



# PARAMETRIC COVERAGE

*How it can assist during recovery from natural disasters*

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# Who we are and how can we help

**The American Property Casualty Insurance Association (APCIA)** is the primary national trade association for home, auto, and business insurers. APCIA promotes and protects the viability of private competition for the benefit of consumers and insurers, with a legacy dating back 150 years. APCIA members represent all sizes, structures, and regions—protecting families, communities, and businesses in the U.S. and across the globe.

While we do not sell insurance, part of our mission is to provide consumer education regarding home, auto, and business insurance.

We seek to inform consumers so they can make better decisions on how to protect their property and assets.



## Why it's critical to have insurance:

Insurance provides you with a financial safety net, that helps you and your loved ones recover after something bad happens — such as a natural disaster, fire, theft, or other peril.



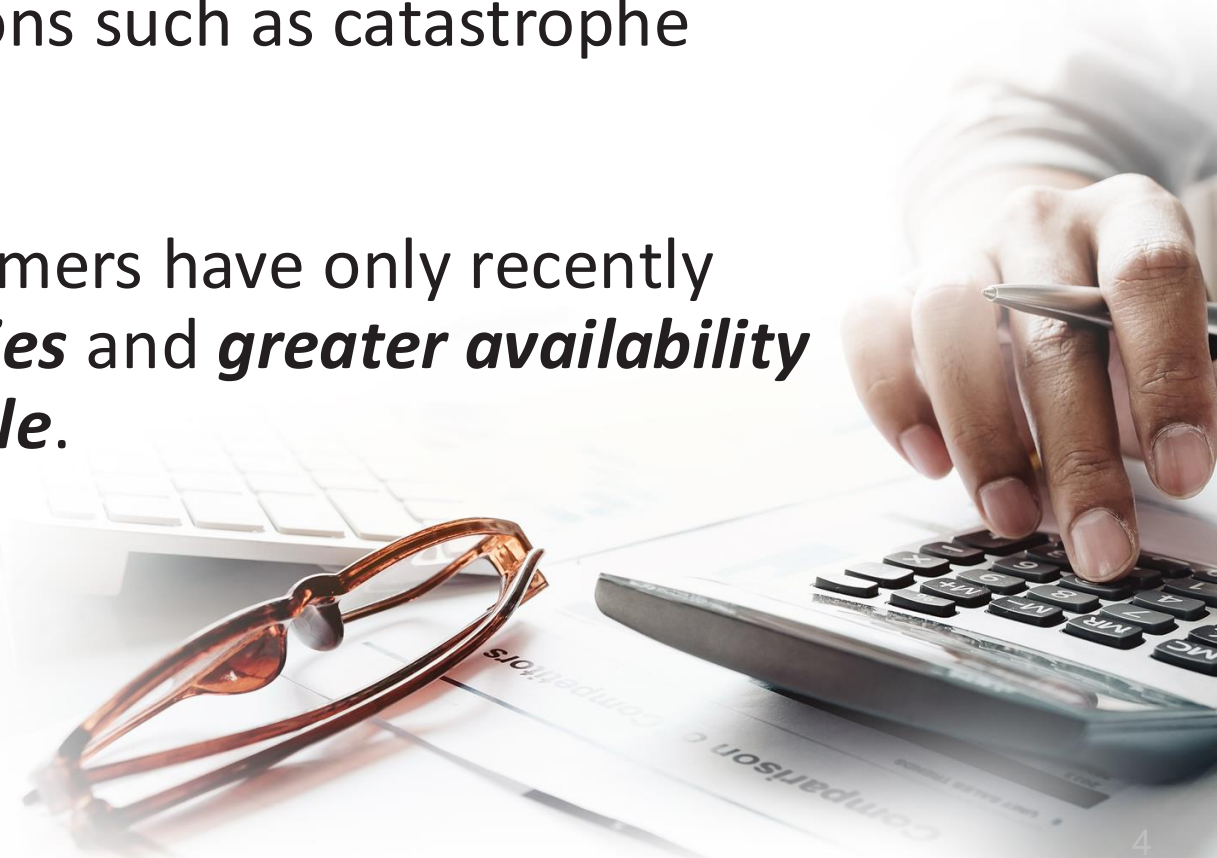


# Emerging Parametric Market

**RAPIDLY GROWING MARKET** – Been in use for decades through the application of large-scale transactions such as catastrophe bonds.

However, parametric options for consumers have only recently been possible due to *newer technologies* and *greater availability of data* at an *increasingly granular scale*.

Increased *education* and *awareness* of how parametric covers work and their value is translating into more deals done.





# Emerging Parametric Market

**COMPLEMENT TRADITIONAL INDEMNITY PRODUCTS** – May complement other risk mitigation strategies and has become increasingly popular due to its ability to provide a *streamlined claims process* for both customers and insurers.

Following a natural disaster, parametric insurance can provide *fast payments* that help to speed up disaster response and recovery.

In areas where traditional insurance has been difficult to obtain or for risks where traditional insurance is unavailable, parametric insurance may help fill protection gaps.





