Role of Parametric Insurance in Climate Resilience: Bermuda's Supervisory Experience

Presentation to the NAIC Innovation Workstream of the Climate & Resilience Task Force

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Agenda

- Parametric Insurance – Tool for Climate Resilience

- Bermuda's Supervisory Experience
    - Parametric Insurance & Capital Markets
    - Tailored Supervisory Approach
    - Parametric Insurance - Basis Risk & Outlook

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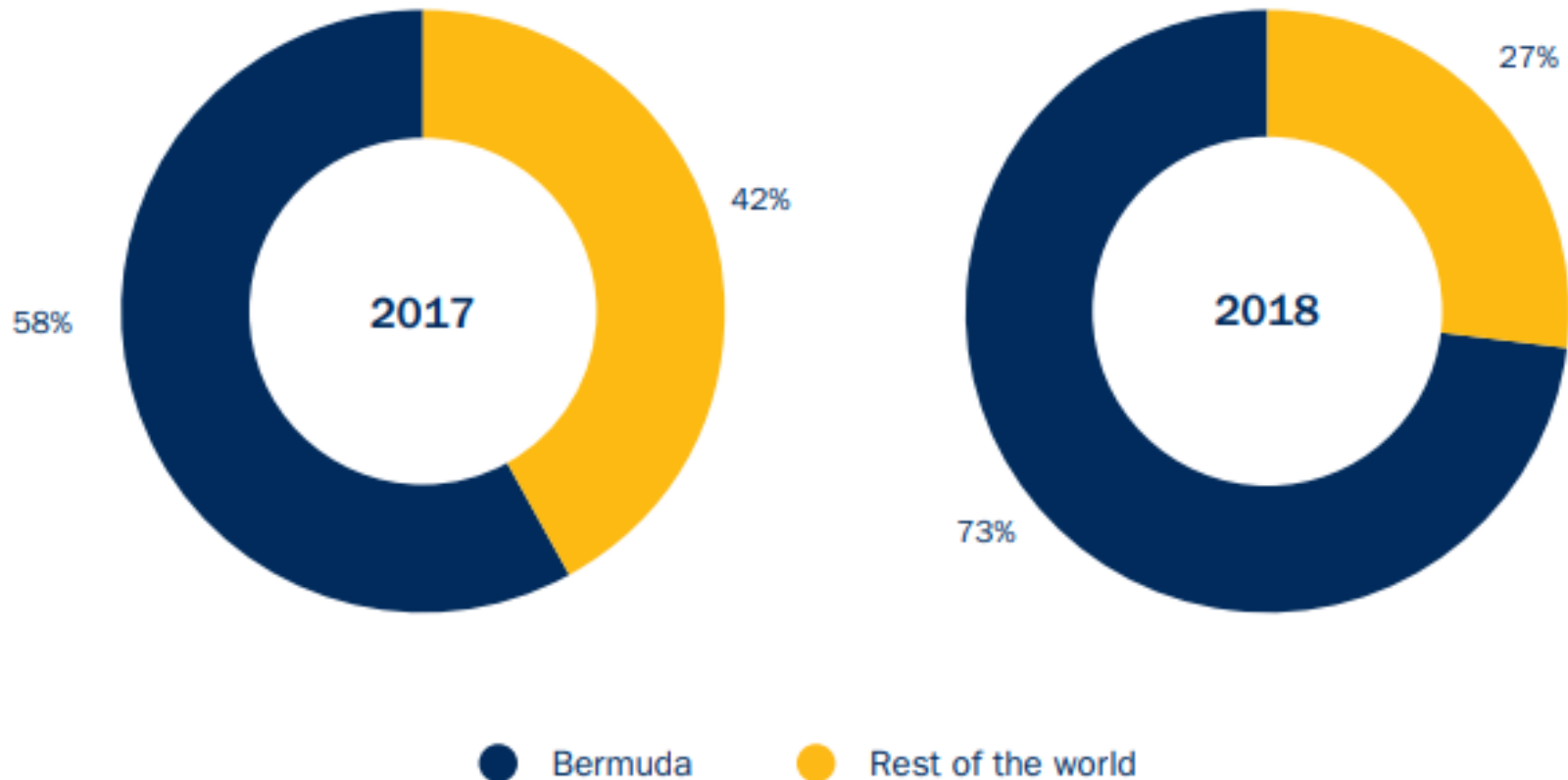# Parametric Insurance – Tool for Climate Resilience

- Extreme weather events occur with greater frequency and impact, BMA is seeing more parametric insurance solutions

- Harder to rely on historical weather data alone to predict climate-related weather risks - increasingly complex and unpredictable.

- Predefined triggering event & payment - if an event (e.g., hurricane, earthquake) hits the defined trigger level for the index/measurement reflecting the peril in question, contract pays out according to a predefined scheme

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Parametric Insurance & Capital Markets

- Alternative risk solutions that enable organizations to finance or to transfer risk in a non-traditional way – do not necessarily require physical damage to occur.

- ILS/Capital markets able to engage more easily with parametric structures:
    - Sophisticated from a modelling point of view
    - Innovative designing customized solutions with uniquely tailored index and pay-out structure aligned with economic exposure
    - Cat, Earthquake etc.

