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Author
Cassandra Hannibal, FIA, CERA
Moody's Analytics Research

Contact Us

Americas
+1.212.553.1658
clientservices@moodys.com

Europe
+44.20.7772.5454
clientservices.emea@moodys.com

Asia (Excluding Japan)
+85 2 2916 1121
clientservices.asia@moodys.com

Japan
+81 3 5408 4100
clientservices.japan@moodys.com

Climate disclosure: best practice, regulatory, and TCFD

Introduction

In recent years climate change risk has been upgraded from an emerging risk to a public risk that all firms are expected to monitor and manage. The speed of this change has meant that best practice and regulation have evolved at an astonishing pace and are continuing to develop. In this paper, we discuss the regulatory environment and emerging best practice for climate change risk disclosures for insurers.

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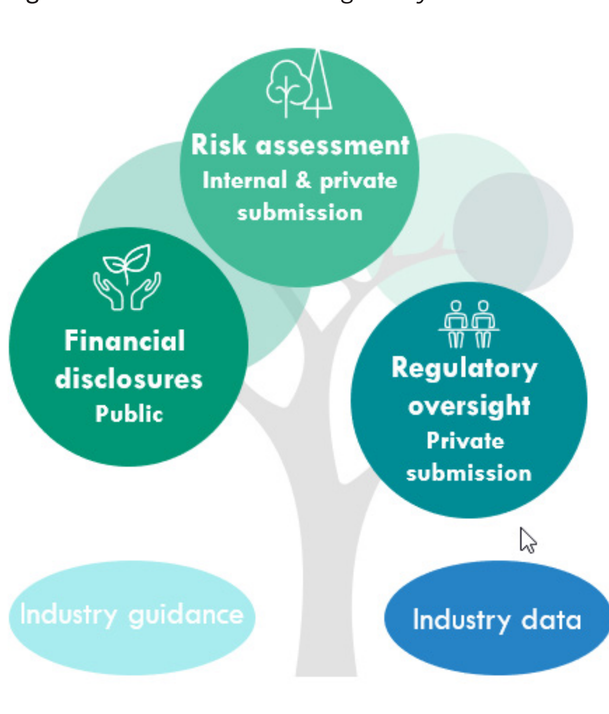
Regulatory environment

Supervisory and regulatory authorities have many aims but they typically include protecting customers, ensuring market stability, and supporting market development. Climate-related changes threaten each of those aims. For example, the uncertainty due to incidence of physical risks or the costs of transition risks may lead to poorly priced products. These threaten the insurer's solvency if prices are too low so that costs exceed expectations and could eventually lead to market instability. Alternatively if prices are too high they can prevent customers having adequate protection.

Regulators can set rules, prepare policies, give guidance and issue sanctions. To monitor firms, authorities subject insurers to several ongoing disclosure requirements covering internal assessments, private submissions to the regulator and public statements/disclosures.

Figure 1 Disclosures in the regulatory environment



Explicitly including 'climate-related risks' or 'climate change risks' in regulation takes time as the formal process of creating new or changing existing regulations can be lengthy. It involves iterations of proposals, consultations, approvals, followed by publication and implementation. Each of these activities can take months. In the interim, the regulator can issue guidance on an ad hoc basis. For example, the New York State DFS issued its consultation on climate change risk in March 2021[1].

It is worth noting that even when climate change risk is not explicitly stated in the regulations under their 'standard' risks, existing regulations typically mandate that all significant risks are included and have rules for the treatment of other significant risks and the treatment of emerging risks. For example, under the IFRS standards there are materiality judgments to be made on risks relating to recognition, measurement, performance, and disclosures. These are key areas of financial reporting. How these considerations encompass climate change risk is summarized in a paper from the International Accounting Standards Board[2].

Historically when climate change risk was considered, it was often considered an emerging risk. In recent years, as the impact of climate change has been visible to stakeholders, the risk has moved from emerging to developing. Physical and transition risks have driven changes in product design, pricing, reserving assumptions, investment choices, and financial reporting mainly with disclosures.

