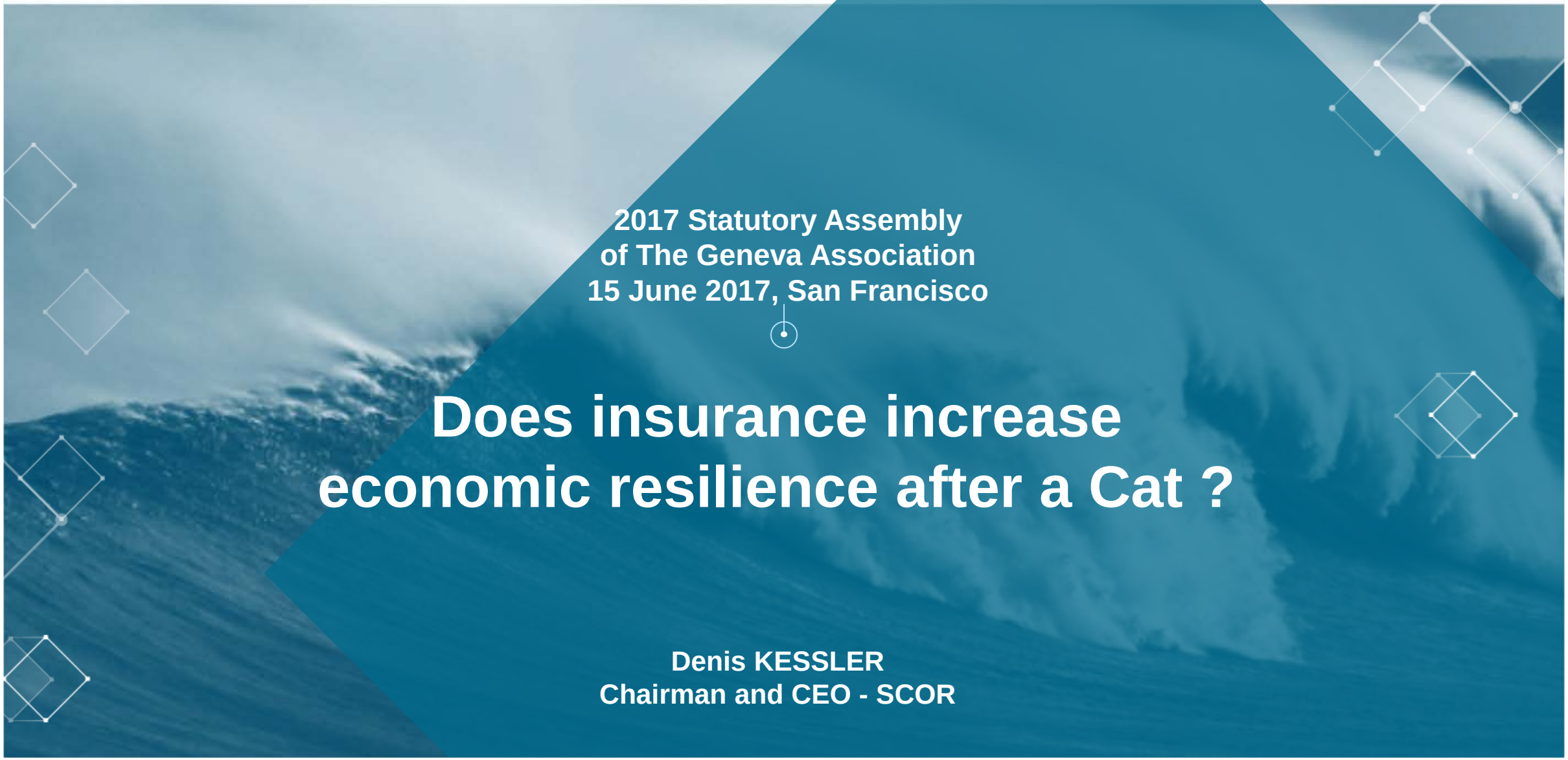

2017 Statutory Assembly
of The Geneva Association
15 June 2017, San Francisco

Does insurance increase economic resilience after a Cat ?

