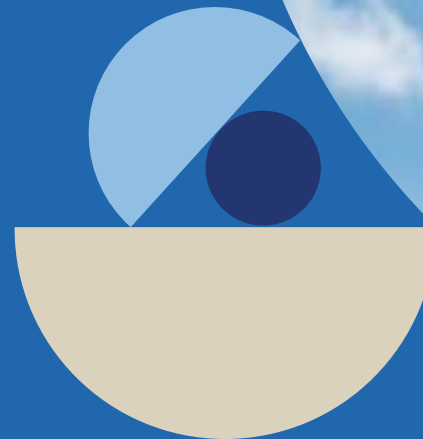


# Parametric Insurance: From need to solution

NAIC: Innovation Workstream of the Climate and  
Resiliency Task Force

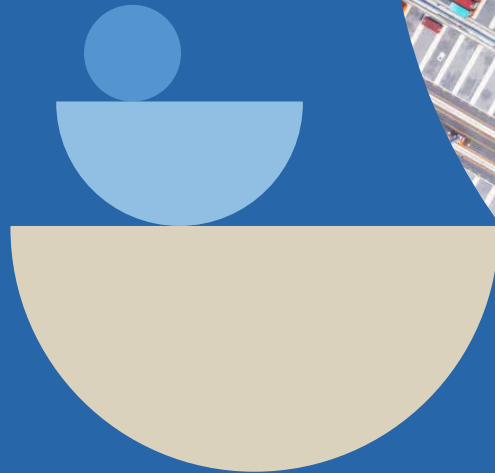
May 2022  
Jonathan Charak FCAS MAAA CPL  
Zurich North America



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



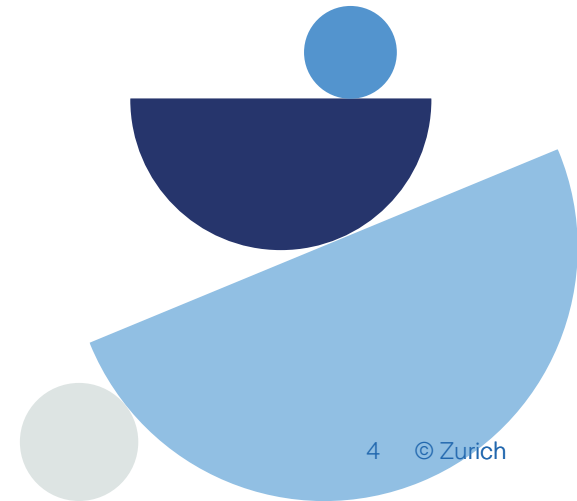
# Customer-led solutions are needed in all industries



**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



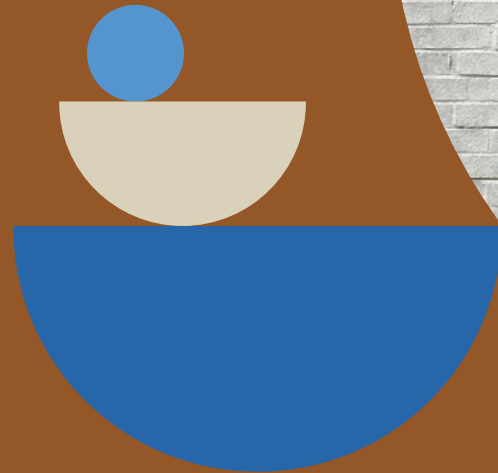
Identify and understand the world's emerging and evolving risks and their impacts to society and our customers