[1] For public comment: Proposed Guidance for New York Domestic Insurers on Managing the Financial Risks from Climate Change, New York DFS, March 2021

[2] IFRS Standards and Climate Related Disclosures, IASB, November 2019

Public statements/disclosures

The Financial Stability Board Taskforce on Climate-related Financial Disclosures (TCFD) has created a reporting framework based on a set of disclosure recommendations. Initially, compliance with TCFD recommendations was voluntary and many insurers adopted them on a best-efforts basis, with further improvements to follow. Now, some territories such as Singapore, New Zealand, Switzerland, France, and the UK have set a date by which the TCFD requirements will become mandatory for all financial institutions including insurers. For example, in the UK, the Bank of England has proposed a staggered implementation 2022–2025[3].

The TCFD requirements are split into four categories: Governance, Strategy, Risk Management, and Metrics and Targets.

Figure 2 TCFD elements[4]

Governance

The disclosures should include a description of Board oversight and management's role in assessing and managing climate-related risks.

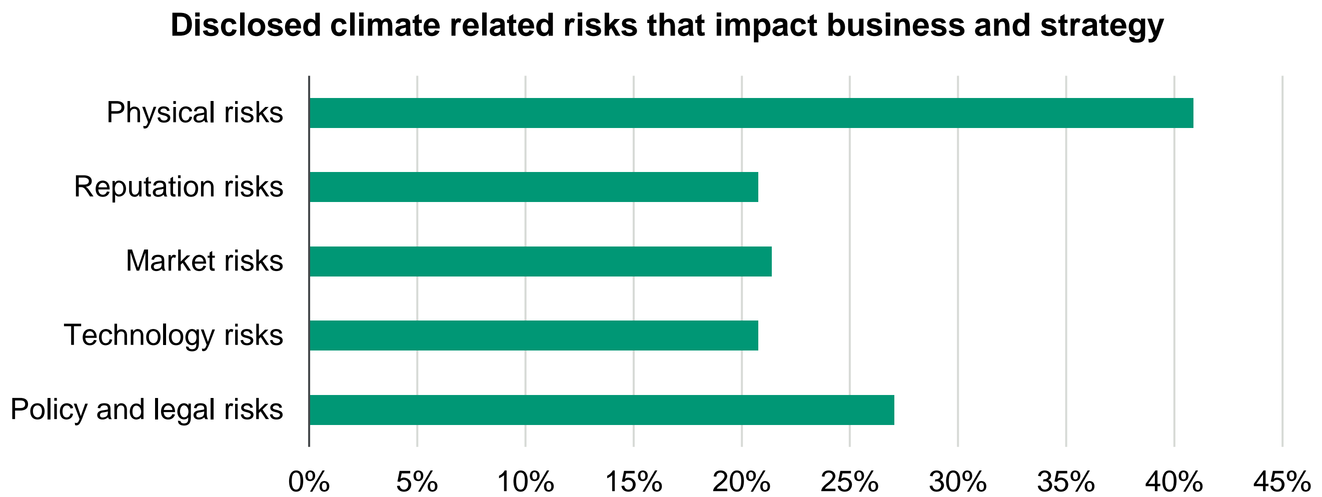
This often requires a company-wide education series tailored to the different levels of the organization so that climate risk can be fully integrated into existing processes and any new processes can be implemented effectively. As our understanding of climate-related risk is evolving it is a continuous process. Management's role is evolving and Board oversight is becoming more detailed.

Moody's ESG Solutions data on corporate governance, includes a data on TCFD Strategy, with details on how companies are disclosing against the TCFD recommendations. The data currently covers nearly 3000 companies, including more than 150 insurers. Findings included:[5]

- 26% of the insurers included report on having assigned climate-related responsibilities to management.
- 30% disclosed that they have established processes to inform board members about climate change issues.
- 43% of the insurers have identified at least one climate-related risk that may affect their business and strategy over the short, medium, and long term.
- Physical risks are most frequently reported, followed by policy, and legal risks.

[3] A Roadmap towards mandatory climate-related disclosures, HM Treasury, November 2020
[4] Figure 2 in Recommendations from the TCFD, TCFD, June 2017
[5] More details can be found in the forthcoming report, The State of TCFD Disclosures, Moody's ESG Solutions, October 2021

Figure 3 Reported climate-related risks that may affect business and strategy over the short, medium, and long term



Strategy

The disclosures should include a description of the short, medium, and long-term climate-related risks and opportunities. They should also describe the impact on businesses, strategy, and financial planning and assess the resilience of strategy under different scenarios, including a 2°C or lower scenario.

Defining the short, medium and long-term time horizons requires some judgment as the likelihood of a risk occurring as well as the severity of the impact vary greatly over the different time horizons.