Denis KESSLER
Chairman and CEO - SCOR

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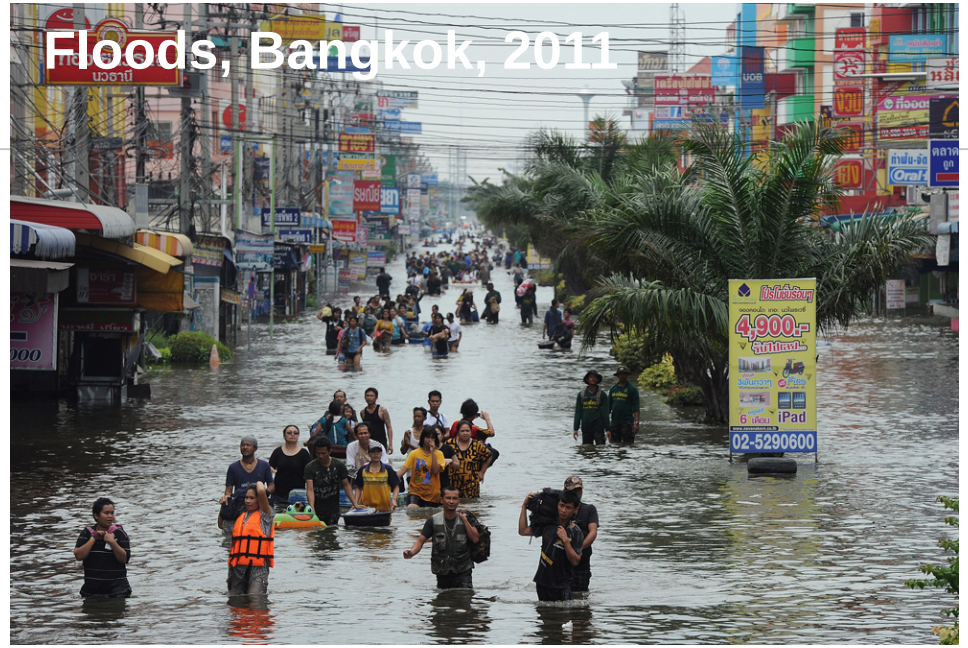
Extreme events and climate risk



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The challenges raised by extreme events and climate risk and the issue of the protection gap in developing economies are two sides of the same coin (1/2)

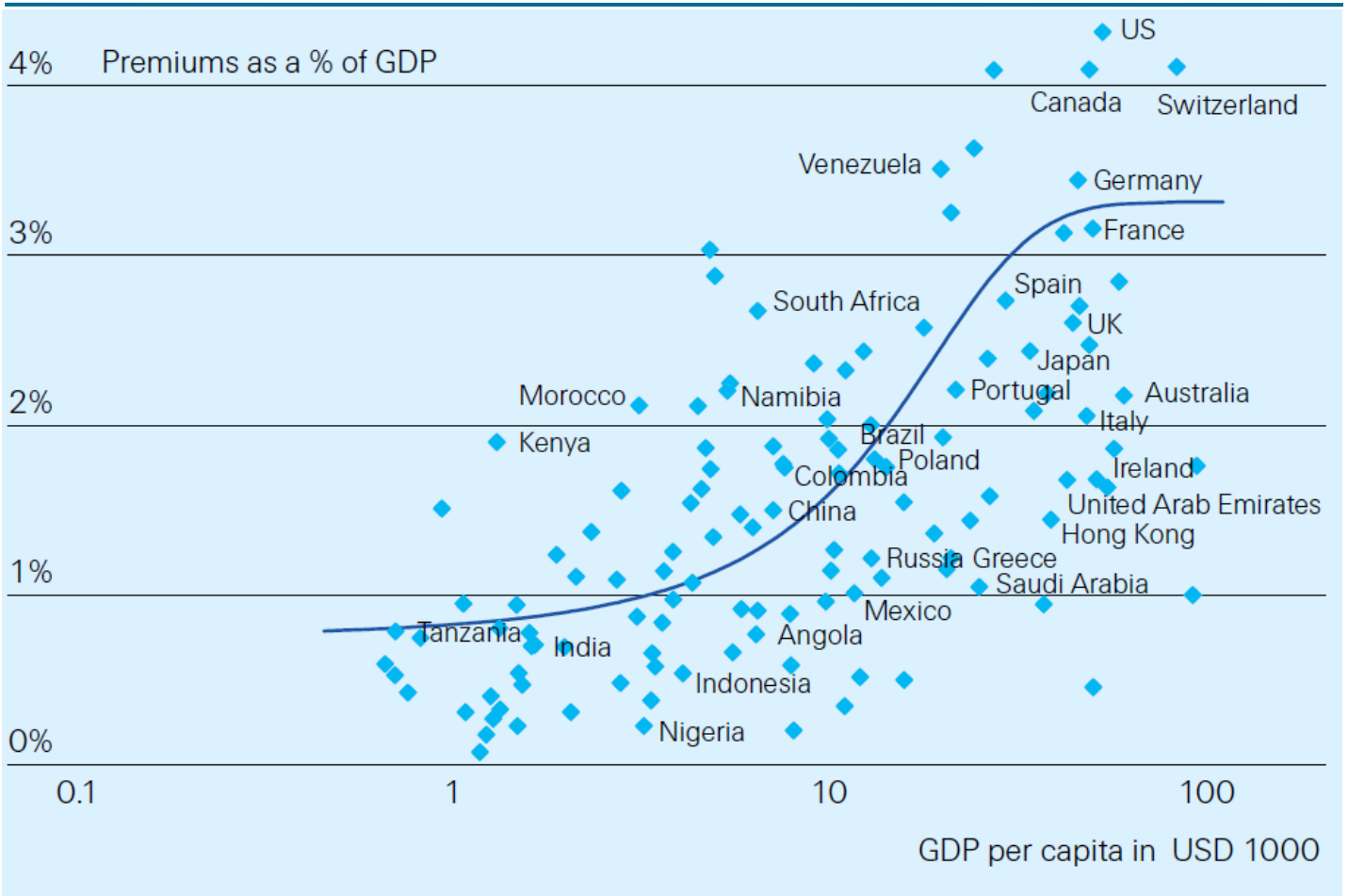
- **The damaging impacts of Cat and extreme weather events are deeper and more severe in developing countries than in developed countries…**
  - Emerging countries face major economic and social disruptions after an extreme event
  - The human toll is higher in developing countries than in developed countries
  - The reconstruction period is usually longer and the recovery is systematically slower in developing countries than in developed countries
  - Emergency post-Cat international aid is often key to cope with the short-term consequences of a major event in developing countries

