

# Parametric Insurance

WTW Alternative Risk Transfer Solutions



**Parametric Insurance is a simple, transparent risk transfer program that utilizes robust independent data to respond swiftly, providing funds instantaneously in times of crisis.**

**Parametric insurance** has been increasingly used to manage earthquake, windstorm and flood risks, due to the shortage of traditional insurance capacity. New and emerging data sets are allowing the application of parametric solutions to wildfire, ash clouds, supply chain vulnerabilities, and more traditional risks.

Parametric Insurances feature a **transparent structure, simple and fast claims settlement,** and coverage for **non-damage BI**. Insurance programs structured with a combination of traditional and parametric capacity help to fill the gap of protection and improves **program efficiency**.

## Benefits

The characteristics of parametric insurance are based upon robust independent data, and require significant modeling and structuring, with potential basis risk. The benefits include:

- Transfer of risks not covered by traditional insurance
- Managing peak natural catastrophe risks in parallel with traditional placement
- Cover for non-damage business interruption
- Tailored to reflect specific geography, risk exposure, risk appetite, and budget.
- Flexibility in solution design (perils, trigger, and basis of compensation)
- Transparency of coverage allows quick settlement once an event is measured
- Capacity available from insurance and capital market sources.

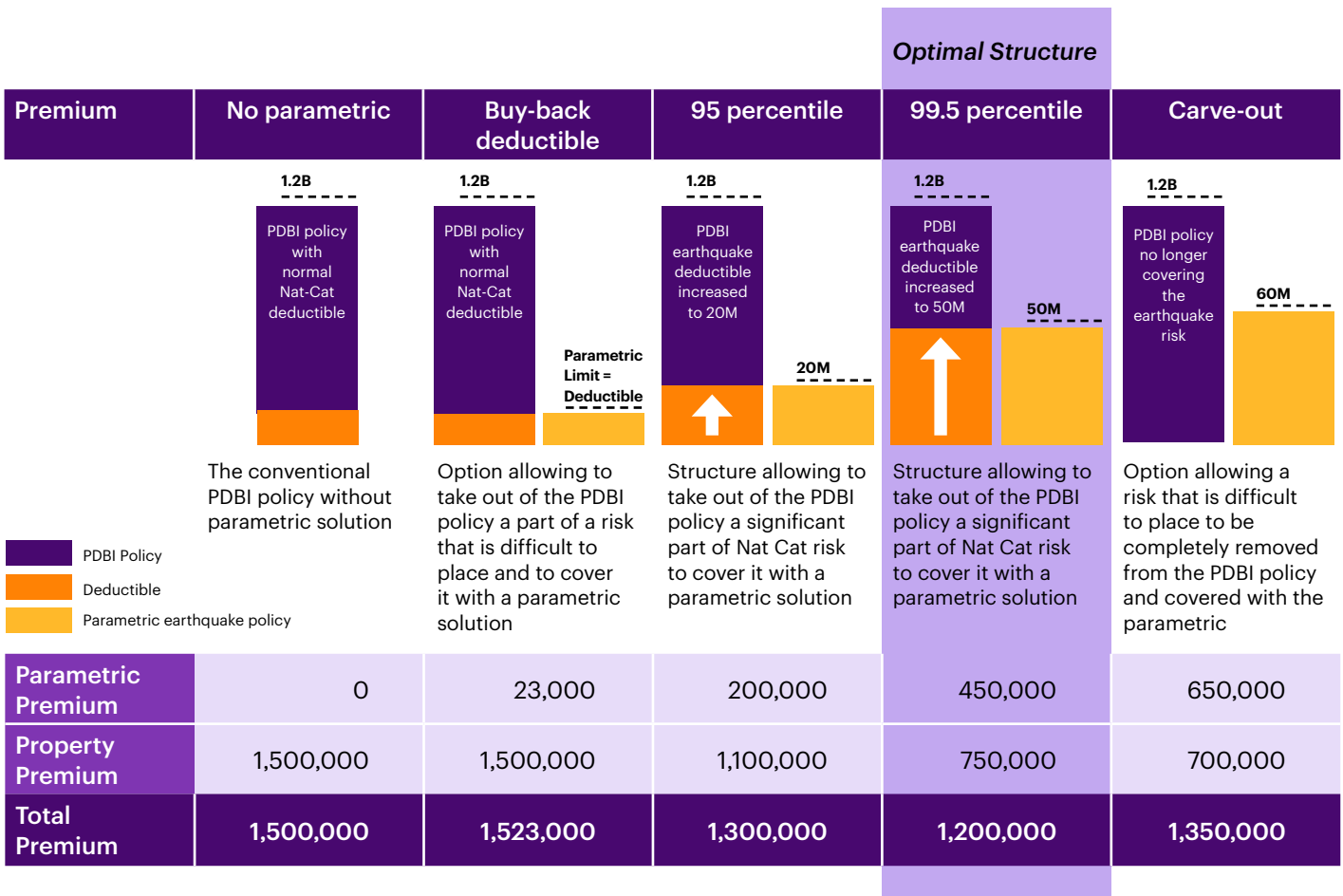
## Parametric insurance

While considering parametric insurance versus indemnity, you need to consider if the insurance payment is triggered/calculated according to a pre-agreed scale of payment, or with reference to actual loss at the concept of indemnity.