To date, many insurers have focused on the risks posed by climate risk – both directly through items such as increased claims costs, disruption and stoppages, and indirectly through items that cause reputational damage, loss of customers and loss of investors. Opportunities are often alluded to in less detail.

Assessing the resilience of the strategy under different scenarios is difficult for several reasons:

» Selecting appropriate scenarios. There are several different scenarios that may occur with climate risk. The Network for Greening the Financial System (NGFS) considers six scenarios which are becoming more widely used. Some strategies will be less resilient to different scenarios of both policy extremes and temperature rise.

» Translating the scenario into model inputs. The impact of climate change on individual risk factors is difficult to assess. In addition, it requires significant skill to maintain coherent relationships between the different risk factors and this can result in multiple outcomes. Moody's Analytics has developed a translation methodology which can be implemented by insurers[6].

» Modeling the factors and their interactions with each other. For example, whilst insurers had been modeling pandemic risk for decades, few, if any had modeled the knock-on impacts observed during the COVID-19 pandemic.

» Communicating the results. The complexity of the model may lead to output that is not easily understood or does not point to reasonable mitigating actions.

» Taking appropriate actions. The most efficient action to mitigate risks may differ depending on the cause of the risk. For some, additional controls are most effective, for others reinsurance to cover costs and so on. Under climate scenarios, both the cost and availability of these options will vary significantly. This must all be considered when assessing the suitability of mitigating action (before the event) and/or management response (after the event).

Based on the same Moody's ESG Solutions'[7] data, 19% of insurers had disclosed information on their climate change scenario analysis and their potential impacts on the companies' business.

[6] Exploring climate pathways using NGFS scenarios, Moody's Analytics, May 2021
[7] More details can be found in The State of TCFD Disclosures, Moody's ESG Solutions, October 2021

Risk management

The disclosure should include a description of the processes for identifying, assessing, and managing climate related risk including integration of these processes into the overall risk management framework.

Many insurers have well established risk management processes which allow for emerging risks and established risks. One of the challenges with climate change risk has been data. For example, when making investment decisions, insurers want to invest in assets that have been priced with climate-risks and that are aligned with their ESG-C investment policies. To make that decision they need up-to-date, granular, relevant information on a range of assets.

The same Moody's ESG Solutions'[8] data found 11% of insurers had disclosed divestment from or decommissioning of carbon intensive assets and activities and only 6% disclosed enhanced due diligence applied to projects and transactions.

Metrics and targets

The disclosure should include a description of the metrics used to assess climate-related risks. The targets used to manage climate-related risks and performance against those targets should also be included. The disclosure should also include scope 1, 2 and 3 greenhouse gas emissions, and the related risks.

To date, insurers have found this component difficult. As insurers continue to test different metrics, and regulators' and industry groups' continue to research, the guidance on metrics, particularly for physical and transition risk, will evolve. The TCFD's next report is expected to include more detail on metrics.

Private submissions and internal assessments

To set rules and guidance on emerging topics regulators often require additional information. They can get this from consultations, industry impact studies, or additional submissions. Consultations and industry impact studies tend to be public as these request feedback on a proposal and invite public discussion and debate. Where company specific data is used as with additional submissions, the submission is usually private.

For climate related risks, the aims of these exercises are varied and can include:

- To assess the impact of climate change risk on the whole financial system
- To assess the resilience of the whole financial system
- To assess the feasibility of mitigation strategies/management actions across the whole financial system
- To assess the modeling and reporting capabilities of the industry
- To assess the applicability of the reported metrics

It is unlikely that any single exercise will cover all of the aims above. Different regulators have used different exercises to target specific objectives.

In the UK, the Bank of England carry out a biennial stress testing exercise and in recent years this has included specific climate-related stress tests. In 2021, a selection of the larger banks and insurers were invited to evaluate key financial metrics at five-year intervals under different climate scenarios. The scenarios built on the reference scenarios being developed by the 'NGFS and captured a range of different combinations of physical and transition risks:

- Early policy action scenario
- Late policy action scenario
- No additional policy action

The physical and transition risk variables along with the mapping onto macroeconomic and some financial variables were provided.

[8] More details can be found in The State of TCFD Disclosures, Moody's ESG Solutions, October 2021

Participants provided information on the modeling approach, assumptions, and data alongside the quantification of the impact of scenarios on the balance sheet. Participants also provided qualitative information about the actions they would take to mitigate risks and respond to new business opportunities in each scenario.

