



Swiss Re

# El rol de reaseguro en la gestión de riesgos

ASSAL 2019, Santa Cruz, Bolivia

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Your Swiss Re Team

# Agenda

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1. Integrated risk management
2. Increase resilience
3. Parametric insurance mass distribution
4. Structured reinsurance

# 1

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## Integrated risk management

# Nat Cat risks are largely uninsured

Global Nat Cat protection gap totalled USD 193bn in 2017

## Percentage of uninsured economic losses, 1975-2017

### North America



**69.7%**  
uninsured earthquake loss



**40.0%**  
uninsured storm loss

### Western Europe



**96.4%**  
uninsured earthquake loss



**39.2%**  
uninsured storm loss

### Latin America



**83.3%**  
uninsured earthquake loss



**82.4%**  
uninsured storm loss

### Asia



**88.8%**  
uninsured earthquake loss



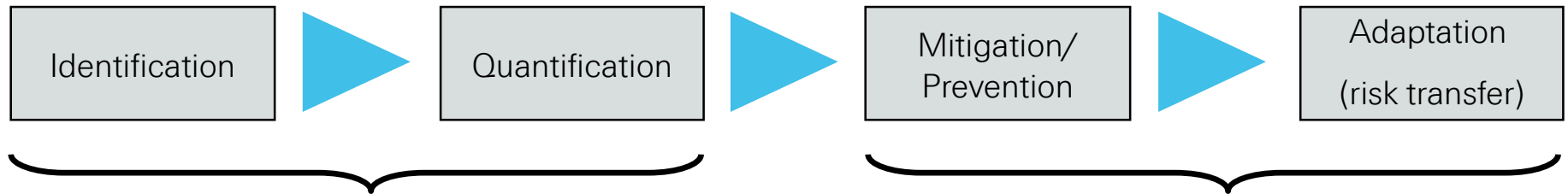
**80.3%**  
uninsured storm loss

Source: Swiss Re Institute

<sup>1</sup> Natural catastrophe protection gap is calculated based on known insured and economics losses by region and peril, 1975-2017