Other considerations should include:

- Business interruption costs associated with specific events (e.g. windstorm, earthquake, flood) are not covered by traditional insurance unless there is associated damage to insured assets
- Parametric solutions respond to objectively defined characteristics of an event as opposed to damage sustained to assets
- Claims are triggered if the actual measured physical characteristics of the event exceed pre-agreed thresholds.

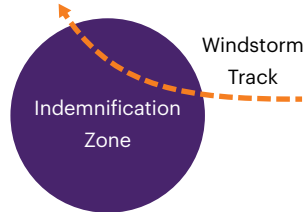
**Parametric insurance, combined with conventional insurance, offers a cost effective risk transfer program to fill the gap of protection.**



## We help transfer and finance non-traditional risks

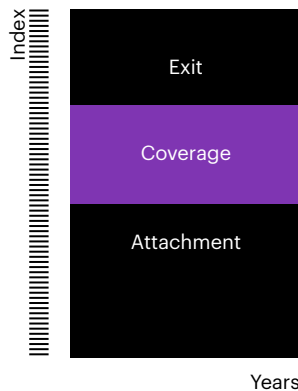
### Natural Catastrophe

- Insurance payment is triggered/calculated according to a pre-agreed scale of payment
- Business interruption costs associated with specific events (e.g. windstorm, earthquake, flood) are not covered by traditional insurance unless there is damage
- Respond to objectively defined characteristics of an event as opposed to damage sustained to assets
- Claims are triggered if the actual measured physical characteristics of the event exceed pre-agreed thresholds.



### Agriculture and Aquaculture

- **Target Customers:** Crop and animal production, fishing and aquaculture, forestry, support activities, and post-harvest activities
- **Challenge:** Agriculture and aquaculture product is vulnerable to natural catastrophe/weather events, e.g. drought, flood, frost, cyclone, led to loss of yield
- **Forestry:** Suffer from weather risk, such as wildfire led to loss of carbon sink
- **ART Solutions:** Parametric solution to protect yield, “Cat-in-a-box” for extreme climate, wildfire and carbon sink solution, affinity solutions.



