

# EMERGING RISKS IN (RE)INSURANCE

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Distribution

June 8, 2023

A business of Marsh McLennan



1. Who we are and what we do

*Global Risk Perception Survey 2022-2023:*

2. Highlights and what they tell us

3. Executive views on top concerns

4. Emerging risks for the (re)insurance industry

# Agenda

# Who we are and what we do

• 1



# Guy Carpenter Is Part of Marsh McLennan, a Global Professional Services Firm



Colleagues: 85,000+  
Annualized revenues: ~\$20B

Clients in more than 130 countries  
New York Stock Exchange (MMC)



**Insurance broker and risk advisor**

- Risk management, consulting, and transfer
- Financial solutions and insurance program management services

1871 year founded  
45,000+ colleagues  
550+ offices worldwide



**Risk and reinsurance specialist**

- Reinsurance and risk management
- Contract management, claims handling, and fiduciary accounting

1922 year founded  
3,500+ colleagues  
60+ offices worldwide



**Talent, health, retirement and investment consulting**

- Personnel strategy
- HR systems
- Compensation
- Incentive systems
- Communication

1937 year founded  
25,000+ colleagues  
160+ offices worldwide



**Management, economic and brand strategy consulting**

- Strategy
- Organization
- Operations
- Risk management
- Transformation management

1984 year founded  
6,000+ colleagues  
70+ offices worldwide

# GC Placement & Distribution – how we support Clients & Markets

## Placement & Distribution



### Placement Organisation

Our internal placement infrastructure enables us to coordinate reinsurer engagement and opportunities across the GC network. Our dedicated Placement Leaders join the dots across regions, lines of business and capabilities to help reinsurers navigate our organisation.



### Portfolio Insights

We extract insights from our premium and trading behaviour data and overlay it with qualitative broker insights to deliver actionable analysis of reinsurers' GC portfolios. We can explore a market's position in our portfolio, compare it relative to peers and pinpoint growth opportunities.



### Pipelining & Business Development

By analysing our portfolio across ~1700 clients, we can pipeline opportunities. Our expertise covers traditional reinsurance business, portfolio solutions and alternative underwriting models, enabling us to develop optimal and new solutions.



### Value Add

We are always looking for innovative ways to serve our markets and to help them grow their books. We work across our GC capabilities and expertise to better match risk and capital.

## Data & Insights

Insights from our ~\$60bn of annual ceded written premium data underpin our approach to supporting reinsurers realise their ambitions

***Global Risk  
Perception Survey 2022-2023***

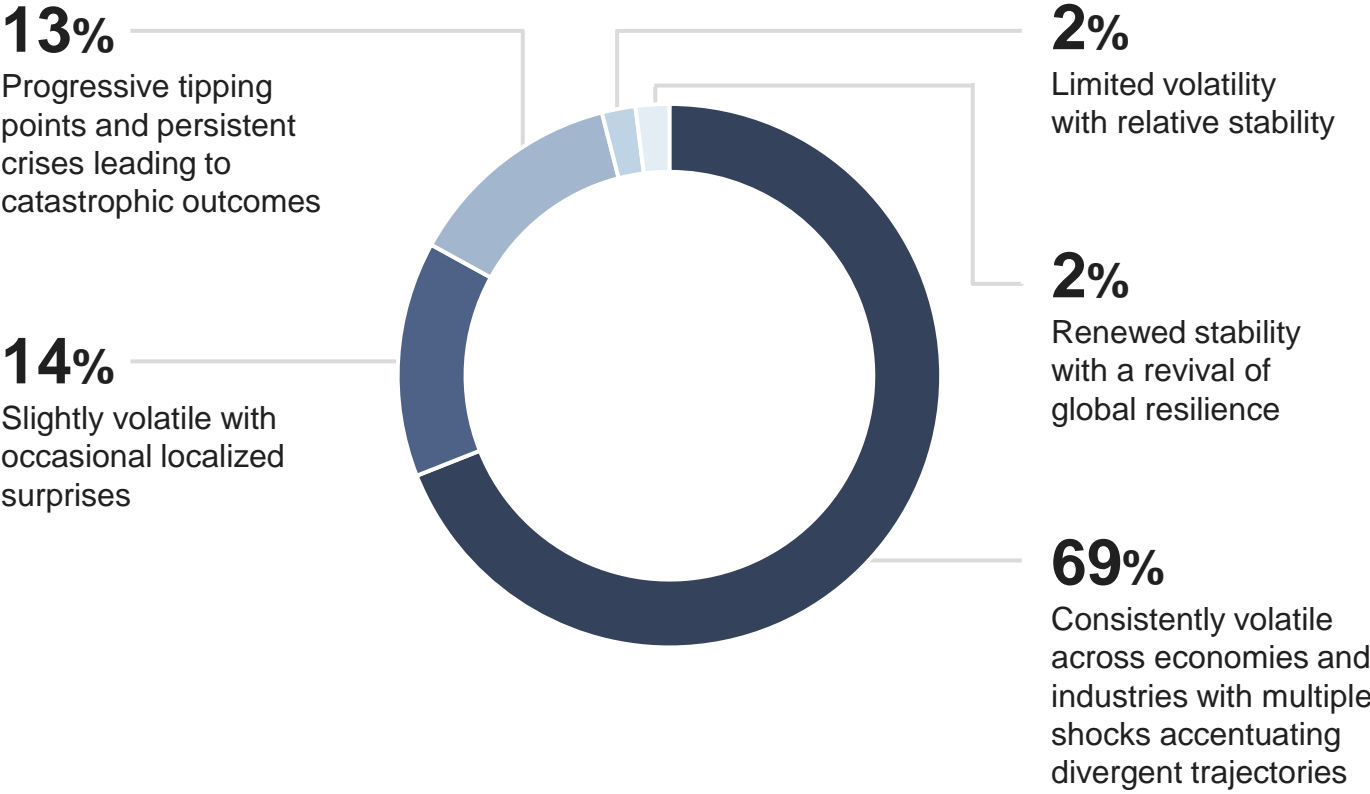
**Selected highlights  
and what they tell us**