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

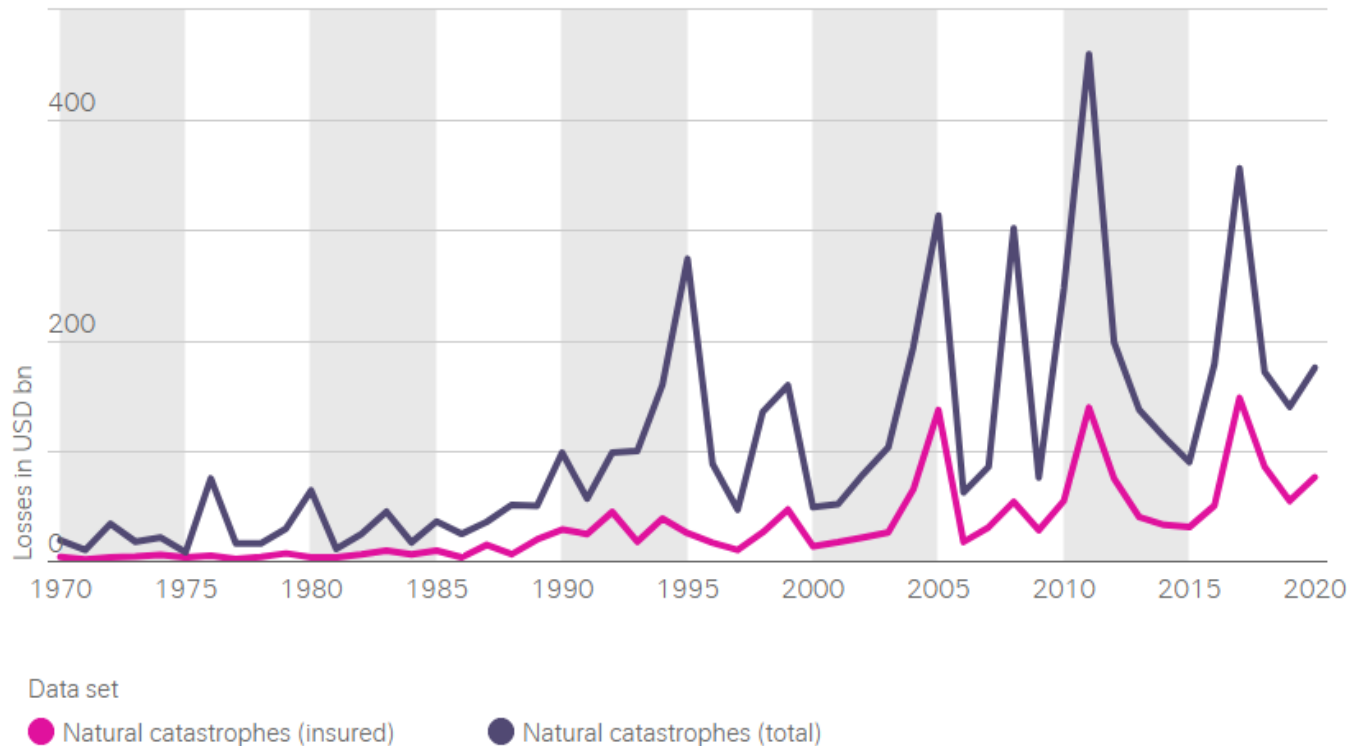


# Further the insurance industry has a 'protection gap'...

... parametric insurance is part