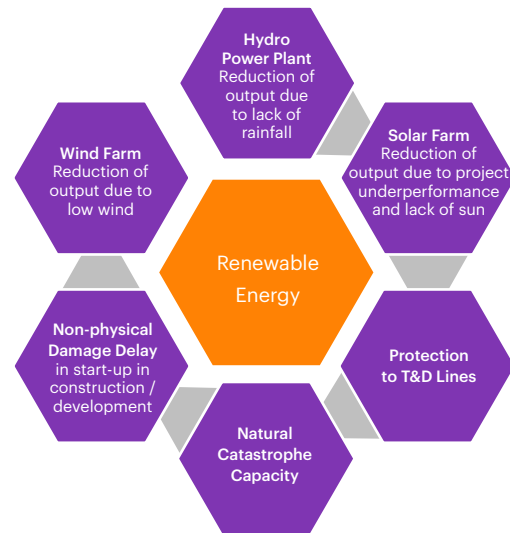
### Construction

- **Target Customers:** Civil engineering, construction of buildings, specialized construction, construction contractors, inspectors, liquidated damage and cost overrun
- **Challenge:** Concerns of financial impact associated to construction projects, liquidated damage and cost overrun may be the result of natural catastrophe and weather risk
- **ART Solutions:** Parametric Adverse weather solution, “Cat-in-a-box” solution for extreme weather, captive solution, customized credit and collateral solution.

Category	Lower (mm)	Upper (mm)	% of Limit
1	166	185	1%
2	185	191	5%
3	191	198	10%
4	198	210	25%
5	210	263	50%
6	263	0	100%

### Renewable Energy

- **Target Customers:** Onshore and offshore wind, hydro, solar, bio-energy, carbon capture and storage
- **Challenge:** Renewable energy production is volatile and vulnerable to weather risk, including low wind for wind plant, lack of rainfall for hydro plant, lack of sunlight for solar plant
- **ART Solutions:** Parametric weather risk solution, parametric NDBI solution, captive solution, asset and capital solution.



### Carbon Credit

- Carbon credit is considered a high-value asset for the renewable energy industry that allows operators to emit a certain amount of carbon dioxide or other greenhouse gases over a period
- The delivery of carbon credit trading from renewable energy is susceptible to weather risks and subject to validation and verification. Parametric insurance can cover the risk facing both sellers and buyers of carbon credit
- Parametric insurance can fill the protection gap by covering the loss of revenue from production without physical damage, as well as protect the carbon credit trading value.



### Crude Oil / Jet Fuel Price

- The jet fuel price insurance policy is a risk management tool that works for airline industry
- Our straightforward insurance policy automatically pays a cash settlement when the average trading fuel price for the policy period exceeds the pre-determined trigger level
- **Benefits:** Low cost, transparent, tax deductible, accessible, efficient, trustworthy, secure, autonomous.



The time period, in calendar months, the policy is required



The volume of fuel policy holder expects to consume over the duration



The fuel price beyond which policy holder can claim

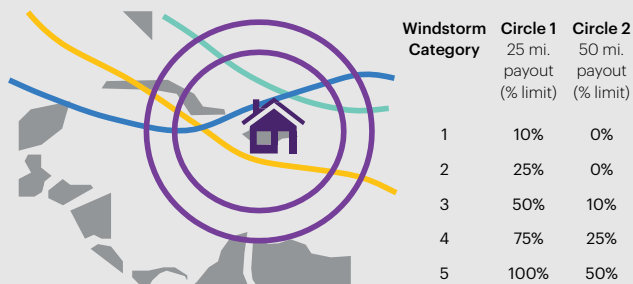
## Two possible parametric structures for typhoon

### Cat-in-a-box approach

A radius is drawn around the asset(s) that is being insured. The solution pays out if a named windstorm tracks through the drawn circles. Basis risk can arise when a storm closely misses the circle but winds still damage assets.

#### 1 Storm & Radius Mapping

#### 2 Solution



### Gridded data approach

Wind speed is measured at a specific grid point close to the selected location. This is used to determine the payout of the policy. Payout can occur on a stepped basis. This approach helps minimize basis risk.

#### 1 Storm Mapping & Gridded Exposure

#### 2 Solution



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