# Examples of Parametric Products in the Market

As technology improves and high-resolution data becomes more widely available, there are a growing number of parametric insurance offerings in the U.S. and around the world.

These include the products for:

***Earthquakes***

***Flood***

***Hail***

***Hurricanes/Tropical Storms***

***Wildfire***





# Parametric Examples

## PRIMARY PERILS:

# *Earthquake & Hurricane*

*In 2022 – specialty (re)insurance group Chaucer partnered with parametric insurance provider K2 Parametric to provide **hurricane and earthquake** damage cover for U.S. mid-size corporates and municipalities.*

*In 2024 – Chaucer announced plans to offer a parametric weather product to cover non-damage business interruption.*

<https://www.chaucergroup.com/news/chaucer-announces-entry-into-weather-insurance-market>



*In 2023 – Liberty Mutual Re developed a parametric reinsurance treaty for earthquakes that that takes its trigger from installed sensor data provided through Safehub technology.*

*In 2024 – Liberty Mutual Re and Safehub also developed a sensor-based parametric **earthquake** insurance cover in the U.S. for the University of California. Leveraging 180 Safehub sensors installed across multiple UC locations, it was the first building-specific, sensor based parametric earthquake insurance cover in the U.S.*

<https://www.artemis.bm/news/liberty-mutual-re-backs-first-us-sensor-parametric-quake-cover-for-university-of-california/>



# Parametric Examples

PRIMARY PERILS:

## *Earthquake & Hurricane*

In 2022 – Global advisory firm WTW and The Nature Conservancy (TNC) partnered with Munich Re to provide the first coral reef insurance policy in the U.S., based on a similar program in Mexico.

The parametric insurance program in Hawaii will provide funds to protect, restore, and repair damaged reefs in the aftermath of **hurricanes or tropical storms**.

<https://trellis.net/article/nature-conservancy-debuts-new-hawaii-coral-reef-insurance-plan/>

In 2023 – The professional services and risk management firm Aon helped the Government of Puerto Rico set up the first parametric insurance protection mechanism employed to reduce FEMA's Obtain & Maintain (O&M) requirement.

The program designed with **hurricane and earthquake** triggers may help illustrate how federal agencies can work with the insurance industry to meet coverage needs.

<https://www.reinsurancene.ws/aon-completes-historic-parametric-insurance-program-for-puerto-rico/>







# Parametric Examples

## SECONDARY PERILS:

### ***Flooding***

In 2022 - FlashFlood offers parametric **commercial flood** coverage in the U.K. and U.S. using a minimum water depth as the trigger for each policy.

With just 5% of businesses having traditional flood insurance, the product can pay catastrophic flood claims within hours after an event. "FloodFlash can be used for flood coverage as a standalone policy or in combination with NFIP policies since we can offer coverage to about the \$500k limit and our coverage can be used for any loss incurred by flooding."

<https://www.propertycasualty360.com/2022/11/21/flood-insurer-launches-the-first-mass-market-parametric-flood-insurance-coverage/>

Guy Carpenter introduced FloodShield, a parametric **flood** risk solution designed to have broad applicability and can scale to support large portfolio coverage, with users expected to be insurers, reinsurers, corporations and public entities.

The risk transfer will cover any loss, from property to business interruption, with limits up to \$100 million via traditional insurance and reinsurance markets and payouts expected within weeks.

<https://www.artemis.bm/news/guy-carpenter-launches-floodshield-near-real-time-parametric-flood-cover/>





# Parametric Examples

## SECONDARY PERILS:

### ***Flooding***

Swiss Re, Guy Carpenter, and insurtech ICEYE launched a pilot parametric **community flood** insurance program for low- and moderate-income communities in high-flood-risk New York City neighborhoods.

The program will award up to \$15,000 to qualifying households within days of a flood disaster. The parametric trigger utilizes a mix of satellite data, ground-based real-time sensors, and social media images.

<https://www.artemis.bm/news/swiss-re-guy-carpenter-iceye-deliver-nyc-parametric-flood-insurance/>

Cloud to Street (C2S), a climate technology company, partnered with parametric insurance platform Raincoat and Munich Re to provide parametric **flood insurance** coverage in Columbia.

Under the national program, over 100,000 smallholder farmers can receive payouts within days and without needing to file a claim, a particular challenge in developing countries with rural areas.

<https://www.insurancebusinessmag.com/us/news/catastrophe/whats-powering-parametric-flood-insurance-418987.aspx>





# Parametric Examples

SECONDARY PERILS:

## *Hail*



Mainstay Underwriting offers parametric insurance for Australian *car dealership* to cover ***hail*** damage.

The parametric trigger is based on the size of hailstones using a hailstone measuring unit installed directly on the roof of car dealerships.