The challenges raised by extreme events and climate risk and the issue of the protection gap in developing economies are two sides of the same coin (2/2)

- **… whilst the protection gap is much wider in developing countries than in developed countries**
  - The insurance penetration is much lower – both in terms of the proportion of households covered and in terms of the insured amounts
  - In particular high-income countries contract more insurance for every physical type of catastrophe

⇒ Emerging economies are much more deeply affected by Cat events than industrialized economies

S-curve in non-life insurance, 2014



Source for the graph : Swiss Re Economic Research & Consulting

Several factors influence the impact from natural disasters and extreme weather events on economic activity

- As a matter of fact, several factors influence the impact from Cat events on the economic growth of any country, be it developing or developed

  ➢ **Short vs. long-run perspective**
  - A negative impact is likely in the immediate aftermath of the Cat
  - Long-run effects could go both ways i.e. be either expansionary (“creative destruction” hypothesis) or contractionary

  ➢ **Developing vs. developed countries**
  - A country’s economic, social and political characteristics affect its vulnerability to the occurrence of a Cat event : in this respect developing countries are clearly at a disadvantage
  - The vulnerability depends on both the *sensitivity* of the country to such events and its *adaptive capacity*, i.e. its ability to deal with this impact[1)]

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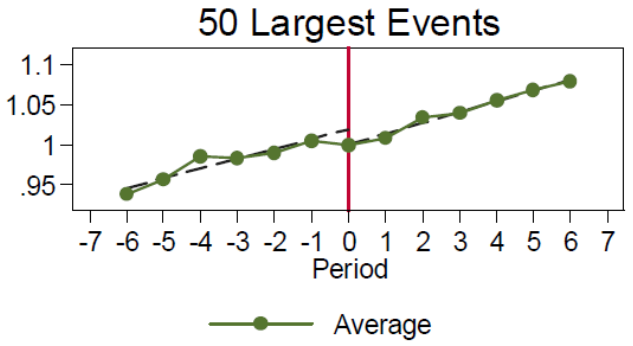
1) Climate change, adaptation and economic growth, Bowen, Cochrane and Frankhauser (2012)

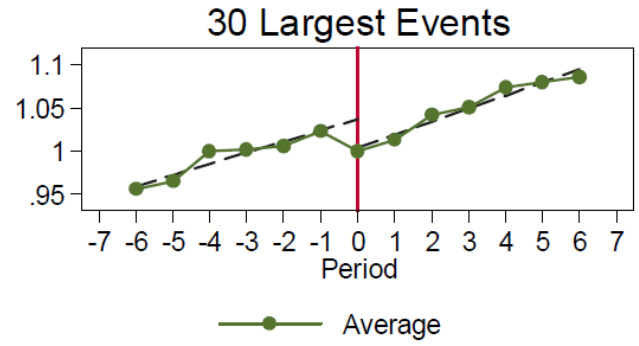
Major natural disasters are harmful for economic growth, particularly in developing countries …

- Numerous studies provide empirical evidence on the impact of Cat events, and notably climatic disasters, on economic growth:
  - Major natural catastrophes usually have large and significant negative effects on economic activity, with long run consequences for most extreme events
  - These effects are usually worse in developing countries than in developed countries
  - A jumping demand for insurance and falling risk taking can be noticed after natural disasters