2

# Short-Term Global Risk Environment

Rank	Currently Manifesting Risks
1	Energy supply crisis
2	Cost-of-living crisis
3	Rising inflation
4	Food supply crisis
5	Cyberattacks on critical infrastructure

## Outlook for the Short Term



Note: WEF Global Risk Perception Survey (1249 responses worldwide).  
Source: World Economic Forum; MMC analysis

# Top risks perceived to be most severe over a time horizon

## Short term

0-2 years

Rank	Risk
1	Cost-of-living crisis
2	Natural disasters and extreme weather events
3	Geoeconomic confrontation
4	Failure to mitigate climate change
5	Erosion of social cohesion and societal polarization

## Long-term

5-10 years

Rank	Risk
1	Failure to mitigate climate change
2	Failure of climate-change adaptation
3	Natural disasters and extreme weather events
4	Biodiversity loss and ecosystem collapse
5	Large-scale involuntary migration

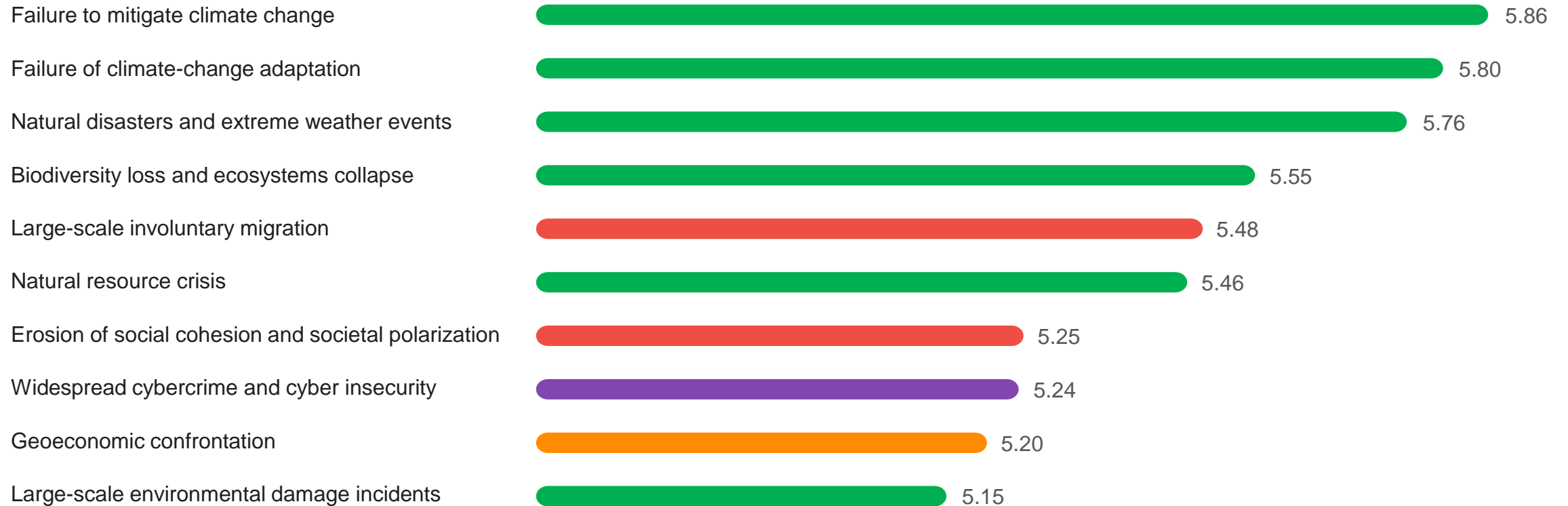
■ Economic ■ Environmental ■ Geopolitical ■ Societal ■ Technological

Note: WEF Global Risk Perception Survey (1249 responses worldwide).  
Source: World Economic Forum; MMC analysis



# Top ten risks perceived to be most severe in the next decade

## Average Severity Rank



■ Economic ■ Environmental ■ Geopolitical ■ Societal ■ Technological

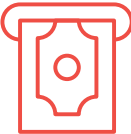
Note: WEF Global Risk Perception Survey (1249 responses worldwide). Respondents were asked to rank each risk on a scale of 1 (low severity) to 7 (high severity).  
Source: World Economic Forum; MMC analysis

# Risk interconnections



Note: WEF Global Risk Perception Survey (1249 responses worldwide).  
Source: World Economic Forum; MMC analysis

# Pressing challenges over the next two years



### Cost-of-living crisis

Recovery from the pandemic and disruptions to energy flows due to the Ukraine crises have helped make basic necessities increasingly unaffordable, stoking sociopolitical instability across both high- and low-income countries.



### Geoeconomic warfare

Heightened interstate conflict has led to the more prolific use of economic levers to constrain the rise of rival powers, such as technology bans and export controls, progressively impacting trade dynamics and supply chains.



### Economic downturn

With the end of cheap finance and globalization in retreat, the economic outlook contains specters of growth stagnation, liquidity shocks, and the proliferation of debt distress.



### Climate action hiatus

Growing demand for resources, fiscal constraints, and increasing natural disaster damage are setting up difficult near-term trade-offs between meeting urgent societal needs and ensuring momentum to achieve net-zero goals.



### Societal polarization

Widening inequality, entrenched domestic political disagreements, and the persistent spread of misinformation have led to deeper polarization and civil unrest across the world.