of the solution to narrow the protection gap



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



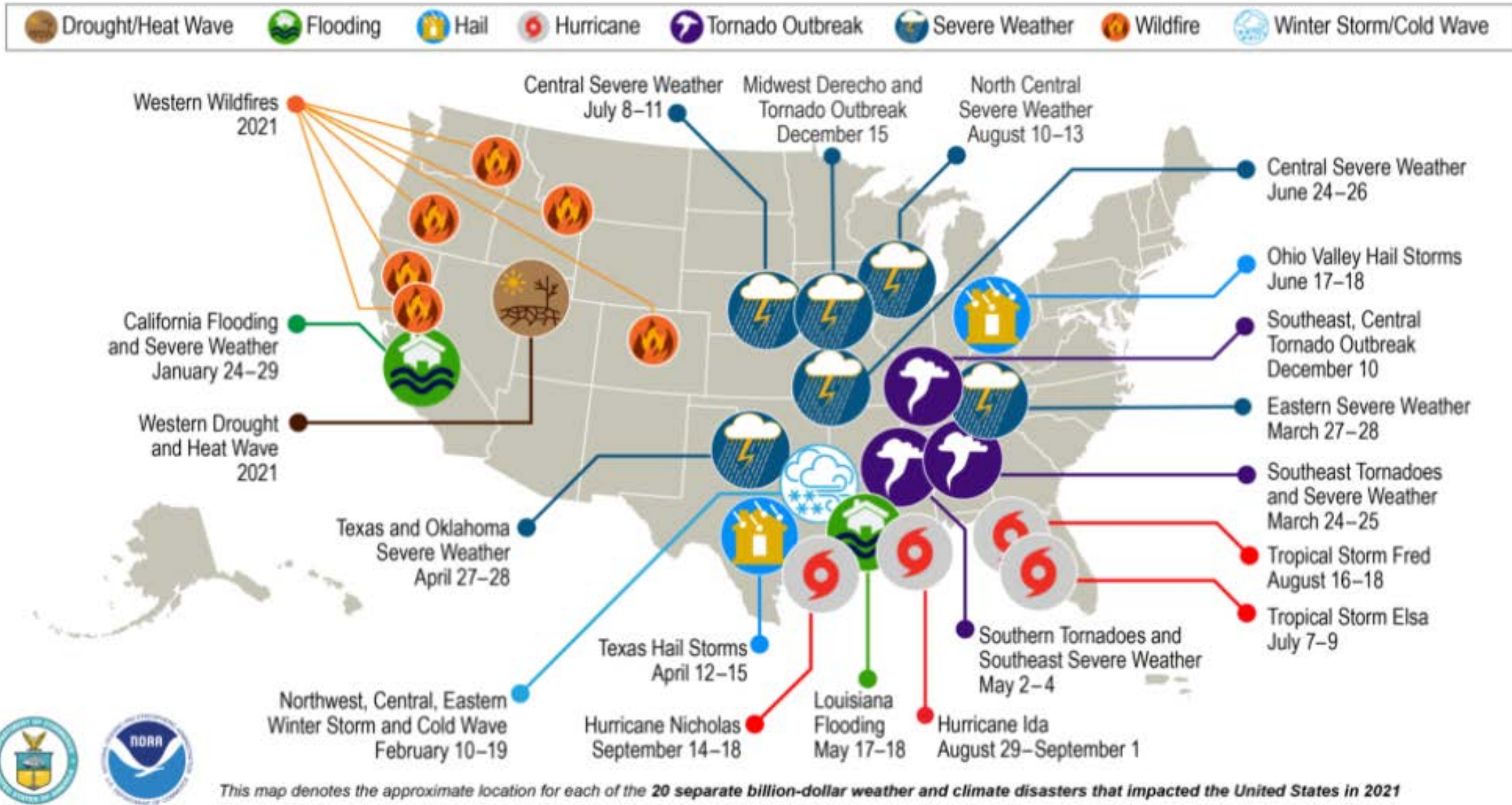
### Comments

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