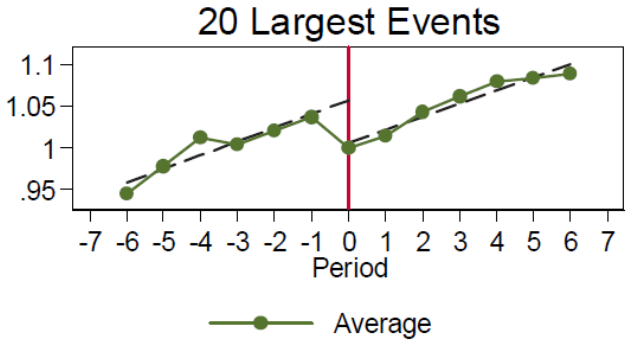
Real GDP per capita evolution shows a clear break with large Nat Cat shocks



Events: 50. Difference in trend is not significant at 5% level



Events: 30. Difference in trend is not significant at 5% level



Events: 20. Difference in trend is not significant at 5% level

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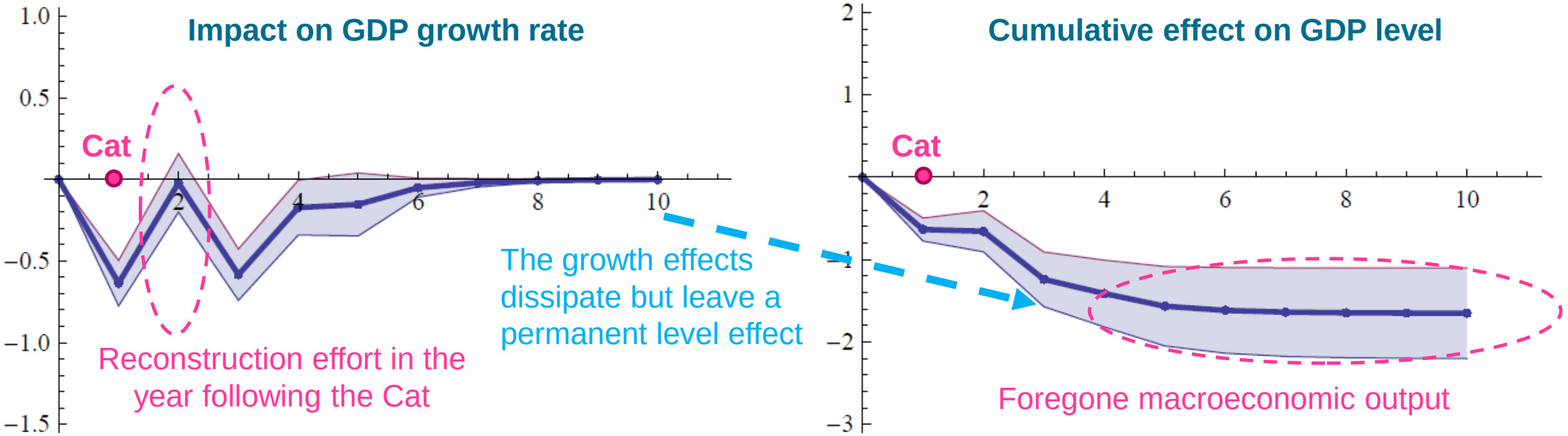
Source for the graphs : The Welfare Gains From Macro-insurance Against Natural Disasters, Borensztein, Cavallo & Jeanne (2015)

… and their consequences play out over several years, leaving behind a permanent macroeconomic cost, which adds up to direct losses from the immediate destruction of property



- Growth falls by some 0.6-1% points on impact in a typical disaster, and the cumulative permanent output loss exceeds this initial impact by a factor of 2 or 3
- Attention to affected populations and areas should not be limited to the immediate aftermath of a disaster. Long-term effects on health, nutrition and education illustrate the social dimension of the problem

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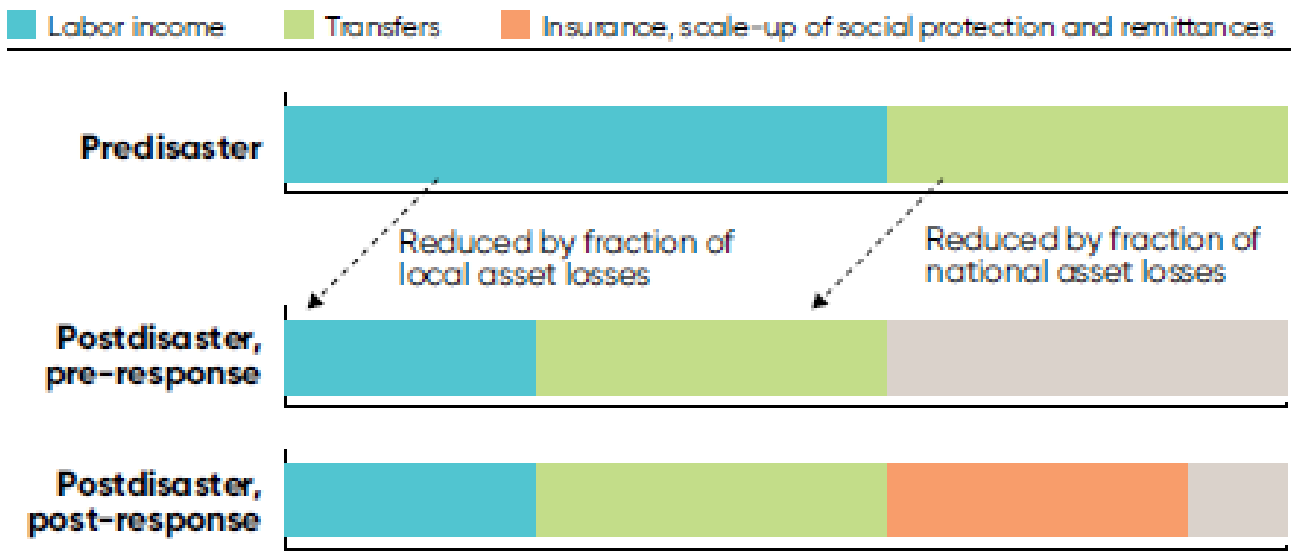
Source: BIS Working Paper - Unmitigated disasters? New evidence on the macroeconomic cost of natural catastrophes (2012) by Goetz von Peter, Sebastian von Dahlen, Sweta Saxena