# Integrated risk management

Strategy for climate change adaptation



## Risk assessment expertise and risk modelling

### ■ Investments in research & development



## Available public policy "toolkit": (illustrative)

### ■ Urban planning & regulations:

- Land use regulations
- Building codes

### ■ Physical prevention measures:

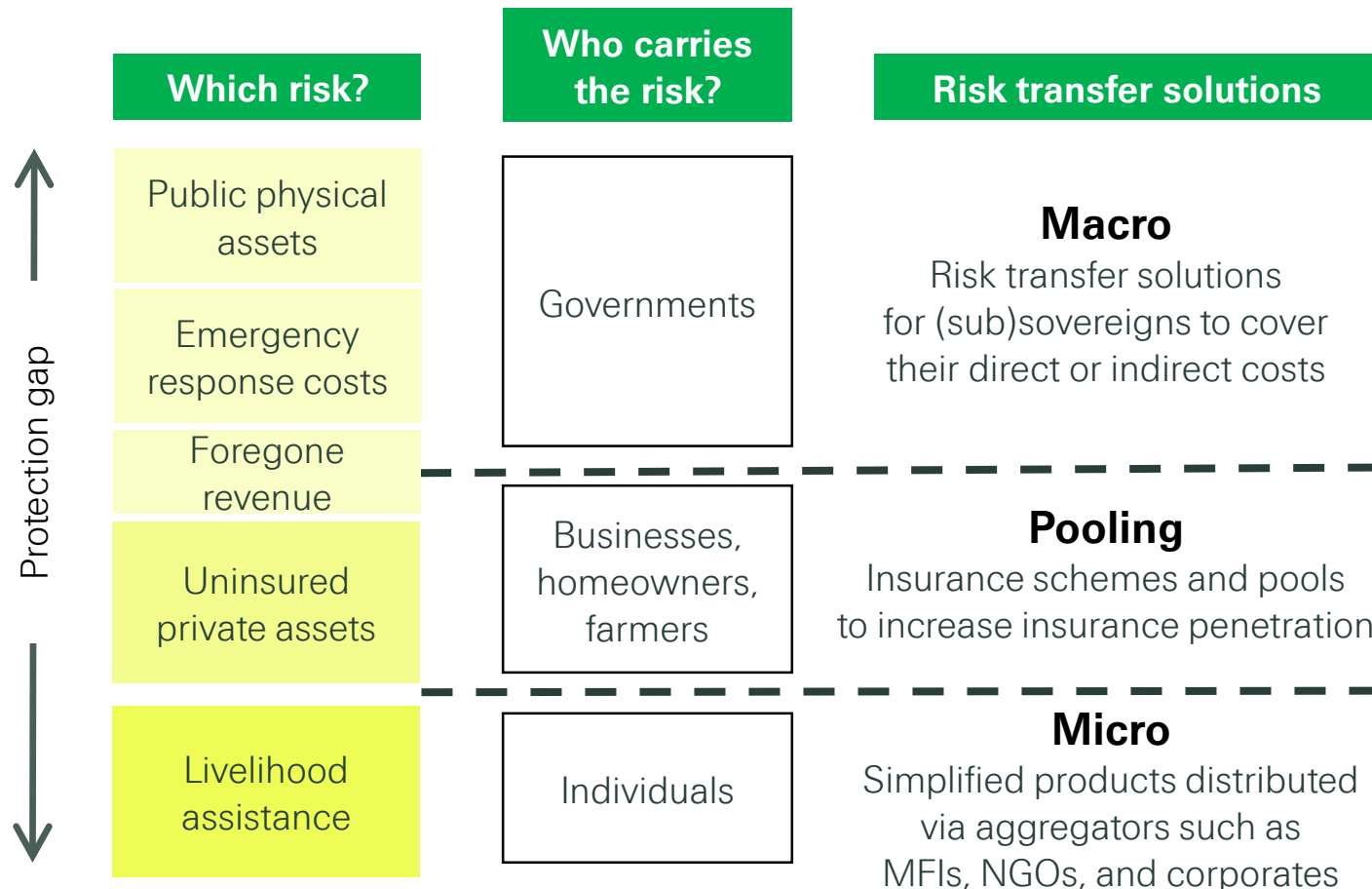
- Drainage systems
- Flood protection measures like dams, retentions systems for large quantities of water, relief watercourses etc.
- Hillside and other stabilization measures

### ■ Adaptation measures include:

- Ex-ante disaster financing instruments, such as
  - ✓ Reserve funds
  - ✓ Creation of efficient catastrophe insurance markets (regulatory regimes)
  - ✓ New financing instruments for the public sector
- Post-disaster emergency relief measures

# Integrated risk management

Public & private sector – Combined response



# 2

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## Increase Resilience

# What to expect if an extreme event occurs

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- Losses will **stress and strain** your infrastructure (evacuation, debris, limited transportation, business interruption)
- You will be expected to **pay claims fast**
- You might completely underestimate the claims burden, its **adverse development** and **settlement time**
- You might not have bought **enough reinsurance cover**, backing up the loss burden
- You might realize **weaknesses in underwriting** and mistakes
- Cash flow might be limited and insufficient, however the **liquidity/financing need immediate**
- Your surplus capital might not be sufficient to **maintain your solvency** level, you might need to hustle for more capital or you risk to get downgraded or go bankrupt
- Access to **capital markets** post event is expensive and restricted, **credit downgrades** might and challenge your future existence
- Regulator and rating agencies will assess your capital position and **enterprise risk management** capabilities



# Lessons learned

Reinsurance markets react faster than primary insurance markets



- A mid-size event **erodes 10% of the equity**; don't even imagine a spill-over caused by an extreme event
- The **vulnerable phase** lasts some 3 years (*exhibit 1*)
- Reinsurance markets will react faster than primary insurance markets ("**the sandwich**") (*exhibit 2,3*)
- Reinsurance **rates** will **go up**
- Original market price level might not be **risk adequate**
- **Risk mitigation** makes up a major part of the total P&L expenses
- Any **additional issue** may cause an exit
- How to be **resilient** and have long-term peace of mind?