*Global Risk  
Perception Survey 2022-2023*

**Executive views on  
top concerns at a  
national level**

3

# Global overview of business leaders' concerns for the next two years

## Top 10 global risks for doing business

Rank	Risk
1	Rapid and/or sustained inflation
2	Cost-of-living crisis
3	Debt crises
4	Severe commodity price shocks or volatility
5	Geoeconomic confrontation
6	Severe commodity supply crises
7	Geopolitical contestation of strategic resources
8	Employment and livelihood crises
9	Lack of widespread digital services and digital inequality
10	Natural disasters and extreme weather events

■ Economic
 ■ Environmental
 ■ Geopolitical
 ■ Societal
 ■ Technological

Note: WEF Executive Opinion Survey (12,550 responses worldwide). Respondents could choose up to five risks they consider as being the biggest threats for their country in the next two years.  
Source: World Economic Forum; MMC analysis

## Key observations



With inflationary pressure in many countries and a potential global recession on its way, economic risks are the primary concern for business executives



Economic uncertainty threatens to cause knock-on societal impacts on living costs, employment, and livelihood



With geo-political tensions breaking out into full blown conflict (e.g. Russia-Ukraine crisis), the potential of further confrontation worries respondents



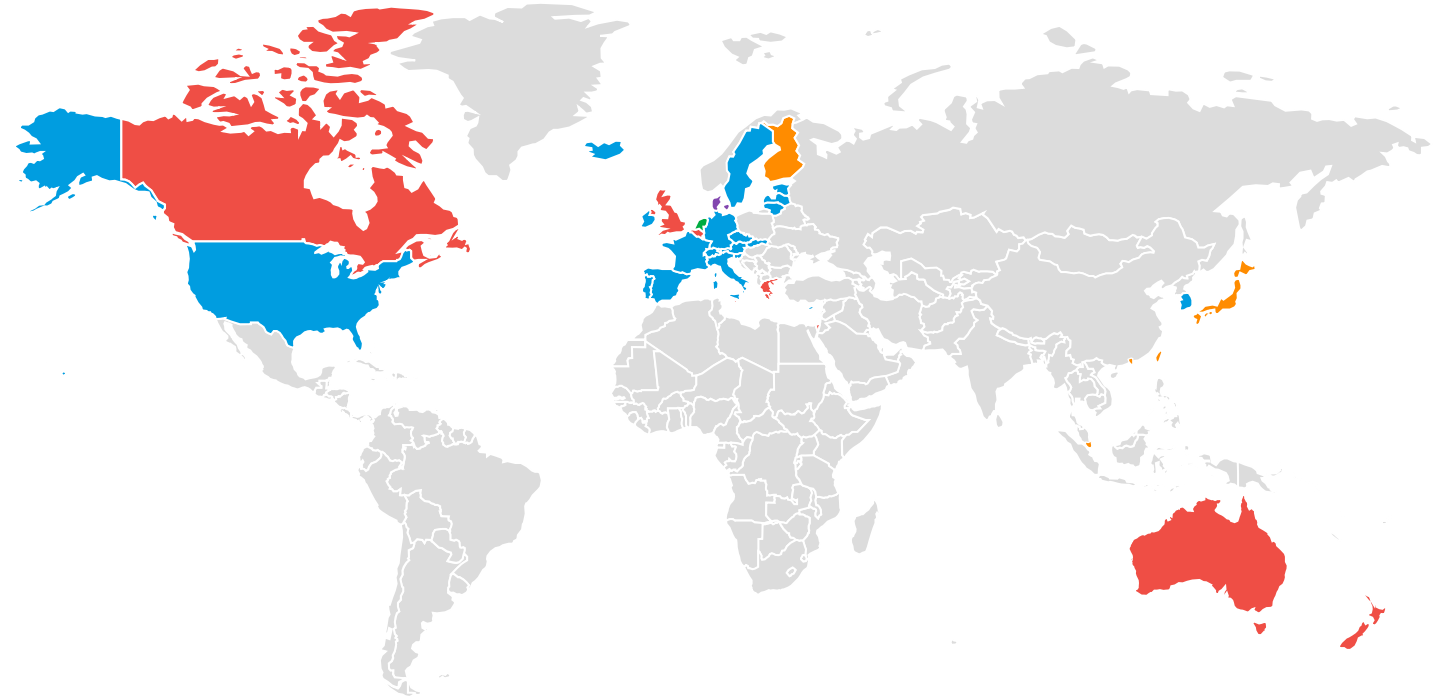
As first-hand impacts of climate change continue to be observed, businesses are wary of extreme weather events and supply constraints of key resources and commodities



Technological risks feature less prominently in this year's results, but access to digital services remains a top business concern in many regions

# Top concerns in advanced economies

Rank	Risk
1	Rapid and/or sustained inflation
2	Cost-of-living crisis
3	Geo-economic confrontation
4	Severe commodity price shocks or volatility
5	Severe commodity supply crises
6	Debt crises
7	Failure of climate-change adaptation
8	Interstate conflict
9	Geopolitical contestation of strategic resources
10	Asset bubble burst