Can (re)insurance mitigate these negative effects ?

- (Re)insurance compensates, with public support, a share of the losses induced by natural disasters
- The importance of this compensation is highlighted by many international studies

A crucial question is whether the existence of risk transfer mechanisms has an influence on the macroeconomic cost of Cat events

The income of affected people after a disaster depends on the share of transfers and the response to the shock



Source : Hallegatte, S., M. Bangalore, and A. Vogt-Schilb. (2017): "Socioeconomic Resilience to Multiple Hazards—An Assessment in 117 Countries.", Background paper, World Bank

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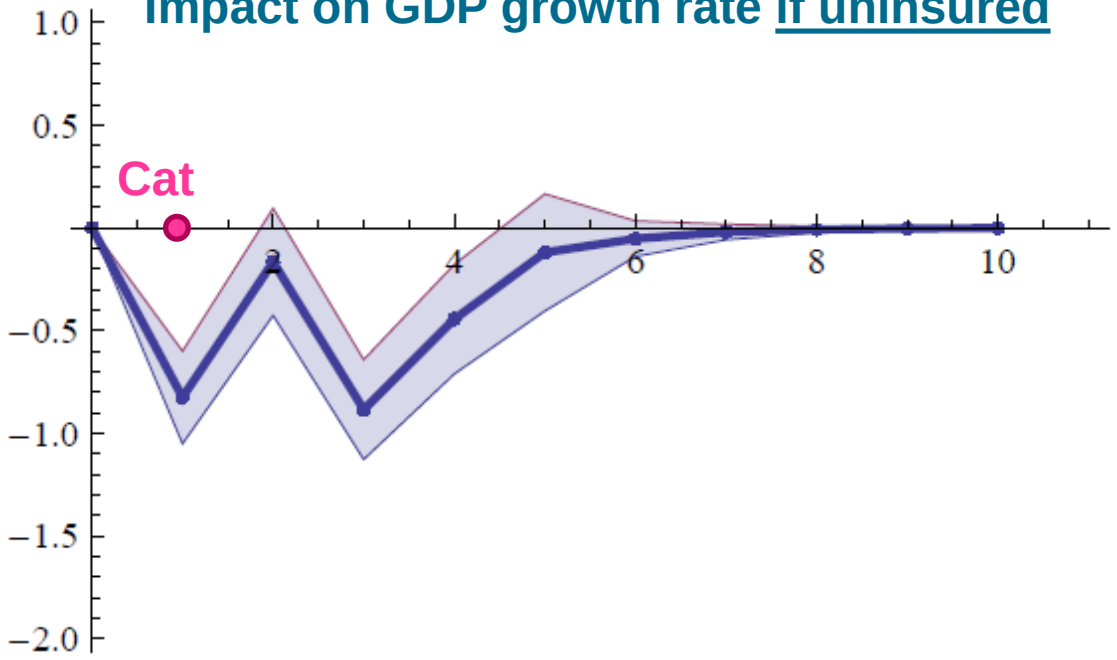
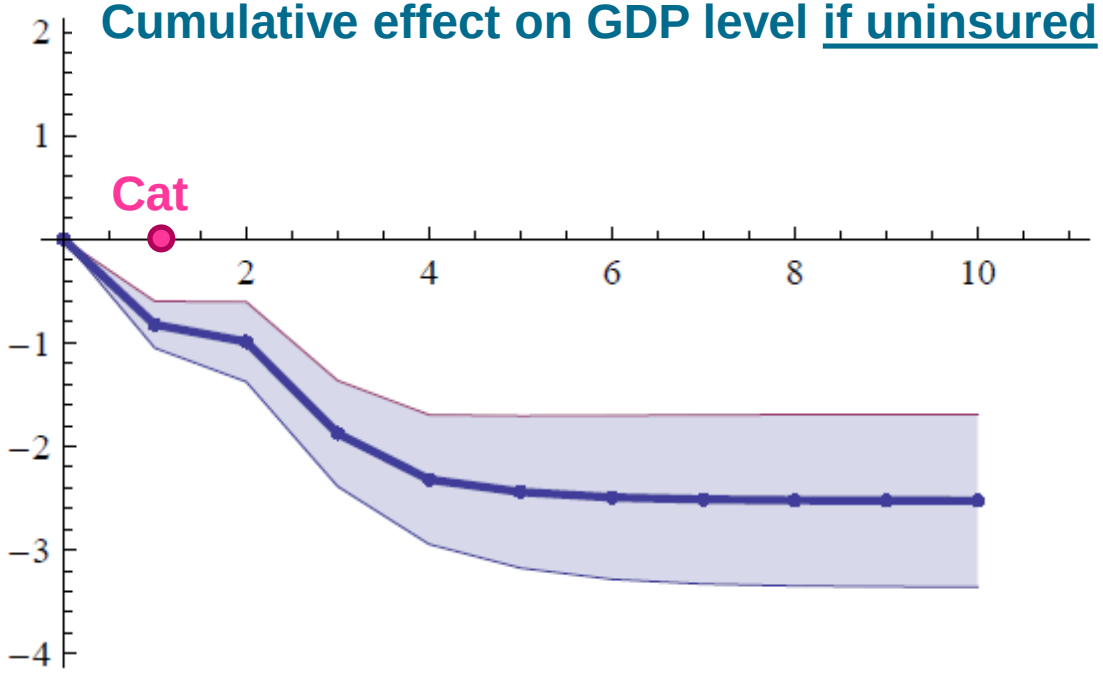
Insurance plays an important role in mitigating the macroeconomic costs arising from major Cats (1/2)