# Reinsurance answer to potential threat scenarios

## Optimize Property Cat protection

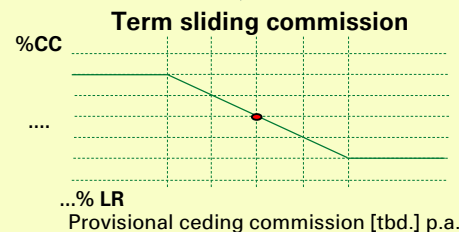
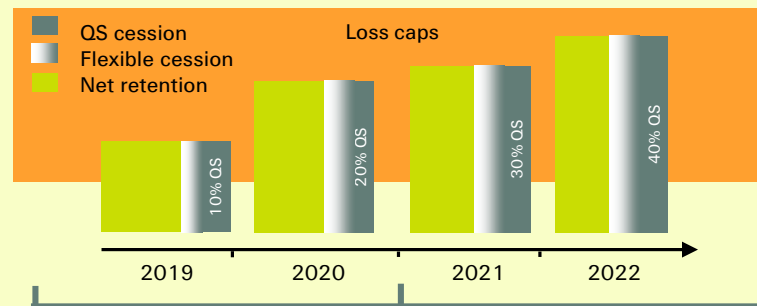
Operational- / risk transfer efficiency and funds protection

## Multi-year with flexible cession

Strategic multi-multi-year (with flexible cession rate) to elevate the interaction between reinsurer and insurer

## International “de-risking”

International “de-risking” if possible, to manage capitalization of legal entities



Innovative insurance solutions can close the protection gap and support clients to face a number of unexpected challenges

# 3

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## Parametric insurance mass distribution

# Parametric insurance value proposition

Fast, flexible and affordable

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Parametric insurance makes sense **when traditional insurance is not accessible or affordable**

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Parametric insurance acts as a **complement to traditional insurance, not as a substitute**

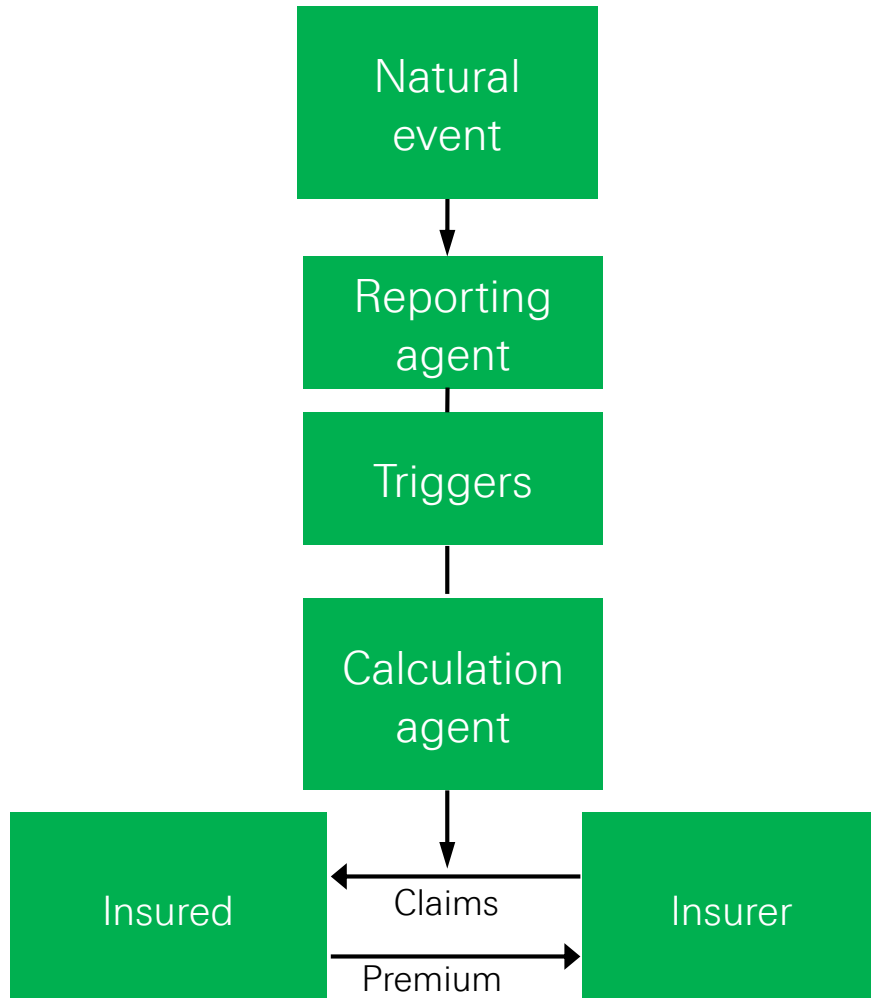
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Parametric insurance offers **immediate pay out for emergency cash relief**

