



Keynote Speech European Congress of Actuaries 2024: The evaluation of risks - an issue for insurers but also everywhere

Ronnie Garreud
Allianz Group Risk

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Confidential



Ronnie Garreaud



Global Head of Insurance coverage, Allianz Group Risk

French **Life Actuary**, Master degree in Mathematics & Statistics



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|-------------|--|-------------|
| 2016 | Global Head of Insurance coverage
Life/Health/Pensions risk center of competence
Sustainability risk center of competence
CRO Allianz Deutschland AG
Delegate vice Chair CRO Forum | Allianz SE |
| 2004 | Head of Life Modelling
Life/Health CRO & Chief Actuary
Deputy Life/Health CFO, Head of Life controlling | AXA Germany |
| 2001 | Team lead of Life Pricing team | AXA France |
| 2000 | Project lead of the implementation of non Life economic capital model | AXA Germany |

The CRO Forum was formed in 2004 to advance risk management practices in the insurance industry

Over the past 20 years, the CRO Forum has and continuous to share its views on relevant topics related to their core objectives through publications and papers.

23 Member companies from large multi-national insurers



Current working groups along the 3 key objectives of the CRO Forum

1. Championing best practice in risk management to advance business

EC – Climate Resilience Dialogue Climate Risk Models Artificial Intelligence Inflation

2. Alignment of regulatory requirements with best practice in risk management

Regulatory Capital

3. Providing insights on emerging and long-term risks

Geopolitical developments Emerging Risk Initiative

Chairpersons in 2024

Chair: Carlo Ferraresi (Generali)

Vice-chair: Carolina Otero (Allianz)

Vice-chair: Patrick Raaflaub (Swiss Re)

Meetings

- ❖ Quarterly & Monthly member meetings
- ❖ Annual meeting together with the North American CRO Council
- ❖ Semi-annual meeting with EIOPA
- ❖ Close collaboration with Insurance Europe & CFO Forum

Contact details

- ❖ **Email:** croforumadmin@thecroforum.org
- ❖ **Website:** <https://www.thecroforum.org/>



20th Anniversary meeting & recent publications



Agenda

- 1 Emerging Risks and Changing Environment
 - 2 Risk Identification: Avoiding surprises & Being prepared
 - 3 Grasping the unknown: Scenario Analysis
 - 4 Facing the key limitations of Models
-

01

Emerging Risks and Changing Environment

Fast changing environment with enormous implications on risk management: *Avoiding surprises matters more than ever*



***“Geopolitical tensions:
Uncertainty can be unsettling”***



***“Inflation Risk & Volatility: a new challenge
for insurance management”***



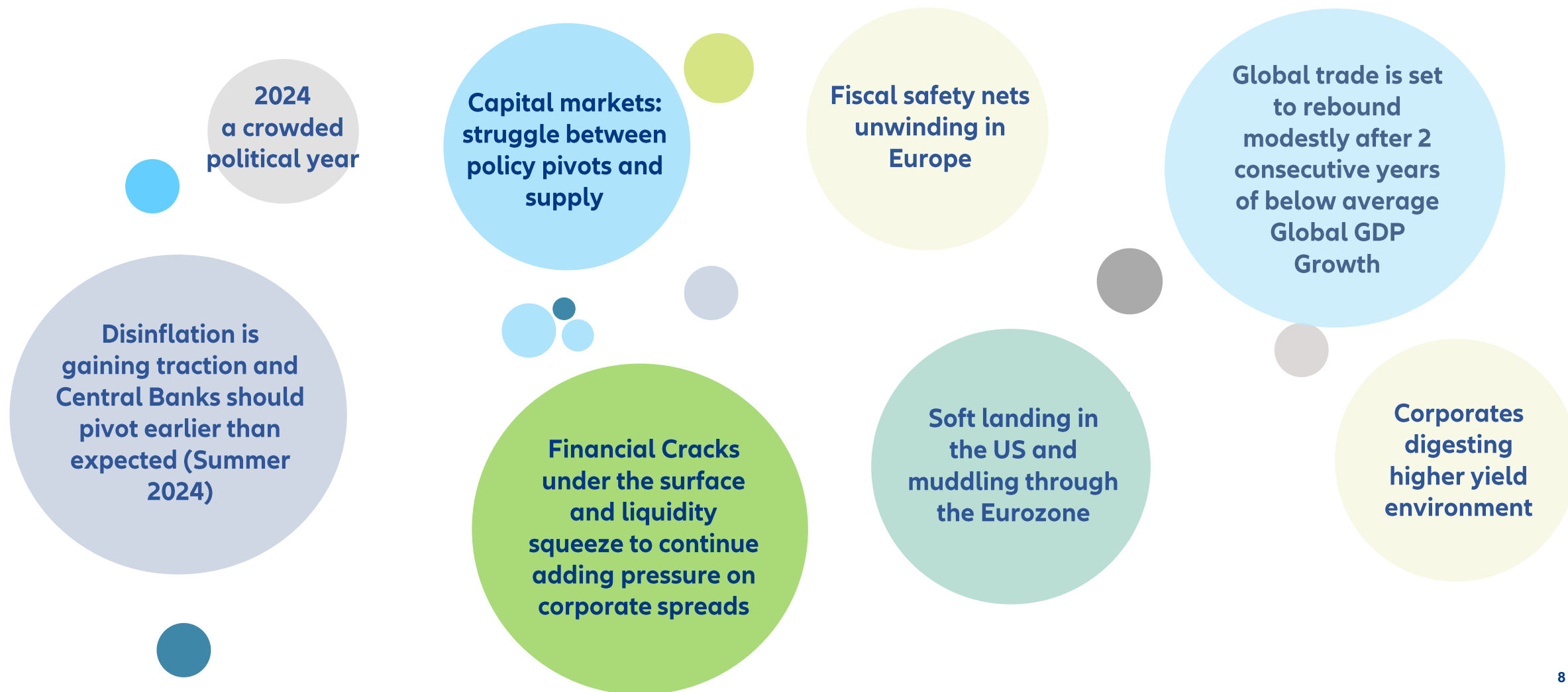
***“Operational and Underwriting Cyber Risk:
A ‘black swan’ in the making?”***