# Weather and climate disasters more frequent, varied and costly

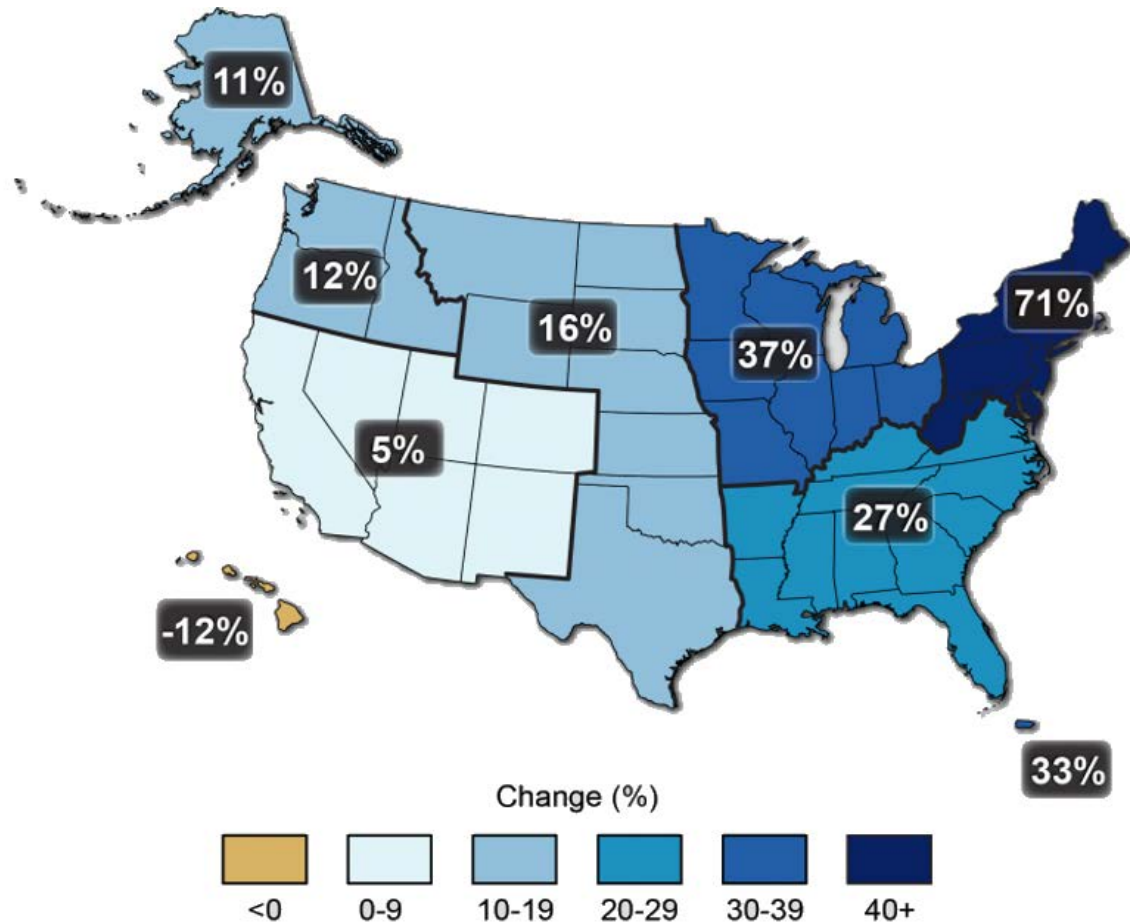
## U.S. 2021 Billion-Dollar Weather and Climate Disasters