Impact on GDP growth rate if uninsured



Cumulative effect on GDP level if uninsured



- If we separately analyze the uninsured loss from the insured loss of Cat events, we see that it is mostly the uninsured part of catastrophe-related losses that drives the subsequent macroeconomic cost

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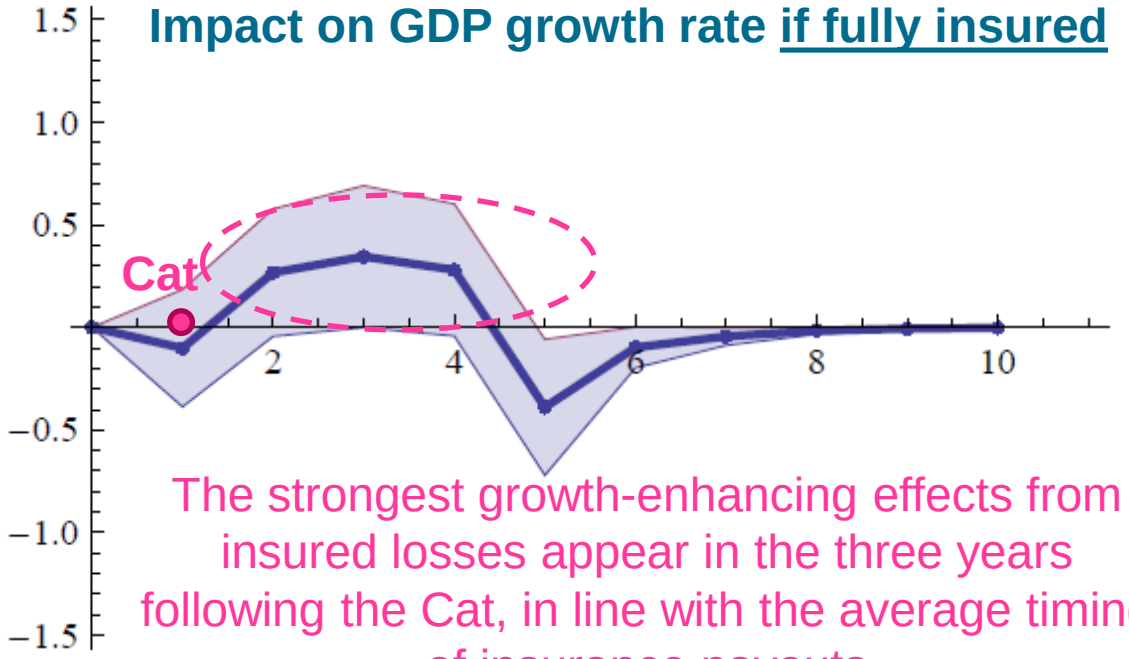
Source: BIS Working Paper - Unmitigated disasters? New evidence on the macroeconomic cost of natural catastrophes (2012) by Goetz von Peter, Sebastian von Dahlen, Sweta Saxena