Invited participants made their submissions by the end of September 2021, however many other insurers chose to complete all or some of the stress tests on a voluntary basis, to enhance their understanding of climate related risks and test their own modeling capabilities.

Exercises like these are not simple and have highlighted many issues:

» Availability of relevant data. For example, in the Climate Biennial Exploratory Scenario (CBES) exercise insurers carried out a counterparty level assessment of their largest financial and non-financial corporate exposures. This required volumes of relevant data at a granular level that few insurers had in-house. Consultants such as Moody's Analytics were able to supply credit risk metrics (for example, probability of defaults) at named level[9], conditional on several different climate scenarios, to support the CBES exercise.

» Modeling expertise. Some financial variables may be supplied but many insurers still needed to expand the scenario to sectors and regions not quantified in the CBES scenarios. This requires specific expertise. This has been an area of focus for insurers and consultants working with scenario generators[10]. More generally most climate-related stress testing exercises will require a projection of the balance sheet, capital requirement and other key measures over long time horizon, for the CBES exercise 30 years. Even with some simplifications, a meaningful projection is challenging. Deep learning, proxy modeling and other techniques have been investigated for use in projections[11].

» Resource and modeling capacity. Any additional reporting requirements use additional people and additional model capacity. From a technology perspective, with the increased reporting demands on insurers outside climate risk, many insurers are upgrading their models, reviewing methodology and some are moving to cloud modeling.

» Other uses. Feedback on the value of these exercises has been mixed. In some cases the output that is useful to the regulator is not as informative for the insurer, so this becomes a resource draining compliance exercise of little or no use to the insurer for decision making.

The CBES exercise is an example of submission designed specifically for climate-related risks requested by the regulator. However, there are other regular submissions, particularly those designed for risk assessment that may not have explicitly stated climate-related risks at outset but will necessarily include them going forward.

Insurers in many territories carry out their Own Risk and Solvency Assessments (ORSA). These are designed to assess all the risks to which an insurer is exposed. These are carried out at least annually and are not usually published but are submitted to the supervisor for review. Typically, these include projections of the financial statements under different scenarios, with a focus on the capital requirements, where the scenarios are set by insurer.

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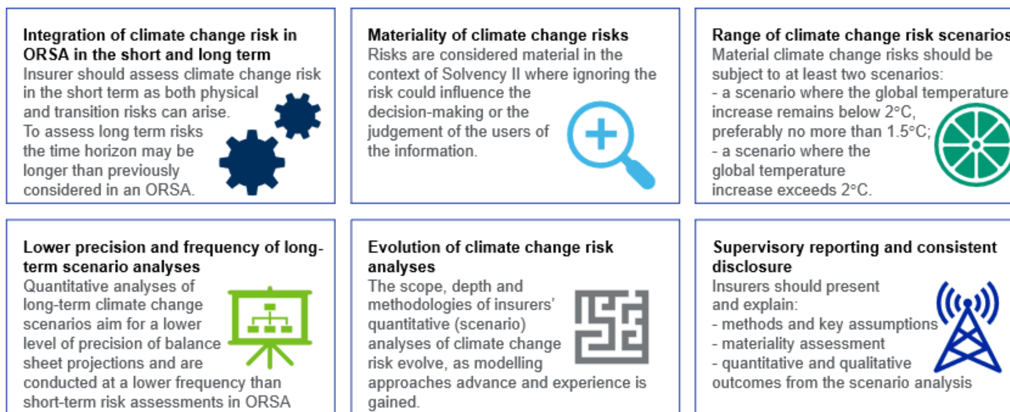
[9] For example, the methodology for corporates is described in the paper Assessing the Credit Impact of Climate Risk for Corporates, James Edwards, Rebecca Cui, Abhishek Mukherjee, Moody's Analytics, March 2021

[10] More details can be found in the follow up paper to Exploring climate pathways using NGFS scenarios, Alasdair Thompson, Nick Jessop, Moody's Analytics, May 2021

[11] Deep learning the cash flow model, Moody's Analytics, June 2020

Figure 4 Summary of EIOPA opinion on climate scenarios in ORSA



Following a statement in 2019, and a consultation cycle in 2020, the European Insurance and Occupational Pensions Authority (EIOPA) issued an opinion on the use of climate change risk scenarios in the ORSA in April 2021. In short, EIOPA expects authorities to supervise the integration of climate-related risks into the ORSA process and EIOPA will monitor this from 2023. The opinion covers a range of climate-related items including the requirement for at least two climate-related scenarios, one where the global temperature increase remains below 2°C and one where the global temperature increase exceeds 2°C. This allows a comparison of the results under two scenarios[12]. Some insurers are planning to incorporate climate-related scenarios into their ORSA process this year.