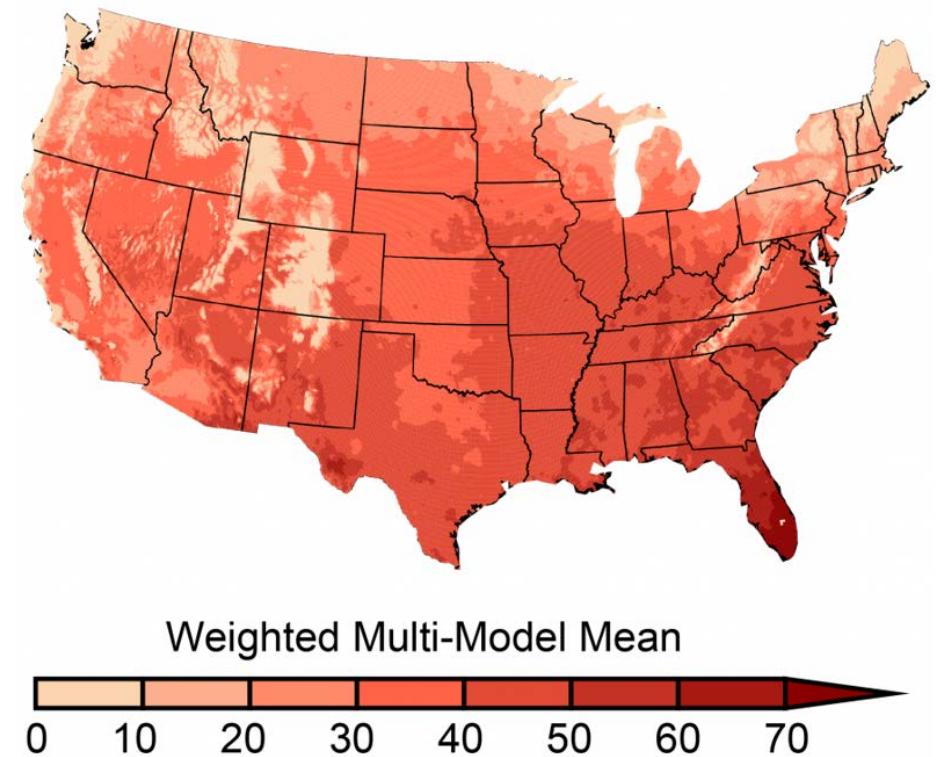


# Weather and climate disasters more frequent, varied and costly

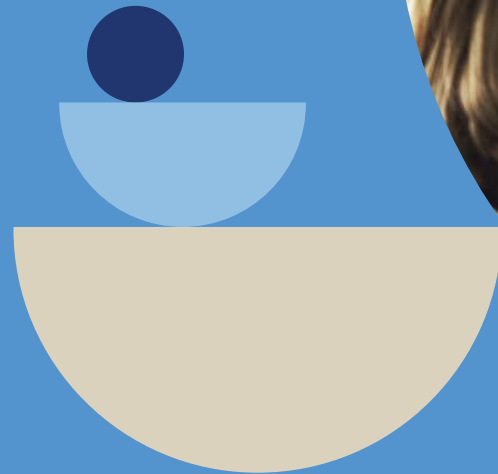
Observed change in very heavy precipitation<sup>1</sup>, % pts



Projected change in number of days above 90°F  
Mid-21<sup>st</sup> Century<sup>2</sup>, # count



# Quick overview





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

If you pay me



In case the event  
Y happens



I pay you



Premium

u/w personalised and  
automated

Trigger event

Fully transparent and  
undisputable by anyone

Compensation

Pre-determined  
and automated

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

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

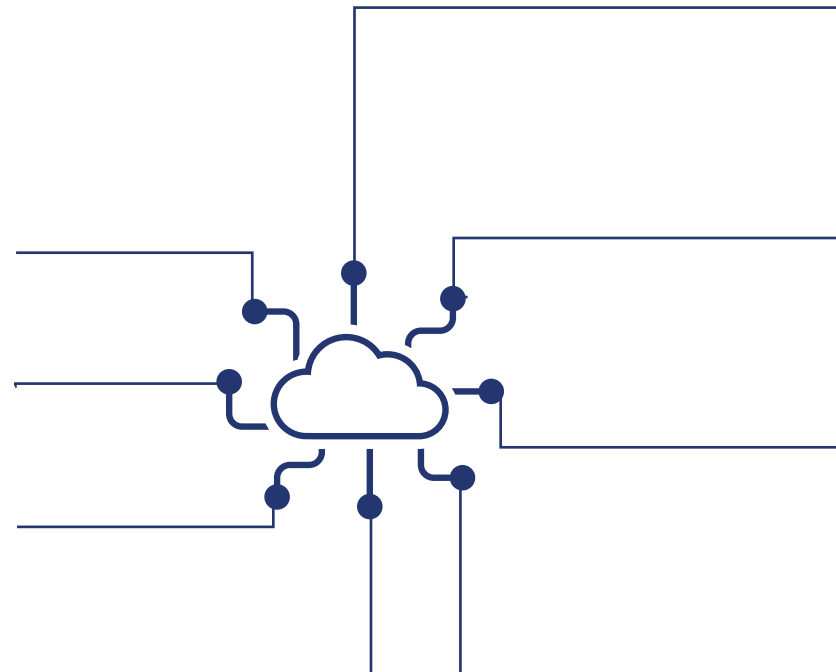
It's enabled by data...