- Addressing coverage gaps (e.g. non-damage business interruption) in a cost efficient manner – Institutional investors (e.g. pension funds) with appetite to deploy capital if attractive risk adjusted return thresholds are met.

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Parametric Insurance & Capital Markets:
Alternative Capital - Bermuda vs Global

2017
58%
42%

2018
27%
73%

● Bermuda   ● Rest of the world

Source: 2019-Alternative-Capital-Report

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Parametric Insurance & Capital Markets: Motivations for Participating in ILS
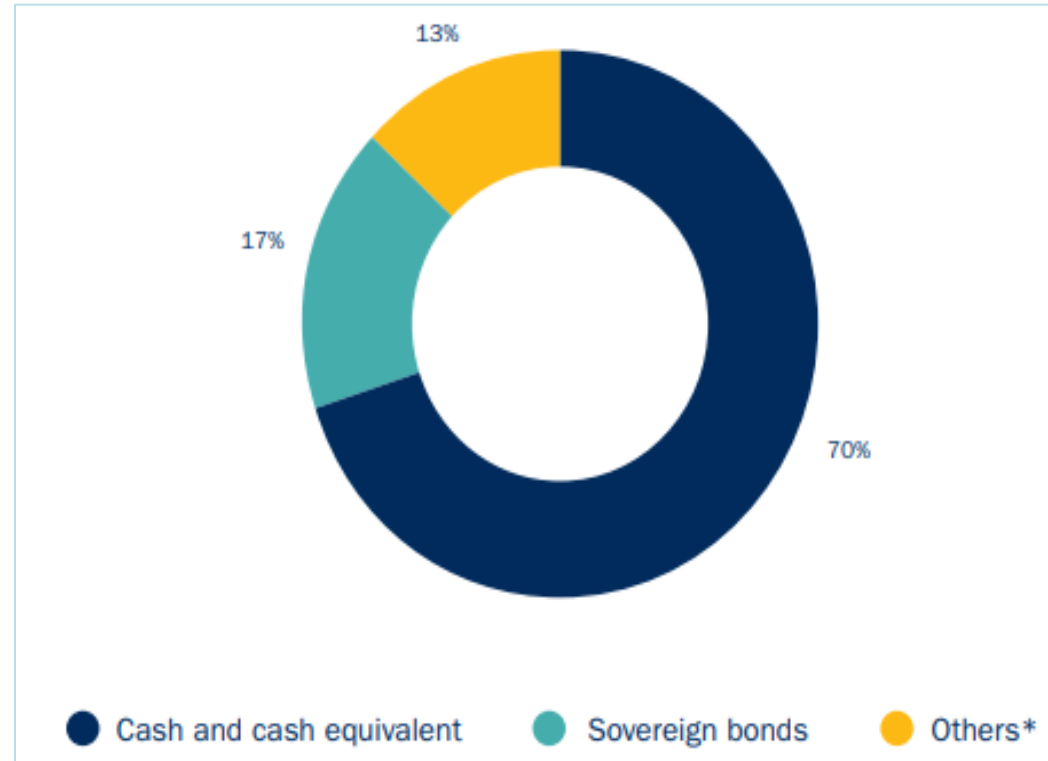
Investors

- Low correlation to the traditional capital markets

- Attractive risk-adjusted returns

- Innovative ILS – e.g. Cat bonds can be listed/liquid

- Short term duration – typically 1-3 years

Cedants

- Access to additional cost effective capacity coverage – e.g. peak zones

- Multi-year contracts adds price stability (2-3 year deals)

- Credit risk/diversification of capacity

- 'Partnership' to remain relevant, earn fees

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Tailored Supervisory Approach – Policyholder Protection

- Collateral to full policy limits
- Trust account or collateral accounts
- Investment strategy is "cash and cash equivalent"
- Clear/incontrovertible and effective contractual language
- Loss triggers and events are clearly defined
- Premium and interest structures are clearly defined
- Independent parties in place to adjudicate on loss events
- Funding is available for the operating costs of the SPI

Legend: Cash and cash equivalent (70%), Sovereign bonds (17%), Others* (13%)

Source: 2019-Alternative-Capital-Report

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Parametric Insurance: Basis Risk

Indemnity

Requires loss (claims) adjustment process

Pays on actual loss

Cost of loss adjustment

Payment delays due to loss adjustment

Parametric

Payment upon triggering event

Fast payments

Simple, transparent

Basis Risk

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Parametric Insurance - Basis Risk & Outlook

- Form - derivative without changing the substance of the underlying risk, thus rendering such risks to differ in no way from those common in the traditional reinsurance market

- Substance/Functionality:
  - Supervisory focus: the relative uncertainty of the relevant trigger
  - Policyholder exposure, close relationship between the trigger and exposure
  - Parametric solutions complement rather than replace traditional indemnity products
  - Customized wordings based on specific needs of policyholder, typically aligned with wider insurance program.
  - Structuring challenges - how to design and adapt to specific needs
  - Risk that an unusual event does not trigger payment

- Outlook
  - Parametric covers will continue to grow
    - climate risks, protection gap, data analytics

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Questions?