Going forward

Globally regulators have increased their focus on climate-related risks. In conjunction with insurers, other companies, industry groups and other regulators, they are continuing to develop rules and guidance rapidly. The additional consultations, private submissions, and burden on internal reporting will continue whilst the data, methodology, and modeling improves and is incorporated into regulation. A recent study by the Geneva Association on regulatory approaches into climate risk assessment in the insurance industry has highlighted some of the difficulties with the current approaches and proposes some improvements.

Figure 5 Summary of Geneva Association recommendations

	RECOMMENDATION
1	A well-designed regulatory climate change risk assessment and scenario analysis should contain: a) A clearly defined objective, and methodology that links back to the objective b) An explanation on how the approach delivers meaningful and decision useful outputs c) An explanation of the key challenges of climate modeling, for example, the magnitude of transition and physical risks, extended uncertain time horizons, weaknesses when modeling 'extreme scenarios' d) Design scenarios that apply the latest climate and environmental sciences.
2	The need to be agile and adaptable as climate science, the methods for assessing climate change impacts and re/insurers' understanding of these impacts on assets and liabilities are evolving quickly.
3	Strengthened collaboration and information sharing: 1) across the industry, 2) among the insurance industry, regulatory and scientific communities; and 3) among the financial services regulators and supervisory bodies globally, to expand the potential data pool and promote further development of climate risk assessment.

The TCFD guidance has been well received with many regulators and insurers accepting the recommendations and others working towards compliance. With each iteration improvements are made with data, methodology, and the presentation of the disclosures. However even with full compliance some difficulties remain. For example, for stakeholders using the disclosures comparisons are difficult. Insurers have autonomy to choose their own methodology and assumptions to make the disclosures specific and pertinent, so will inevitably make different decisions. For example, different time periods for short, medium and long-time horizons, different metrics used to assess climate-related risks and so on. These can be significant differences. Eventually more of a consensus will be formed as best practice emerges but in the interim it will be difficult to compare insurers against each other and also against other firms. A balance will emerge between comparable disclosures and disclosures relevant to the insurer.

[12] EIOPA-BoS-21-127 paragraph 3:18

References

TITLE	AUTHOR	DATE	LINK
Recommendations of the Task-force for Climate-Related Financial Disclosures Final Report	FSB	June 2017	Recommendations | Task Force on Climate-Related Financial Disclosures
IFRS Standards and Climate Related Disclosures	Nick Anderson, IASB	November 2019	in-brief-climate-change-nick-anderson
Deep learning the cash flow model	Aubrey Clayton	June 2020	Deep-Learning the Cash Flow Model
A Roadmap towards mandatory climate-related disclosures	HM Treasury	November 2020	FINAL_TCFD_ROADMAP
Assessing the credit impact of climate risk for corporates	Moody's Analytics	March 2021	assessing-the-credit-impact-of-climate-risk-for-corporates
Opinion on the supervision of the use of climate change risk scenarios in ORSA EIOPA-BoS-21-127	EIOPA	April 2021	opinion-on-climate-change-risk-scenarios-in-orsa
Exploring climate pathways using NGFS scenarios	Alasdair Thompson, Nick Jessop, Moody's Analytics	May 2021	Exploring Climate Pathways Using NGFS Scenarios
Insurance Industry Perspectives on Regulatory Approaches to Climate Risk Assessment	Geneva Association	June 2021	insurance-perspectives-on-climate-risk-assessment
Measuring TCFD disclosures	Moody's ESG Solutions	October 2021	Measuring-TCFD-Disclosures

Abbreviations

CBES	Climate Biennial Explanatory Scenario
EIOPA	European Insurance and Occupational Pensions Authority
FSB	Financial Standards Board
IFRS	International Financial Reporting Standard
NGFS	Network for Greening the Financial System
TCFD	Taskforce for Climate related Financial Disclosures

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