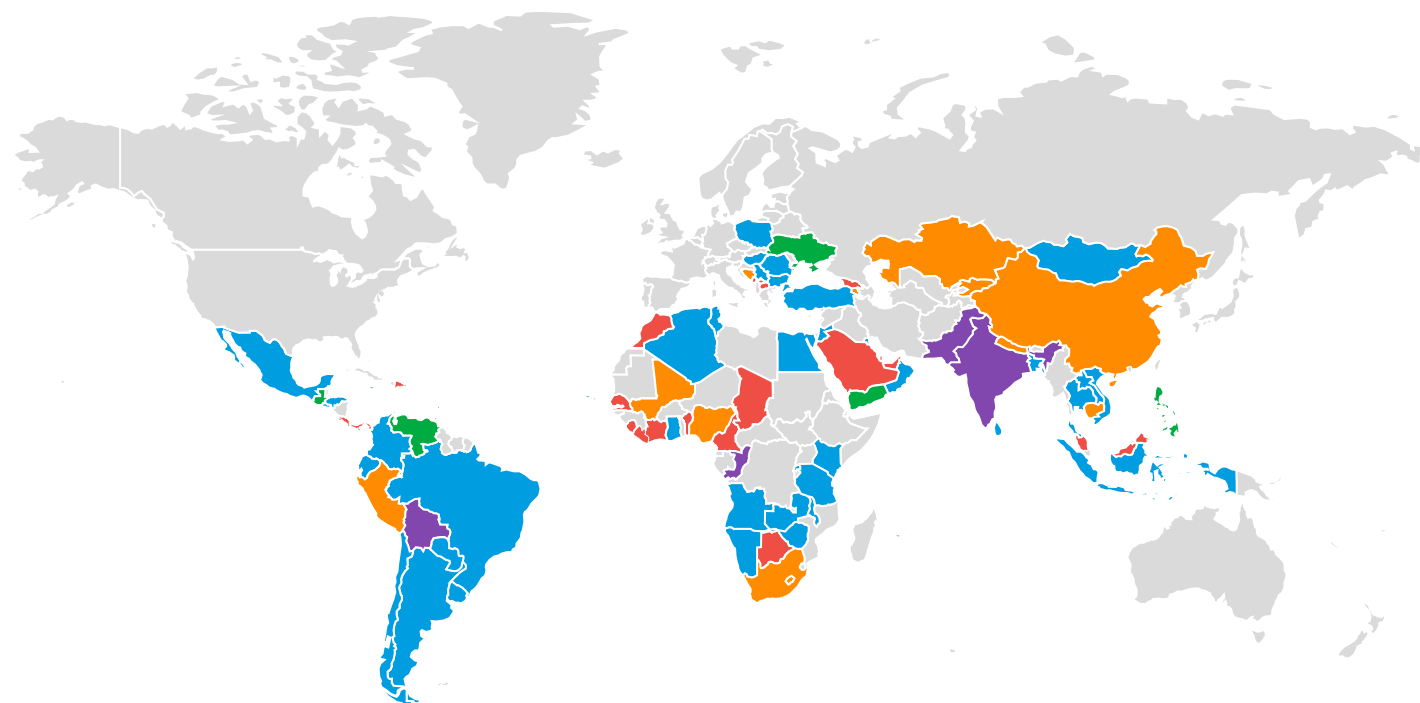


■ Economic
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 ■ Technological

Note: WEF Executive Opinion Survey (12,550 responses worldwide). Respondents could choose up to five risks they consider as being the biggest threats for their country in the next two years.  
 Source: World Economic Forum; MMC analysis

# Top concerns in emerging markets

Rank	Risk
1	Cost-of-living crisis
2	Rapid and/or sustained inflation
3	Debt crises
4	Employment and livelihood crises
5	Lack of widespread digital services and digital inequality
6	Severe commodity price shocks or volatility
7	Severe commodity supply crises
8	Geopolitical contestation of strategic resources
9	Goeconomic confrontation
10	Natural disasters and extreme weather events



■ Economic
 ■ Environmental
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 ■ Societal
 ■ Technological

Note: WEF Executive Opinion Survey (12,550 responses worldwide). Respondents could choose up to five risks they consider as being the biggest threats for their country in the next two years.  
 Source: World Economic Forum; MMC analysis

# Perspectives advanced economies vs. emerging markets

## Advanced economies

Rank	Risk
1	Rapid and/or sustained inflation
2	Cost-of-living crisis
3	Geoeconomic confrontation
4	Severe commodity price shocks or volatility
5	Severe commodity supply crises
6	Debt crises
7	Failure of climate-change adaptation
8	Interstate conflict
9	Geopolitical contestation of strategic resources
10	Asset bubble burst

## Emerging markets

Rank	Risk
1	Cost-of-living crisis
2	Rapid and/or sustained inflation
3	Debt crises
4	Employment and livelihood crises
5	Lack of widespread digital services and digital inequality
6	Severe commodity price shocks or volatility
7	Severe commodity supply crises
8	Geopolitical contestation of strategic resources
9	Geoeconomic confrontation
10	Natural disasters and extreme weather events

## Key observations

- Cost of living, inflation, debt, commodity pricing/supply and the threat of conflict (economic or otherwise) are top concerns for executives globally
- Executives in **Advanced Economies** are particularly cautious about geopolitical risks (e.g. interstate conflict, geo-economic confrontation)
- Executives in **Emerging Markets** reflect unease regarding access to digital services and natural disaster events

■ Economic  
 ■ Environmental  
 ■ Geopolitical  
 ■ Societal  
 ■ Technological

Note: WEF Executive Opinion Survey (12,550 responses worldwide). Respondents could choose up to five risks they consider as being the biggest threats for their country in the next two years. Source: World Economic Forum; MMC analysis



# Top concerns by region

	1	2	3	4	5
<b>North America</b>	Cost-of-living crisis	Debt crises	Rapid and/or sustained inflation	Severe commodity price shocks or volatility	Severe commodity supply crises
<b>Latin America and the Caribbean</b>	Rapid and/or sustained inflation	Cost-of-living crisis	Lack of widespread digital services and digital inequality	Natural disasters and extreme weather events	State collapse
<b>Europe</b>	Rapid and/or sustained inflation	Cost-of-living crisis	Severe commodity price shocks or volatility	Geoeconomic confrontation	Severe commodity supply crises
<b>Middle East and North Africa</b>	Cost-of-living crisis	Debt crises	Rapid and/or sustained inflation	Severe commodity price shocks or volatility	Severe commodity supply crises
<b>Sub-Saharan Africa</b>	Cost-of-living crisis	Debt crises	Rapid and/or sustained inflation	Employment and livelihood crises	Lack of widespread digital services and digital inequality
<b>Central Asia</b>	Interstate conflict	Rapid and/or sustained inflation	Geoeconomic confrontation	Severe commodity supply crises	Severe commodity price shocks or volatility
<b>South Asia</b>	Debt crises	Cost-of-living crisis	Geopolitical contestation of strategic resources	Lack of widespread digital services and digital inequality	Rapid and/or sustained inflation
<b>East Asia and the Pacific</b>	Rapid and/or sustained inflation	Geoeconomic confrontation	Cost-of-living crisis	Debt crises	Geopolitical contestation of strategic resources