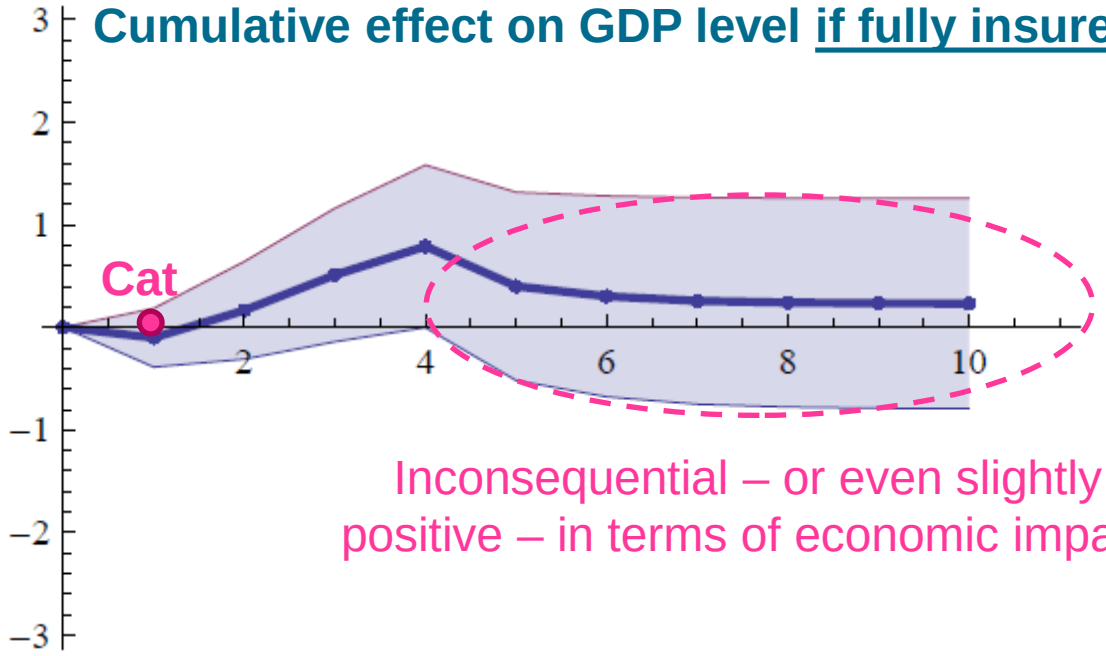
Insurance plays an important role in mitigating the macroeconomic costs arising from major Cats (2/2)

Impact on GDP growth rate if fully insured



The strongest growth-enhancing effects from insured losses appear in the three years following the Cat, in line with the average timing of insurance payouts

Cumulative effect on GDP level if fully insured



Inconsequential – or even slightly positive – in terms of economic impact

- Sufficiently insured events are inconsequential in terms of foregone output
- Small and emerging countries suffer more when uninsured but also recover faster when insured

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Source: BIS Working Paper - Unmitigated disasters? New evidence on the macroeconomic cost of natural catastrophes (2012) by Goetz von Peter, Sebastian von Dahlen, Sweta Saxena

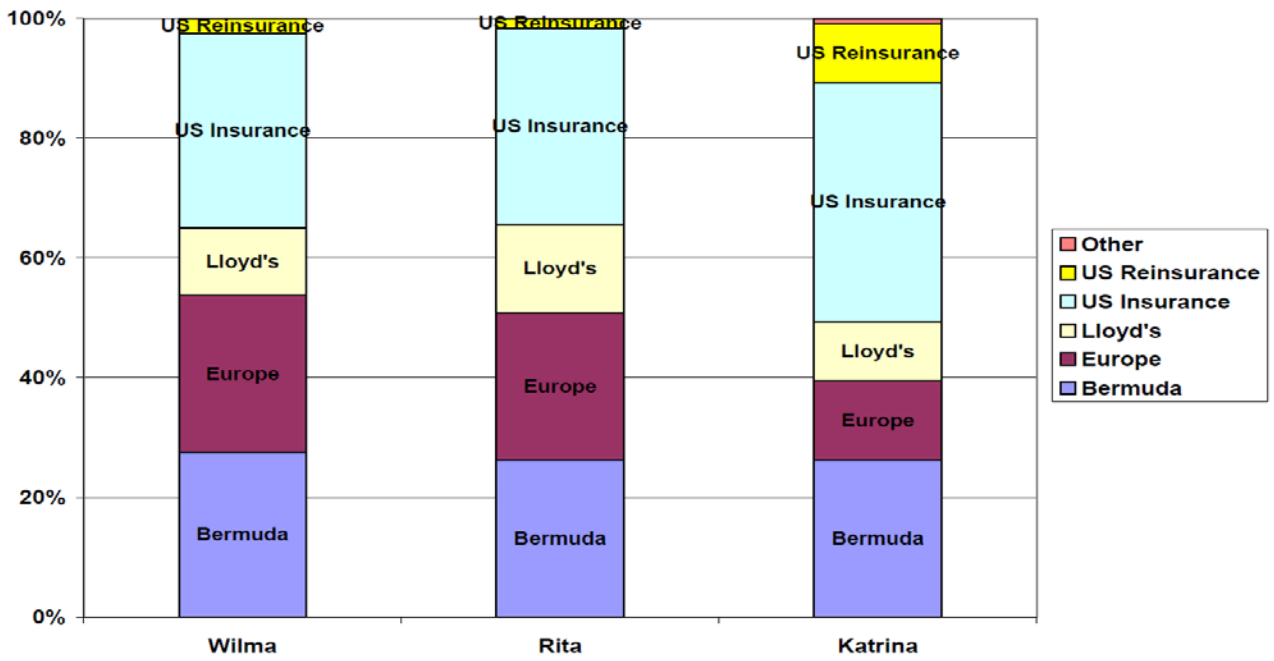
Why (re)insurance is an important factor of economic resilience to natural disasters (1/2)

