



Informing Progress - Shaping the Future

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Climate change and the rise of parametric insurance in the UK

For insurers, climate change has increased the frequency and severity of natural disasters, straining traditional models and becoming a present and accelerating financial risk. Recent years have seen the UK experience an increase in severe storms, prolonged rainfall and extreme heat, events which are reshaping insurance supply, pricing and product design. The Association of British Insurers (ABI) reports that weather-damage payouts reached £585 million in 2024, and the Environment Agency claims that now at least one in six people in England is exposed to flood risk

A clear outcome of these trends has been the growing prominence of parametric insurance; cover that pays quickly in the event of a pre-agreed, measurable trigger, such as river gauge height, rainfall amount or wind speed, that meets or exceeds a certain intensity threshold, rather than on the valuation of insured loss after an event has occurred.

Parametric products have long been used in development and agricultural markets, but today they are increasingly seen as a pragmatic response to the UK's growing climate exposures. The global parametric insurance market is forecast to reach almost \$35 billion by 2033, a 90%+ increase from its current level of \$18 billion.

Parametric is gaining traction

Traditional indemnity insurance can be inadequate when climate volatility both increases the frequency of claims and complicates loss assessment. Insurers face higher claim volumes

and longer settlement cycles following major climate events. Uncertainty, slow cashflow and protracted recovery feature among the list of issues customers are faced with.

Parametric cover addresses both problems by delivering certainty, speed and simplicity; if the pre-agreed trigger occurs and the threshold is reached, a predetermined payout is made quickly, often within days. This speed is particularly valuable to businesses whose immediate liquidity determines whether they can reopen, pay staff or initiate repairs.

Several market drivers are behind the proliferation of parametric cover in the UK:

- **Escalating frequency and severity of weather events:** storm events and intense rainfall are increasing the incidence of flood and damage claims. Insurers and customers are therefore seeking tools that can provide rapid relief and reduce administrative burden.
- **Protection gap and market withdrawal:** in high-risk areas, some traditional insurers have increased premiums, restricted cover or exited the market altogether. Parametric solutions can offer alternative risk transfer where indemnity cover is limited or unaffordable.
- **Developments in data and technology:** advances in remote sensing, IoT gauges, and weather modelling have improved the accuracy and integrity of parametric triggers, helping make the products more commercially viable and appealing.
- **Regulatory and institutional support:** governments, international development agencies, and large reinsurers have supported parametric solutions as part of climate resilience strategies, providing capital and modelling expertise to help scale the market.

Impacts and Advantages

Although parametric insurance is not a panacea, it offers material benefits and is changing behaviours across several areas of the insurance landscape. Its speed and predictability facilitate faster liquidity for recovery and allow businesses to quickly begin remediation and safeguard operations to avoid secondary losses. UK insurtech FloodFlash, for example, has demonstrated how sensor-based triggers can automatically validate and accelerate claims after flood events, a capability that proved useful following flooding in the UK in autumn 2024.

Insurers and corporates can use parametrics to limit tail losses, offering more reliable risk transfer and complementing traditional covers. This is particularly valuable where modelling uncertainty makes indemnity pricing volatile, with a parametric layer providing a predictable, guaranteed payout based on measurable events.

A further influence on the sector comes from the product innovation and market inclusivity parametric insurance enables through new forms of cover where indemnity models are impractical, providing certain customers with access to affordable, targeted protection.

The market has seen a shift in claims economics and customer expectations as predetermined payouts remove the need for lengthy loss adjustment and negotiation and offer lower administrative costs. Policyholders have advanced knowledge of the quantum and conditions of payment, while insurers can offer lower premiums or scale products to underserved segments. There is also flexibility in design, as triggers can be tailored to the client's needs and protection matched accordingly. However, the market needs to manage expectations and clearly communicate that the trigger and amount paid are set in advance and so may not always exactly match the specific needs of those who have suffered a loss.

Real-world applications

A number of UK use cases serve to illustrate that parametric cover has already moved beyond theory and entered into mainstream practice:

- **Commercial flood cover for SMEs:** FloodFlash and similar insurtech firms place sensors at properties or use nearby gauge data to trigger payments when water reaches agreed depths. For many smaller businesses, these contracts have proven invaluable during recent storm episodes.
- **Agriculture and horticulture:** weather-indexed policies can protect farmers against drought, excessive rainfall or heat stress that can devastate yields or livestock. UK agricultural mutuals and insurers have introduced products to protect harvests and livestock amid growing climate uncertainty.
- **Supply-chain and business interruption cover:** large corporates and logistics providers are exploring parametric layers that pay on rainfall or wind thresholds at key points, enabling them to better manage cashflow and coordinate contingency plans.
- **Public sector and catastrophe risk pools:** on a national scale, parametric structures have been used to provide rapid sovereign support after disasters and could help inform UK public resilience strategies. Internationally, they form part of disaster-risk financing frameworks, such as the African Risk Capacity (ARC), which provides technical assistance and prearranged finance to African nations following extreme weather events.

Limitations and design challenges

While parametric insurance is powerful, it is not without drawbacks. The principal issue is basis risk, meaning a trigger may not correlate with an individual policyholder's loss, so localised flood damage might not, for example, be captured by a regional rainfall gauge. Good product design using granular data, multiple triggers or hybrid indemnity/parametric

structures can help mitigate basis risk, but cannot eliminate it. Transparency in contract wording and client education is therefore imperative.

Additionally, parametric markets require robust third-party data and resilient digital infrastructure. Sensor failure, data latency or model error can undermine trust in the mechanism, so effective governance around data quality and dispute resolution is needed. Finally, some customers may still prefer indemnity cover for complete property replacement or where legal obligations require compensation in line with actual loss.

What the future might hold

Looking ahead, it is likely that hybrid solutions will proliferate, with more combined indemnity-parametric policies, with a parametric layer delivering rapid liquidity and an indemnity layer addressing residual, demonstrable loss. This provides a strong balance of speed and accuracy.

A greater role for technology and modelling can also be expected as continued improvements in satellite data, AI-driven hazard models and IoT sensors reduce basis risk and improve trigger design, leading to parametric products becoming more precise and scalable.

The systemic nature of climate risk, international precedent and reinsurer capacity make increased public-private collaboration a viable route for parametric product development. Insurers, reinsurers and government bodies will come together to co-design parametric risk pools and fiscal backstops with the objective of enhancing national resilience to climate events.

As products simplify and distribution channels mature, parametric cover could become a standard component of risk management for sectors previously underserved by indemnity markets, leading to greater penetration among SMEs and homeowners.

Climate change is forcing the UK insurance industry to rethink how risk is transferred and managed and parametric insurance has emerged as a pragmatic, tech-enabled response to the combined pressures of increasing extreme weather and the need for rapid recovery. Its strengths of speed, predictability and cost efficiency address real gaps in current provision, particularly for areas where traditional cover is constrained.

Parametric products will not replace indemnity insurance, but sit alongside it, filling niches, providing immediate liquidity and enabling more sophisticated risk layering. Their long-term success in the UK will depend on a considered approach to design, robust data governance and transparency with users about the nature of payouts and basis risk. With these elements in place, parametrics can be an important tool in the UK's climate resilience toolkit and turn faster payouts and simpler claims into more resilient businesses and communities.

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