# Parametric insurance value proposition

Transparent for the consumer



The coverage is activated after the occurrence of a natural event and depends on its severity (e.g. maximum 1 minute sustained wind speed of a hurricane, magnitude of earthquake)

An independent third party (e.g. USGS and NHC) publishes the intensity of the event

Based on the intensity of the hurricane or earthquake measured at the insured location Insured notifies loss occurred - "An eligible event occurred and damage was suffered"

An independent agent can determine the monetary payment

Payment is given depending on the intensity of the covered event

# Example: Nat Cat parametric solutions

## Earthquake & Tropical cyclone

### Earthquake



**“Shake vouchers”** provide quick cash after an earthquake for insureds to cover incidental losses and expenses. The policy complements property damage insurance with small monetary amounts based on the shake intensity of individual locations worldwide.



### Tropical cyclone



**“Loss of income” covers** combine business interruption and supplemental loss covers. For example, in the aftermath of a hurricane, beachfront hotels may experience losses due to cancellations even if they are not directly affected by the event. The policy pays out a lump sum to be spent at the insureds’ discretion if a hurricane occurs within a predefined geographic area surrounding the insured property (e.g. within a 100 km radius of the hotel).





# Parametric insurance product

Quick cash to pay for incidental losses and expenses, loss of income for high risk areas



## Limit

- Consumer can choose between several different face values



## Premium

- Depends on the chosen limit and the geographic area of the insured object



## Trigger

- EQ: Intensity at the location of the insured. Different possible measures (e.g. Mercalli intensity scale)
- TC: Storm intensity within a predefined geographic area surrounding the insured property (e.g. 100 km radius)
- A proof of loss might be required by the regulator



## Reporting agent

- Independent, reliable and easily accessible event reports  
e.g. U.S. Geological Survey (USGS) publishes near real-time ShakeMaps after an earthquake, reporting the event intensity on a high-resolution grid, National Hurricane Centre (US) publishes six-hourly information on the location, maximum winds, central pressure, and size of tropical cyclones



## Pay out

- How much of the limit is paid out depends on the event intensity (EQ), the hurricane track and on the hurricane category (TC)
- Can be defined as a stepped % function of the face value