- Three main factors make (re)insurance an effective, unavoidable tool for building up economic resilience to natural disasters

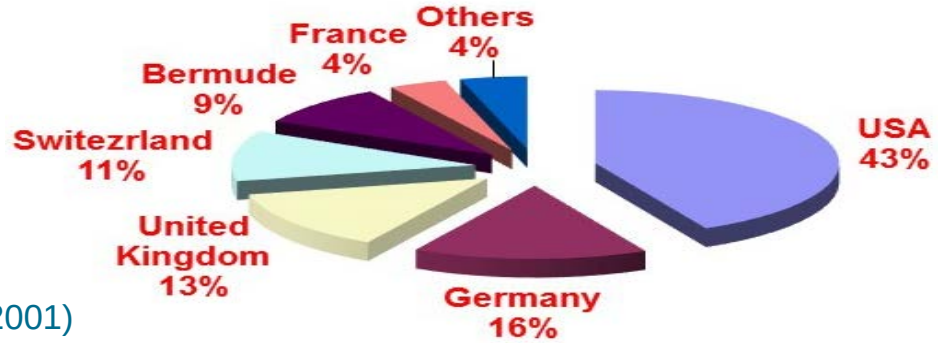
1. International scope

- It contributes to alleviate the national burden of the affected countries, by spreading globally the charge of very large losses
- This is notably true for reinsurance
- It is a key dimension notably for small and medium-sized companies, particularly in emerging economies

Regional distribution of 2005 Hurricanes payments



Regional distribution of 2001 WTC Payments



Sources for the graphs : The Bermuda Insurance Market: an Economic Analysis, D. Cummins (2008) and P. Trainar, FFSA (2001)

Why (re)insurance is an important factor of economic resilience to natural disasters (2/2)

2. Efficiency

- Insurance payouts are allocated to the repair or replacement of facilities deemed sufficiently important for agents to have insured them in the first place. Aid flows rarely come with such incentives and allocation mechanisms
- Business interruption insurance compensates for income lost while a business is being rebuilt
- Insurance payouts are likely to have second-round effects, as funded reconstruction activity spills over to other sectors through externalities and strategic complementarity

3. Prevention incentive

- (Re)insurance is a scheme that gives the right incentives to reduce moral hazard and prevent risk, while the others are increasing it, especially post-disaster public aid

⇒ (Re)insurance and alternative risk transfers may bring a **welfare gain of several percentage points of annual consumption, by :**

- → **reallocating internal resources**
- → **attracting foreign resources**
- → **improving external debt sustainability of small open economies**

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Conclusion: risk transfer to (re)insurance markets has a macroeconomic value. This value may be particularly high for smaller nations that lack the capacity to (re)insure themselves against major natural disasters

- **Filling the protection gap is a necessity and a duty**
  - Insurance is more welfare-enhancing than foreign aid
  - We have a key role to play as an industry in increasing the economic resilience of societies to extreme events and climate risk
  - This prominent role has been already recognized by the international community e.g. with the *G7 InsuResilience initiative*, aiming to give to 400 million additional people in the most vulnerable developing countries access to direct or indirect climate risk insurance by 2020

- **To fulfill this mission, knowledge of the Cat exposure in emerging countries is fundamental**
  - e.g. the risk modelling seminar in Paris co-organized by the Geneva Association and the SCOR Foundation for Science in March this year

- **Public / private partnerships are one way to pursue, or at least to explore, in order to facilitate the expansion of risk coverage and increase resilience**