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21st Global Conference of Actuaries
17th - 19th February 2020 | Mumbai, India

Rethinking Risk with Parametric Insurance

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Date:18th Feb 2020

Parametric Insurance

It is a type of insurance contract in which the insured is protected against the ***occurrence of a specific event,*** in which, based on the magnitude of the event a ***prefixed amount of claim is paid.***

Parametric solutions are structured based on two key elements:

I. Triggered event

Fortuitous – event happening by chance rather than by design

Correlated to the loss

Enough data is available to model the event

II. Payout mechanism

Payment of pre-agreed amount on exceeding pre-agreed index

Parametric Insurance

An example is a policy that pays Rs.1 crore, if an earthquake with magnitude 5.0 or greater occurs as measured by the Richter scale. (Triggered event- Earthquake and payout threshold – magnitude 5.0 on Richter scale.)

Parametric Ins vs. Traditional Ins

Traditional Insurance involves detailed **policy wordings with complex rating parameters** whereas parametric insurance is limited but more straightforward.

This unique structure brings in **efficiency in expenses** for the insurance company and **increased liquidity** (quick payouts) for the customer

The key point to note is that ***parametric insurance does not indemnify for actual losses.*** This results into a risk inherent in every parametric based product – Basis Risk

Basis Risk

"With parametric products, basis risk refers to the near-miss factor"

- Though basis risk is not completely unique to parametric products

  Exclusions, limits, terms and conditions present in the traditional indemnity policy also represent basis risk.

- Organizations may find the payout to be too small or too large as compared to actual losses - under parametric model.

- To mitigate the risk:
  - Structured payout in a step fashion rather than all-or-nothing.
  - Product can also have multiple trigger point

Rethinking Risk with Parametric Insurance

"If one can meaningfully connect risk to a given data set, there's an opportunity to employ parametric insurance"

- **A building block for microinsurance**

  An insurance which helps the banks to offer credit to farmers for cultivation of agricultural products as it is backed by a parametric drought/excess rainfall cover.

- **Weather linked Livestock Insurance**

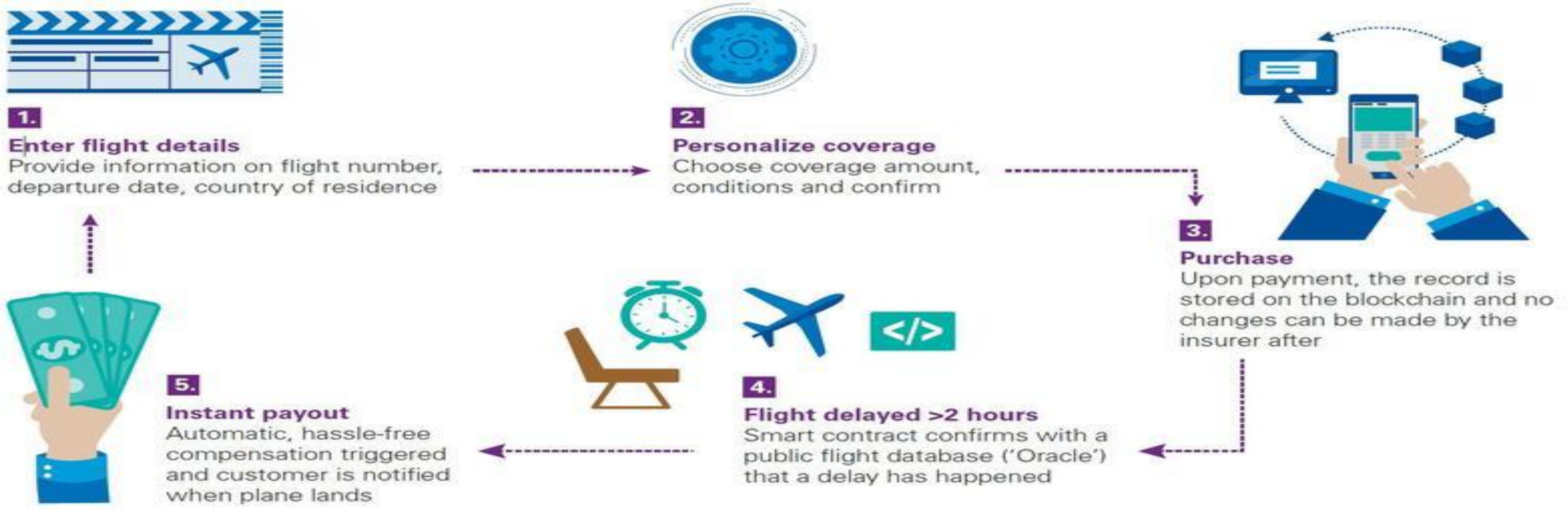
  As reported in United Nations Framework Convention on Climate Change (UNFCCC), a rise in temperature by 2-4° C by 2050s will negatively impact milk production by more than 15 million tons by 2050 with respect to current levels of production.

- **Index-based Agriculture Insurance using satellite imagery data:**

  To predict the loss in forage and vegetation in the drought prone arid and semi-arid regions using vegetative index like NDVI

Making Smart Insurance a reality

The automatic payment in-built into parametric insurance makes a natural connection with blockchain (DLT – Distributed Ledger Technology) and makes way for issuance of smart insurance. The only prerequisite is that it requires trusted data sources and secure transactions.



Challenges and Outlook

- Gaining regulatory approval
- Obtaining reliable data to model the risk the insured is concerned about.
- Educating people, clients and intermediaries, about how parametric products work - explain what it does and does not do

Big data and related technologies are driving insurers and customers to rethink what's possible with a parametric insurance model and hence parametric insurance is something worth keeping an eye on.

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Thank You

The views expressed here are personal