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.

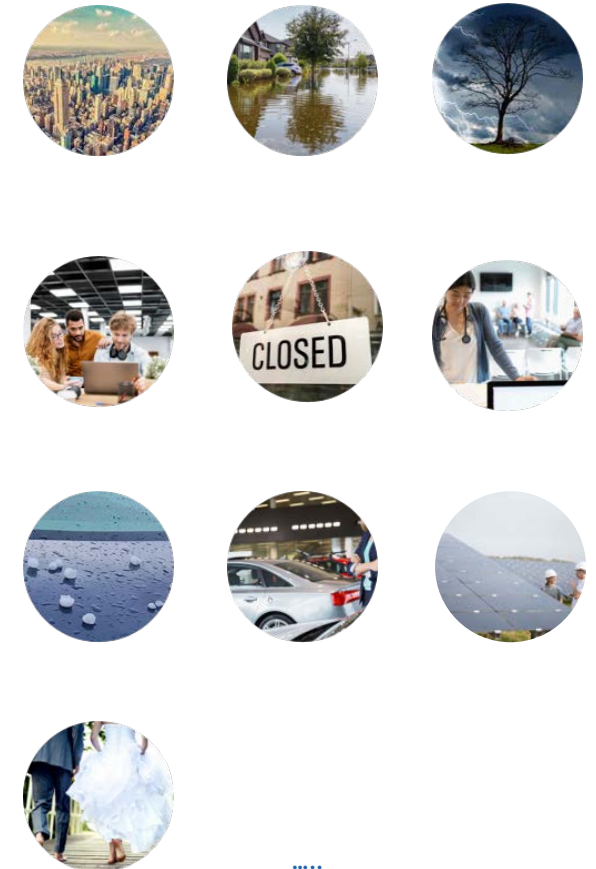
## Type of Data Sets



...Calculations 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



## 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

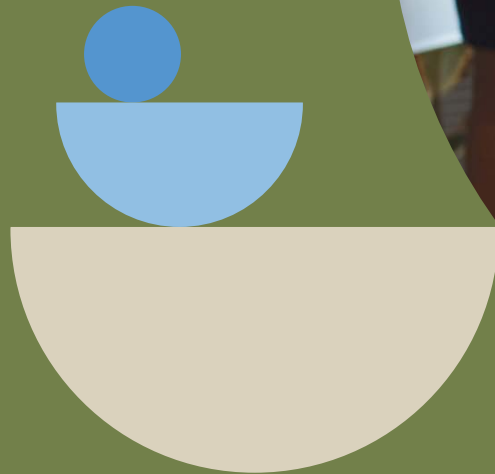
Price of parametric insurance depends on the subject of the insurance and structuring



## 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

by Ryan Smith  
07 Jan 2021

SHARE  




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

## 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

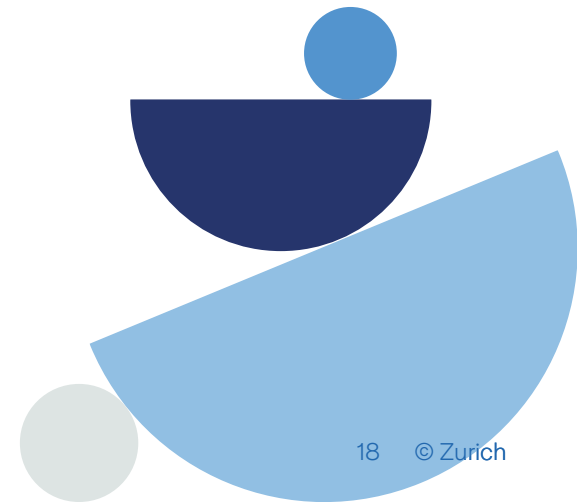
- Does this fall within appetite

## 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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