■ Economic
 ■ Environmental
 ■ Geopolitical
 ■ Societal
 ■ Technological

# Emerging risks for the (re)insurance industry

# 4

# The Changing Nature of Risk

## Mega Trends Influencing Industry Trends and Issues



### Old Masters

- 1 Large losses
- 2 Inflation
- 3 Litigation



### Impressionists

- 4 IFRS17
- 5 ESG
- 6 Technology, Cyber



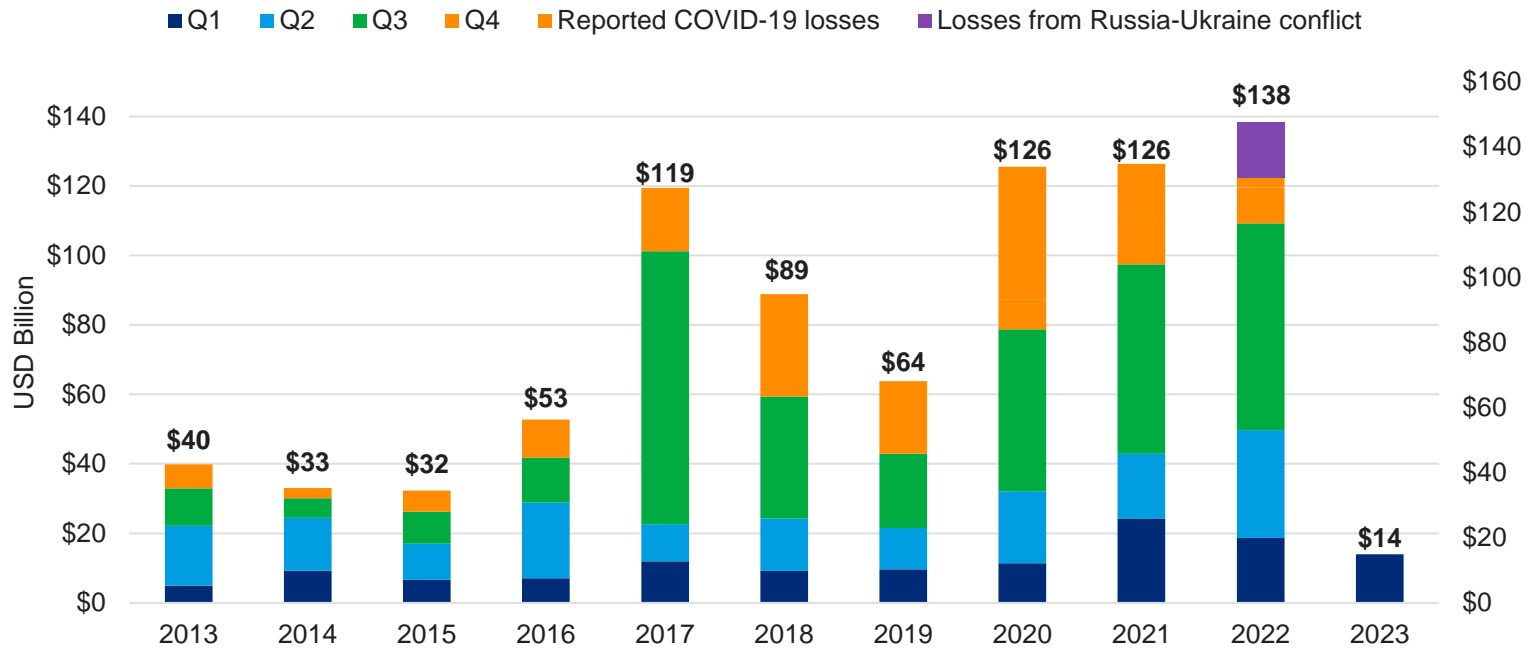
### NFTs?\*

- 7 Scarcity
- 8 AI, Q-Day
- 9 Space

# 1 Global Large Loss Activity

2013-2023\*

## Significant Insured Losses (2013 to 1Q2023)



- The projected annual 2022 large loss total rose to **USD 138 billion**, driven by Hurricane Ian.
- Q1 2023 large losses are estimated to be approximately **USD 14 billion**. Earthquakes in Turkey and Syria resulted in losses of approximately **USD 3.4 billion**, while other notable large losses included severe convective storms in the US and floods in the North Island of New Zealand. Please note that this is just a preliminary estimate, as losses for some catastrophe events that occurred in March are not available yet.

