

# Climate change and its undeniable impact on insurance: How to respond?

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## Key points

- The increase in severe weather events predicted by most climate scientists is likely set to significantly impact the insurance industry by affecting the ability of underwriters to measure, predict and apportion risks.
- Insurers must better analyze and understand how their models will fare in light of unforeseen climate events.
- Adapting pricing strategies, using innovative technologies and collaborating with industry stakeholders may be the way forward.

Models that have historically been used by insurers to hedge risk were not designed to predict uncertain events such as natural disasters that may be exacerbated by climate change. This now leaves insurers overexposed to climate risk. Insurers could respond to the gap in climate-related insurance coverage by underwriting and offering policies to consumers who would suffer without such safeguards. But determining how to seize that opportunity is not easy.

The European Insurance and Occupational Pensions Authority (EIOPA) suggests that insurers are taking steps to mitigate the effects of climate change<sup>1</sup> by implementing dedicated adaptation measures in insurance products and offering premium-related incentives. However, EIOPA also reports that the EU insurance market generally appears to be at an early stage in its journey to increase resilience to global warming.

Insurers could simply increase premiums to build larger reserves that are arguably necessary to cover possible volatility in future payouts. However, given the frequency and increasingly serious nature of environmentally destructive events, this would lead to continually increasing premiums — an unfeasible solution.

Insurers are thus confronted with two issues:

- If they price their premiums at a low level to attract consumers, they may fail to take climate risk into account, leading to underpricing and losses.
- If insurers opt for high premiums to take into account the large payouts for severe weather events, businesses and consumers who cannot afford the premiums will go uninsured.

These themes are discussed thoroughly in a November 2023 report issued by the International Association of Insurance Supervisors (IAIS), “A Call to Action: The Role of Insurance Supervisors in Addressing Natural Catastrophe Protection Gaps.”<sup>2</sup>

## Opportunities to develop new insurance models

Insurers have a chance to address such issues.

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Understanding their current exposure to risks associated with climate change is the first step. The U.K. Prudential Regulation Authority (PRA) is set to run a dynamic general insurance stress test in 2025,<sup>3</sup> which will:

- Assess the insurance industry’s solvency and liquidity resilience to a specific adverse scenario. The stress test will involve simulating a sequential set of adverse events over a short period of time.
- Evaluate the effectiveness of insurers’ risk management and management actions following an adverse scenario.
- Inform the PRA’s supervisory response following a market-wide scenario.

Insurers should use the findings from this test to inform their approach to the market and see how protected they are against climate-related losses.

In the U.S., the National Association of Insurance Commissioners (NAIC) has established a Climate and Resiliency Task Force to serve as the coordinating NAIC body for discussion and engagement on climate-related risk and resiliency issues, including dialogue among state insurance regulators, the insurance industry and other stakeholders.

On a more individual level, insurers should themselves adopt climate-specific stress testing to inform their pricing and make portfolio adjustments. By utilizing predictive analytics such as geospatial tools, insurers can make a more detailed assessment of where (geographically) wider protection may be needed, thereby helping to bridge the protection gap.

For example, if insurers are able to more accurately map out where the risk of tsunamis is higher due to tectonic plate patterns, they will be able to apportion risk in a more nuanced way and thereby offer their customers policies that are more tailored to the risks those customers face.

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Insurers can also aid their clients by developing enhanced and innovative insurance products. A leading consulting firm has suggested that the insurance industry currently does not capture the full spectrum of potential losses that are a result of severe weather events.

With the use of artificial intelligence, firms can parametrically (*i.e.*, by using statistical estimation techniques) price their policies to take such overlooked losses into account. Doing so would help mitigate the effect on generic, unspecialized protection.

Insurance companies can also encourage their policyholders to take initiative. For example, by urging their clients to install anti-flood doors or early warning systems, insurers can help their customers mitigate risk. They can then charge such companies lower premiums, thereby offering better coverage while maintaining a steady supply of insurance products.

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## Government collaboration

A unique opportunity also exists for insurance companies to diversify the role they play in the economy. They can collaborate with governments to create agreements on how to apportion risks between public and private institutions.

Further, insurers can work with government authorities to put measures in place for financial assistance in the case of an unexpected mass payout caused by an unforeseen crisis, similar to the Flood Re scheme in the U.K. Under this joint initiative, the U.K. government works with private insurers to provide reinsurance for areas with particularly high flood risks.

Such collaborative arrangements are not uncommon — in the U.S., the National Flood Insurance Program performs a similar coordination function.

Insurers can also cooperate with third parties to devise risk-transfer solutions that offer wider and more significant protection for consumers across the market. For example, the World Bank acted as an intermediary between a South American state-owned hydroelectric power company, a hedge fund, an insurer and a reinsurer. Under this public-private partnership, the power company was offered protection against droughts, and its consumers were safeguarded against extreme fluctuations in commodity prices.

## A path forward

The insurance industry can no longer rely on past data in underwriting and pricing policies, and it is evident that no company can shy away from the impact that risks associated with climate change will have on its business practices. How insurers respond remains an open question.

## Notes

<sup>1</sup> <https://bit.ly/48kAMTT>

<sup>2</sup> <https://bit.ly/47kNrox>

<sup>3</sup> <https://bit.ly/3S8Ik6P>