general financial reporting. If disclosures are outside the financial statements, they may or may not be subject to assurance requirements.
90. A reasonable assurance engagement conveys the practitioner's opinion on the outcome of the measurement or evaluation. A limited assurance engagement conveys the practitioner's conclusion on whether a matter has come to their attention to cause them to believe the information is misstated. In a limited assurance engagement, the nature, timing and extent of policies and processes applied would be less than that necessary for a reasonable assurance. The ability of insurers to have sufficient evidence to support disclosures affects the ability of assurance providers to opine on those disclosures. This can have an impact on the type of opinion that can be provided. If disclosures are required in the audited financial statements but there is not sufficient evidence to support the disclosures, the auditor may be forced to issue a qualified opinion on the financial statements. If the disclosures are difficult to support in reports outside the financial statements, limited assurance may be necessary or it may not be possible to provide assurance. Local regulations may need to consider phasing in any assurance requirements to allow time for insurers to develop better supporting audit evidence. Limited assurance engagements are more likely in the near term due to challenges with data availability.
91. Supervisors should understand the different types of assurance. For supervisors whose authority includes requiring public disclosure, careful consideration will be needed to determine how insurers should report climate-related disclosures (eg financial statements versus outside financial statements).
92. There are several issues that poor data, inconsistencies between data providers and lack of transparency can create. First, in most jurisdictions, insurers' management is responsible for the accuracy of the information that it publicly discloses. Any data from non-transparent providers makes it difficult for management to understand the data and ensure it is reliable. Similarly, if multiple data providers offer significantly different results, that will also create difficulties for management to support its disclosures. It then becomes difficult for the assurance provider to determine how reliable the disclosures are unless it can replicate the result through information it has or validate using other data providers. Significant inconsistencies between data providers increases the complexity for the assurance provider in assessing the reliability of the information

and determining if the disclosure is fairly stated. As discussed above, disclosures will need to be of sufficient quality in order to obtain assurance.

6.7 Recommendations

93. Supervisors should understand how data quality issues can affect the reliability of the information in disclosures and how that affects assurance. This will help supervisors better assess climate-related risks for insurers.
94. Supervisors should understand the applicable assurance and ethics standards for climate disclosures in their jurisdiction in order to consider whether those providing assurance to insurers are qualified and subject to appropriate standards.
95. Supervisors should understand the process in their jurisdiction to obtain assurance on insurers' disclosures. Supervisors should also be aware that it may be some time before some disclosures are of sufficient quality for assurance providers to issue more than a limited opinion.
96. Supervisors should be aware of the implications of poor or inconsistent data on the ability of assurance providers to provide an opinion. Supervisors may want to work with insurers to develop sources for accurate data to aid the assurance process, where possible.