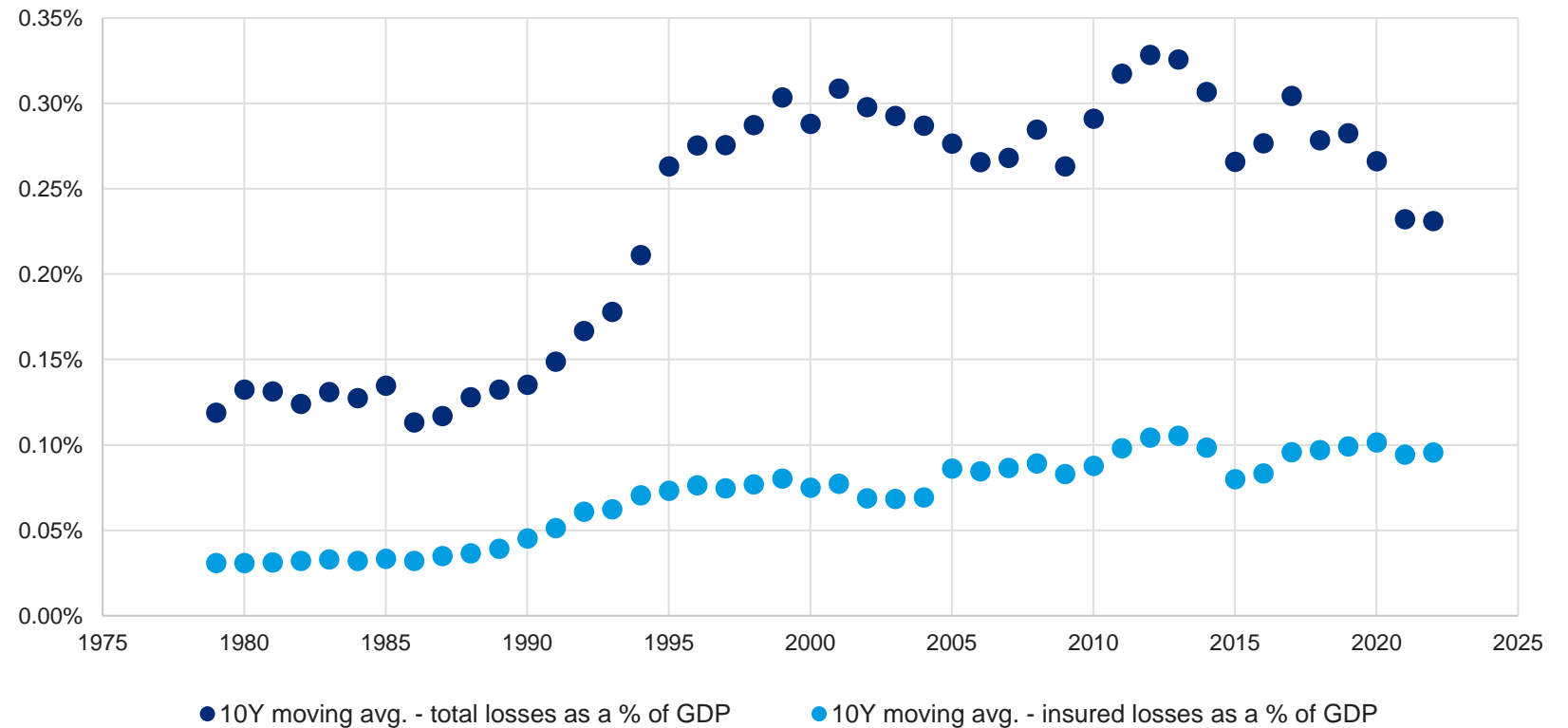
\* Significant Insured Losses (Est. losses > USD 100M). The Q1 2023 significant insured loss estimate is updated as of 4/10/23. Sources: PCS, ICA, AIR, PERILS, Verisk, Guy Carpenter.

# 1 Large Losses

The industry's original raison d'être

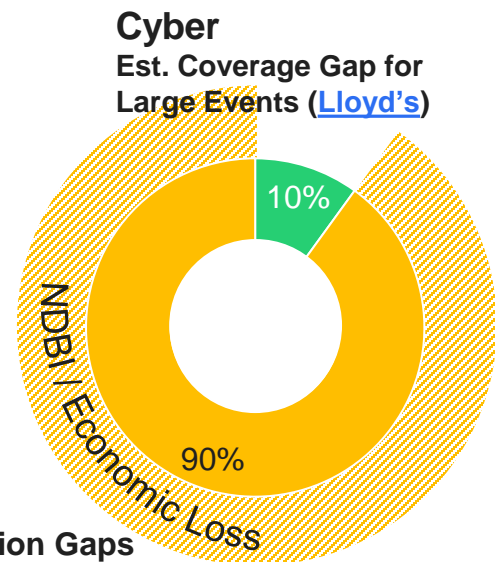
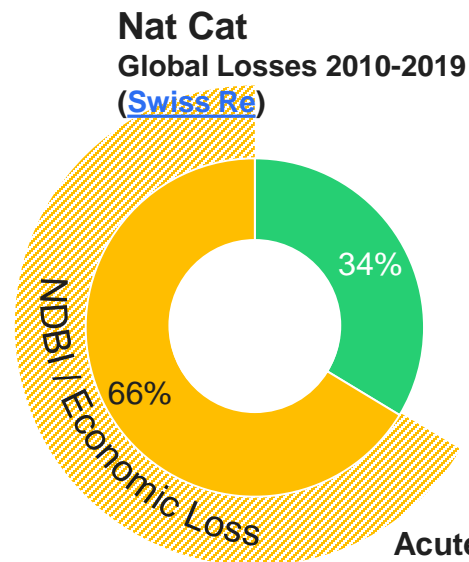
- Insurance and protection gaps vs mitigation
- Concentration risk – Profound
- Climate change – Varies by peril
- Expanding limits of insurability - Lessons from *Deepwater Horizon*
- Recent initiatives

Impact of catastrophic events on economy



# 1 Protection Gaps in major insurance and savings systems... ...represent major social/economic challenges

*Def.: The difference between financed and actual economic losses or liabilities caused by large-scale events or unsustainable long-term trends*