***“In the past years, natural catastrophes sent
shockwaves around the world”***

► Being prepared and avoiding surprises as key challenge in terms of Risk Management

Variety of key trends and disruptors dominate our risk landscape: Proactive risk management can help to navigate successfully



We are operating in an increasingly complex, highly dynamic environment: We need to manage breadth & depth of risks topics

1

Linking risk to strategy



2

Identifying risks fast and as they emerge



3

Understanding technology



4

Increasing risk awareness



02

Risk identification: Avoiding surprises & Being prepared

Risk is the business of everyone: We identify, quantify, monitor and manage risks to avoid any surprises



The entire organization should embrace risk management to ensure resilience & preparedness for any uncertainties.

By **working together**, we can **identify, assess, monitor, and mitigate** risks effectively, **ensuring the long-term success and stability of the organization.**

Role of the Actuary in Risk Management: Risk Assessment and Financial Modelling incl. Analysis of Financial Implications, with Strategies for Risk Reduction, Pricing and Reserving incl. Solvency Assessment

Avoiding surprises is crucial: Risk Assessment processes for systematic Tail Risk identification at early stage



Use Fire Drills exercise and ad hoc scenarios to test the preparedness of your organization

Looking back,
looking forward

Reflect on the Past
Anticipate the Future



By using Fire Drills and ad-hoc scenarios, organizations can:

- gain valuable insights into **potential future developments**
- **enhance their preparedness** for various outcomes
- **make informed decisions** to navigate uncertainty and manage risk effectively

03

Grasping the unknown: Scenario Analysis

Strengthening Preparedness: Leveraging Scenario Analysis to Prepare for Potential Incidents



Looking back: Russia / Ukraine War

Review of scenario analysis carried out in 2021:

- **War and increase in natural gas prices identified & quantified as tail risk scenario** in ad-hoc analysis
- Update of conflict scenarios with “**Energy Crisis, High Inflation & Policy Mistake**” as tail scenario
- **Large scale measures defined, e.g., on Employee Safety**
- **S2 impact, market consequences as well as probability of occurrence** well estimated

Lessons Learned, Actions Taken & Further Enhancements:

- Enhanced analysis for future Geopolitical risk scenario, with **in-depth review of regional footprint**
- Identifying potential **trigger points** as **early warning indicators** to accelerate risk management actions for business operations, etc.
- **Design of scenario: potential economic, business & financial consequences**



Looking forward: Random Ransomware

- **Creating a Scenario Storyline** by understanding trends and methods in cyber-attacks (e.g., targeted ransomware)
- **Supplement Existing Framework with industry data:**
 - Estimate impact using past events and bottom-up assessments, incl. external sources & forward-looking view
 - E.g., identifying critical systems and data; estimating costs associated with system downtime, data recovery, pot. loss of revenue; testing design and effectiveness of response & recovery plans for cyber incidents
- **Running Scenario Analysis with in-depth Risk Assessment:**
 - **Quantitative:** Likelihood of Attack & Impact of Financial Loss, Cyber Insurance Coverage
 - **Operational:** Impact on Operations, Data Sensitivity, Response & Recovery Time
 - **Indirect Costs:** Reputation Damage, Regulatory and Legal Implications

04

Facing the key limitations of Models

When risk evaluation has its limits: Addressing Model Limitations and Mastering Data Scarcity

Model Limitations

Both Solvency II and IFRS 17 models have limitations:

- Assumptions about risk factors and model complexity
- Challenges re implementation and data availability

Data Scarcity / Data Quality Issues / Siloed Data:

- Insufficient internal and external data for statistical estimations
- Reliance on expert judgment
- Restricted testing / development, of model, reduced reliability

Addressing Model Limitations and Mastering Data Scarcity

Insurers must address these limitations through robust validation and transparent reporting:

- **Regular re-testing of model validity against current external conditions required**
 - E.g., changes in interest-rate environment, integration of emerging risks.
- **Cross-functional collaboration for a balanced strategic approach**

Risk Management & Experts

- Identification of limitations within risk mgmt. framework
- Development of alternative approaches (e.g., scenario analysis, sensitivity testing) and evaluation of their effectiveness
- Continuous monitoring and, as needed, further enhancement of models and parameters
- Clear documentation & communication of limitations to relevant stakeholders

Actuaries

- Using mathematical techniques to quantify impact of model limitations and data scarcity on risk assessments
- Model refinement and integration into risk mgmt.



- Enhancement of Data Processes & Quality (e.g., with AI / Advanced Analytics)
- Considering pot. impact of limitations on strategic planning, operational decisions, financial projections

Business

Disclaimer

The content of this presentation represents the Allianz's view and not necessarily the view of the CRO Forum