<https://www.insurancebusinessmag.com/au/news/breaking-news/size-matters-mainstay-underwriting-launches-parametric-hail-insurance-402008.aspx>

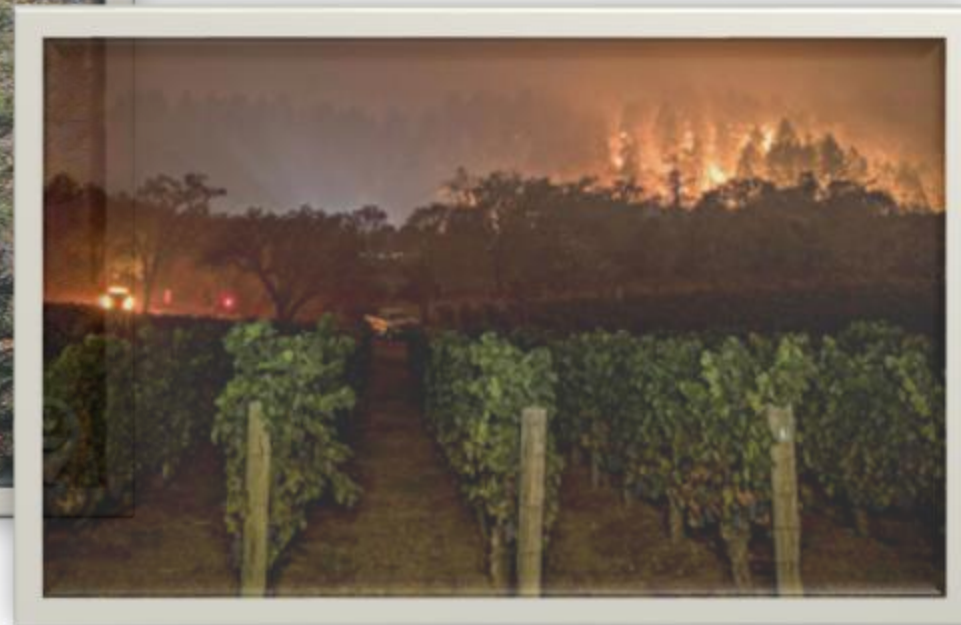




# Parametric Examples

SECONDARY PERILS:

**Wildfire**



Marsh Specialty's parametric solutions group indicates that enhanced data, research, and improved modeling enables the insurance industry to detect and monitor **wildfire** events with increased accuracy in a near real-time basis.

Their clients are able to use parametric wildfire as a standalone policy or as an additional coverage to fill gaps in coverage, such as non-damage business interruptions, or be used as a deductible buydown. Typical parametric clients include forestry operations and wineries.

<https://www.businessinsurance.com/More-buyers-seek-parametric-wildfire-cover/>



# Considerations for Parametrics: Benefits

- **Benefits of parametric insurance exist for both the customer and the insurer**
  - *Example: speed of payment, transparency of triggering event, certainty of payment amount*
- **For insurers, parametric coverage also increases certainty by capping the total amount of liability**
  - *Important for high-severity, low-frequency events*
- **Parametric contracts can also have broader benefits to society**
  - *Example: reduced chance of insurance fraud since the trigger is independently verified and the payment amount is fixed*



# Considerations for Parametrics: Challenges



- **Potential for basis risk**

- If the amount of coverage differs from the actual losses sustained, or the possibility for incurred losses without the parameter being met that would trigger a payment



- **Does coverage fall outside the legal definition of insurance?**

- Implications for financial/tax reporting



- **Regulatory hurdles**



# Questions?

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# Additional Resources

- Milliman (May 18, 2022), Parametric insurance: A captivating solution: <https://us.milliman.com/en/insight/parametric-insurance-a-captivating-solution>)
- National Association of Insurance Commissioners (NAIC), Parametric Disaster Insurance: <https://content.naic.org/cipr-topics/parametric-disaster-insurance>
- PropertyCasualty360 (February 23, 2021), What is parametric insurance, and why should we care? <https://www.propertycasualty360.com/2021/02/23/what-is-parametric-insurance-and-why-should-we-care/>
- PropertyCasualty360 (March 23, 2023), Parametric insurance: The potential for underserved communities, SMEs: <https://www.propertycasualty360.com/2023/03/23/parametric-insurance-the-potential-for-underserved-communities-smes/>
- Wharton, Risk Management and Decision Processes Center (June 8, 2022), Parametric Insurance: Shaping the Future of Public Sector Resilience with Data and Technology: <https://riskcenter.wharton.upenn.edu/lab-notes/parametricinsurance/>
- Wharton, Risk Management and Decision Processes Center (September 2020), Parametric Insurance for Disasters: [https://riskcenter.wharton.upenn.edu/wp-content/uploads/2020/09/Parametric-Insurance-for-Disasters\\_Sep-2020.pdf](https://riskcenter.wharton.upenn.edu/wp-content/uploads/2020/09/Parametric-Insurance-for-Disasters_Sep-2020.pdf))
- Wharton, Risk Management and Decision Processes Center (September 2020), Can Parametric Microinsurance Improve the Financial Resilience of Low-Income Households in the United States? <https://riskcenter.wharton.upenn.edu/wp-content/uploads/2021/01/Proof-of-Concept-report-2020.pdf>