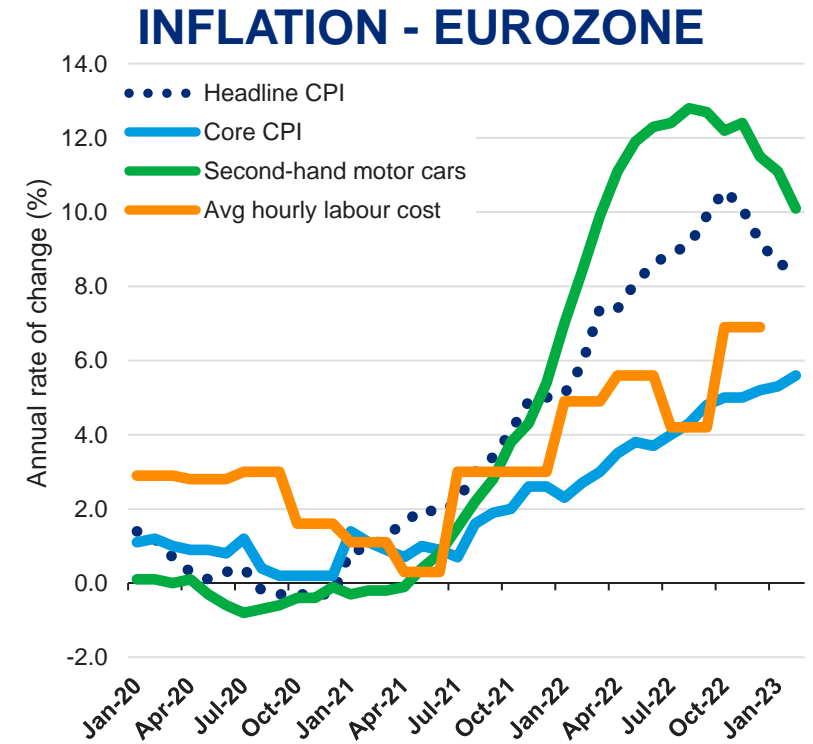
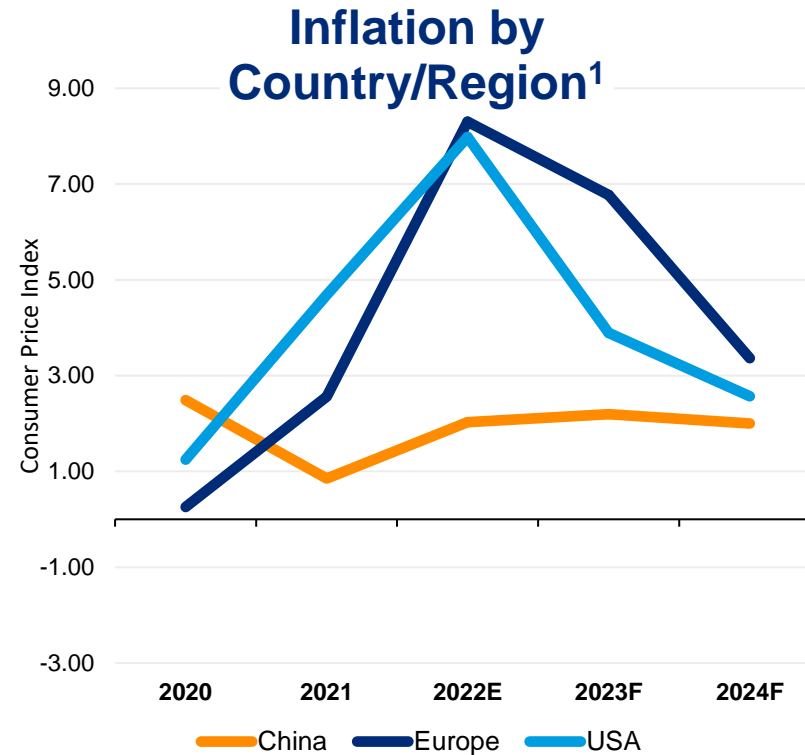


■ Covered by Insurance/Savings  
■ Un(der)insured or Savings Shortfall

# 2 Inflation

#1 risk for (re)insurance in 2023(1)

- Different types of inflation
  - Economic
  - Sector specific
  - Social
- Longer-term drivers
- Implications
- Solutions



Source: OECD Database, Eurostat; Updated as of: 16 March 2023; Noted: 1. Inflation forecast is measured in terms of the consumer price index (CPI) or harmonized index of consumer prices (HICP) for euro area countries, the euro area aggregate and the United Kingdom;

# 3 Litigation

The only way is up

## MTL/MDL/Class actions

- Asbestos
- Cybersecurity (data protection)
- ESG
- Social justice (DEI)