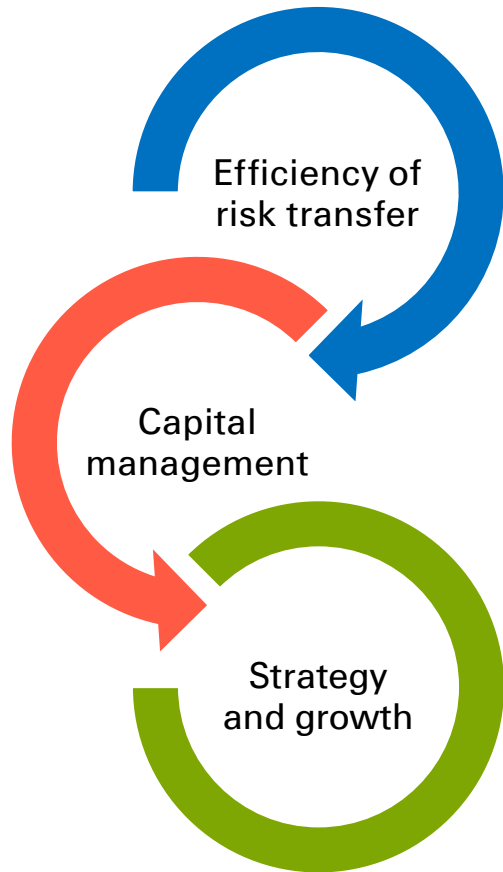


# 4

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## Structured reinsurance

# Reinsurance is Shifting Towards Serving Many Goals



- Combine multiple risks and/or triggers
- Focus on the joint distribution of all risks
- Integration of alternative capacity

- Provide capital relief
- Reduce cost-of-capital and increase capital efficiency; substitute balance sheet capital
- Release trapped capital and monetizing future expected cash flows

- Fund acquisition expenses and negative cash flows associated with growth of new business
- Flexible, on-demand capital relief
- Technical and market expertise

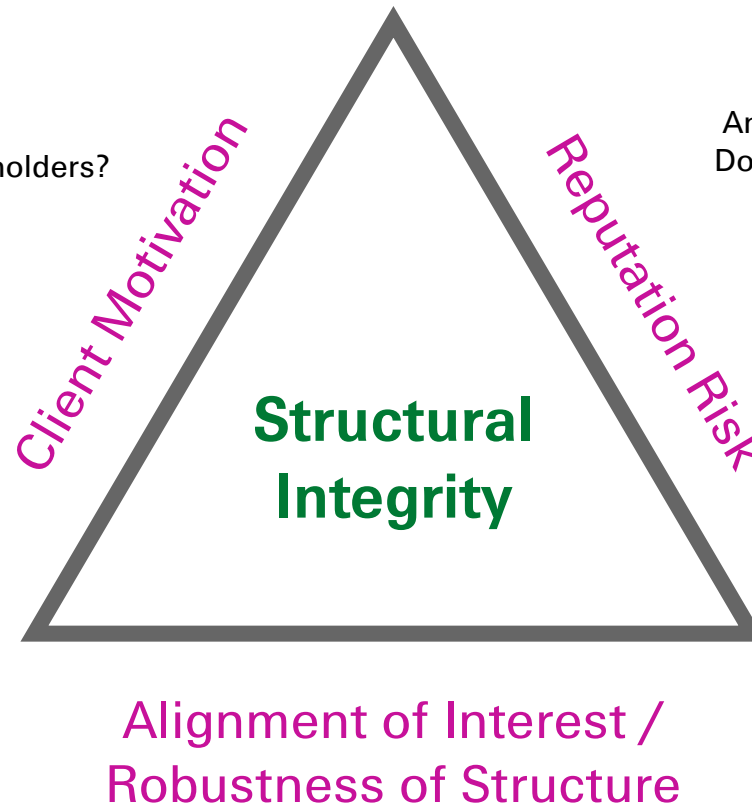
# Structured reinsurance

What is it and what to pay attention to

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- Strategic/structured reinsurance is **not a product**
- It is an extension of traditional reinsurance using **features that help tailor the risks** ceded to the individual needs, challenges and strategic objectives of the clients
- When considering offering a solution for our clients we always check for **risk transfer** and **structural integrity**
- At Swiss Re we **exercise particular care** when involved in any **transactions** that fall outside 'traditional risk transfer'.

# Structural integrity



What is driving the purchase?  
Have we considered all stakeholders?  
Why this alternative?

Any regulatory, accounting, or tax issues?  
Does buyer need surplus relief or surplus?  
Is the regulator/auditor informed?  
Pass the WSJ test?

Are the incentives correct in all possible scenarios?  
Do we suffer and celebrate together?  
Have we tested robustness of model/assumptions?

# The role of reinsurance in an ever evolving society



## Capital Management Solutions

A complement to other corporate finance instruments

## Products to close the Protection Gap

Creating simpler, more affordable products to increase the insurance penetration

## Strategic Capacity Provider

Risk transfer in all lines of business



# THANK YOU

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