Parametric Insurance: From need to solution

NAIC: Innovation Workstream of the Climate and Resiliency Task Force

May 2022
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Agenda

1. Need to be **customer centric** when developing solutions

2. What is the **insurance protection gap**?

3. **Quick overview** of parametric insurance

4. **Product Development**
Customer centric
Customer-led solutions are needed in all industries

**Developers** need to build a home a realtor wants to sell and a future homeowner wants to buy

**Insurers** need to develop insurance propositions that our distribution partners can sell (able to explain the value proposition) and customers want as part of their complete risk management strategy
Insurance product development is a long process ...

... need to ensure we are solving for a customer’s needs

Identify and understand the world’s emerging and evolving risks and their impacts to society and our customers

Ensure customer-led solutions are created that truly solve pain points for our customers

We pull together teams across multiple functional areas to ensure development of well thought out insurance propositions
Insurance protection gap
Further the insurance industry has a ‘protection gap’...  
...parametric insurance is part of the solution to narrow the protection gap

**Natural catastrophe losses 1970-2020** (in USD billions)

**Comments**

Total (economic) loss is larger than insured loss, difference driven by:

- No available insurance product
- Current products too expensive in eye of insured
- Lack of compelling insurance offerings
- Customer choice not to purchase

Sources: Swiss Re Institute
Weather and climate disasters more frequent, varied and costly

U.S. 2021 Billion-Dollar Weather and Climate Disasters

This map denotes the approximate location for each of the 20 separate billion-dollar weather and climate disasters that impacted the United States in 2021.

Sources: NOAA
Weather and climate disasters more frequent, varied and costly

Observed change in very heavy precipitation, % pts

Projected change in number of days above 90°F
Mid-21st Century, # count
Quick overview
What is parametric insurance?

What is being covered?
- Predetermined event, often weather or geological
- Event highly correlated to a financial loss
- Does not require physical damage to provide claim payment for financial loss; non-damage business interruption

How are prices set?
- Based on probability of an event occurring, as well as agreed upon payment once the event occurs
- Geographic location and coverage-period dependent

How are claims paid?
- If the specified conditions occur (trigger is met), claim is paid rapidly without typical delays caused by extensive loss adjustment
The parametric methodology enables the creation of very transparent and automated products.

The payment is not related to the ‘amount of loss’, it is predetermined and solely linked to the ‘trigger event’.

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**Diagram:**

- If you pay me
  - X
  - Premium
    - u/w personalised and automated

- In case the event Y happens
  - Y
  - Trigger event
    - Fully transparent and undisputable by anyone

- I pay you
  - Z
  - Compensation
    - Pre-determined and automated

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Parametric solutions are based on a multitude of data that can be processed by a single engine.

It's enabled by data...

The exponential growth of data combined with new data processing technologies could facilitate the adoption of parametric across the main product lines in commercial and retail.

**Type of Data Sets**

- Enhanced weather data
- Customer data
- Social media data
- Booking systems data
- Airport and traffic data
- Cloud & cyber data
- Social media data
- Credit card transactions
- IoT devices
- Telematics data
- Smart cities and infrastructures

Calculated and statistical models... allowing the delivery of different use cases
Current examples of parametric insurance products

Three main ‘categories’

**Catastrophes**
- Overall, the most common parametric proposition in the market, provides cat only cover that supplements/replaces some portion of a standard property cover

**Weather-related** *(downwind impact)*
- Offerings in this category generally create a newer category of insurance, non-damage business interruption (NDBI)
- These offerings generally expand/compliment traditional insurance

**“Exotics”**
- Uses many new technologies to provide coverage beyond catastrophes or weather
- Some examples include disgrace insurance via Twitter APIs, footfall traffic, and even cyber offerings

The common denominator is verifiable and objective trigger that both the insurer and insured agree to measure an event

Sources: www.pexels.com – public domain images (free stock photos)
Caveats to consider regarding parametric insurance products

**Need to claim loss**
Parametric insurance should not be confused with a financial derivative

**Indemnification limits**
Insurers cannot over-indemnify a customer

**Cost of parametric insurance**
Price of parametric insurance depends on the subject of the insurance and structuring

**NDBI complements traditional insurance**
Can be part of a well thought-out and sound risk management strategy
Product development
In January 2021, Zurich North America announced our 1st parametric insurance proposition to the market.

**Zurich North America launches new parametric insurance product**

Zurich North America has announced the launch of a weather parametric insurance product. The insurance will cover weather-related construction delays not covered by traditional builders' risk insurance policies.

Traditional builders risk policies offer protection for financial loss related to weather events, but only when those events cause physical loss or damage to a product. Zurich's construction weather parametric policy does not require physical loss or damage for a claim to be paid.

Rather, payment is based on predetermined weather events occurring in the project's location, such as extreme rain, wind, or temperatures – any of which can cause project delays that result in financial loss, even when the project is not physically damaged.

**How did Zurich get here?**

- Market Research
- Gain preliminary leadership approval
- Put together team for ideation sessions
- Review/vet ideas → take ideas to market facing leadership
- Ensure skills to develop product are in house or acquirable
- Present candidates / business case for approval
- Pull together updated team to develop product
- Engage with our Product Development project managers
We needed to understand how we will assess opportunities across these four dimensions.

**Modelling Ability**
- Reliance on *internal data*
- New data sources
- Ability to *diversify portfolio* (e.g. Hurricane and EQ will lead to increased accumulation risks)

**Market Opportunity**
- How big is the market (or industry we’re targeting)?
- How big is our foothold in the market (or industry)?

**BU / SBU Appetite**
- Does this fall within appetite

**Distribution Model**
- Are brokers excited to distribute this product?
- Would Program Administrators be able to distribute this product?

Analysis across these four dimensions will lead to a proposed product.
Bold experimentation allows for strategic problem solving in any industry

Bold experimentation in insurance used to develop insurance solutions to close the coverage gap

Use bold experimentation to solve your customer’s problem
Thank you,

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