## Regulatory investigations

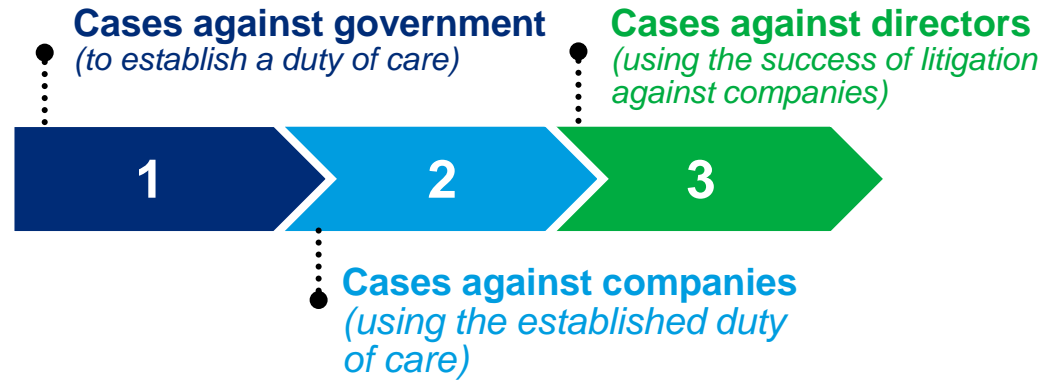
## Global patterns and drivers

- EU Directive on Representative Actions
- Macro conditions

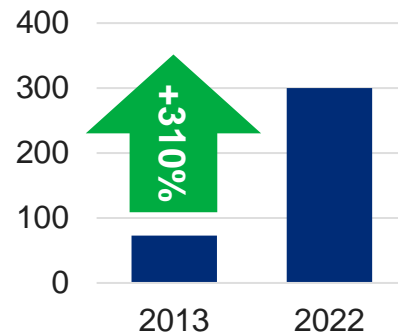
## Implications

## Solutions

## Establishing a duty of care



## # MDLs





# 3 Qualitative assessment of social inflation risk drivers

## Potential expansion of social inflation beyond the USA

Risk driver	Description	USA	Australia	UK	Canada	Netherlands	Spain	France	Germany	Japan
Youth population	Proportion of population below 15 years old	H	H	H	H	H	M	H	M	L
Social media	Indicator of active engagement in accessing and sharing information online.	H	H	M	M	M	M	L	L	H
Litigation funding	Presence of mechanisms to finance formal litigation or alternative dispute resolutions	H	H	H	M	H	M	M	M	L
Collective redress	Existing mechanisms of collective redress or indications of their likely introduction in the short-to-medium term	H	H	H	H	M	M	M	M	L
Politics and regulation	Government actions that may foster social inflation (e.g. taxes, rules, laws or regulations)	L	M	L	M	M	H	H	M	M
Legal environment	Features of common law versus civil law systems	H	H	H	M	M	L	L	L	L
Income inequality	Gini coefficient	H	M	H	M	L	M	L	L	M

There are structural features in the USA that mean social inflation tends to be far more severe than other markets, e.g. punitive damages, jury trials, political appointment of judges, etc.

Despite the signals, social inflation in other countries is not expected to reach the extremes of the USA.

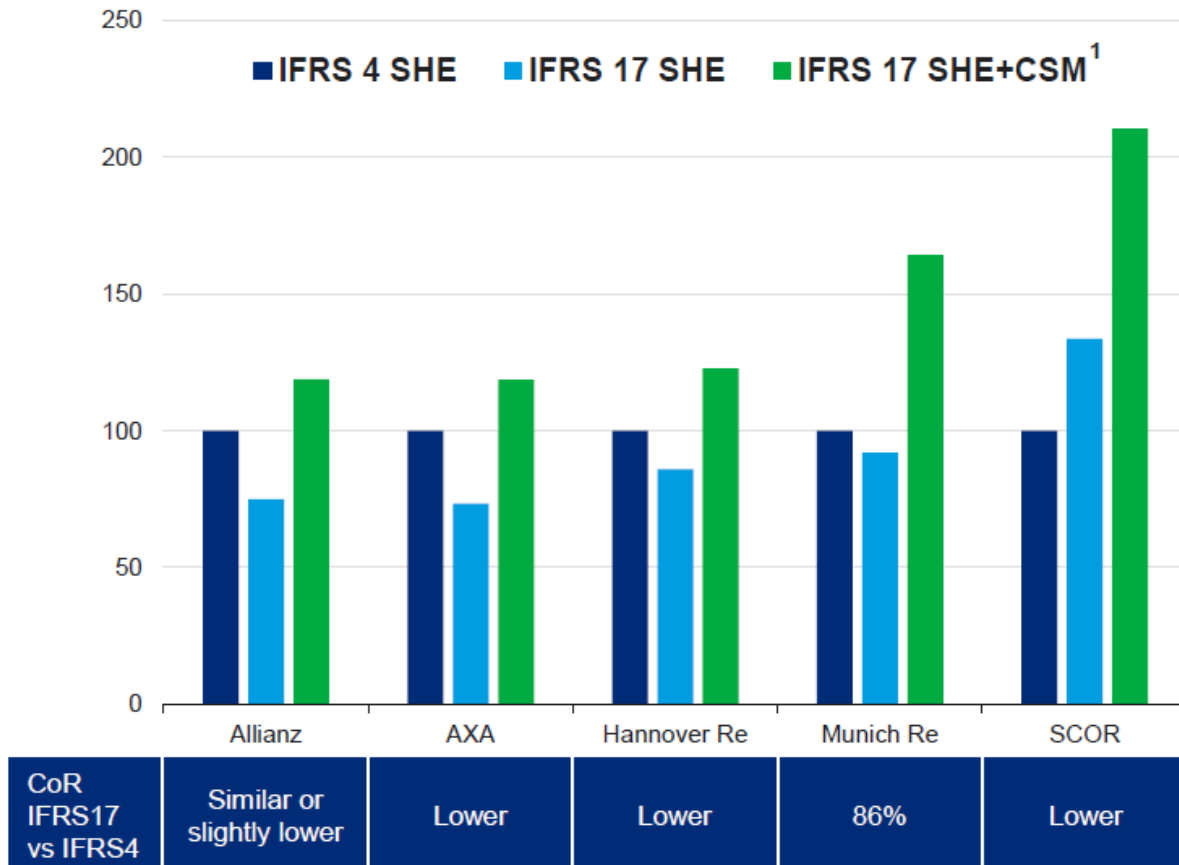
- Australia and the UK have significant high-risk factors that could foster social inflation, although probably not to the degree seen in the USA.
- The risk is more nuanced in medium-rated countries with a more neutral mix of signals. Of those, the Netherlands shows the highest propensity, mainly due to increased litigation funding activity in conjunction with reforms to the system of collective redress.
- Japan currently appears less susceptible to heightened litigation and social inflation risks.

Note: The overview above is prepared on a best judgement basis. It is informed where possible by objective criteria, but some empirical indicators have ambiguous effects on social inflation, so the analysis is by its nature subjective.

# 4 IFRS17

## Accountancy's never-ending quest for value

### Shareholders' equity (SHE) IFRS4 & IFRS17



#### What

- Replacement for IFRS4
- Affects accounting not fundamentals

#### Who and when

- Existing IFRS reporters and those choosing to adopt
- Accounting periods ending 1st January 2023 or later

#### What we know so far

- Common metrics
- Assumptions and complexity

#### Implications

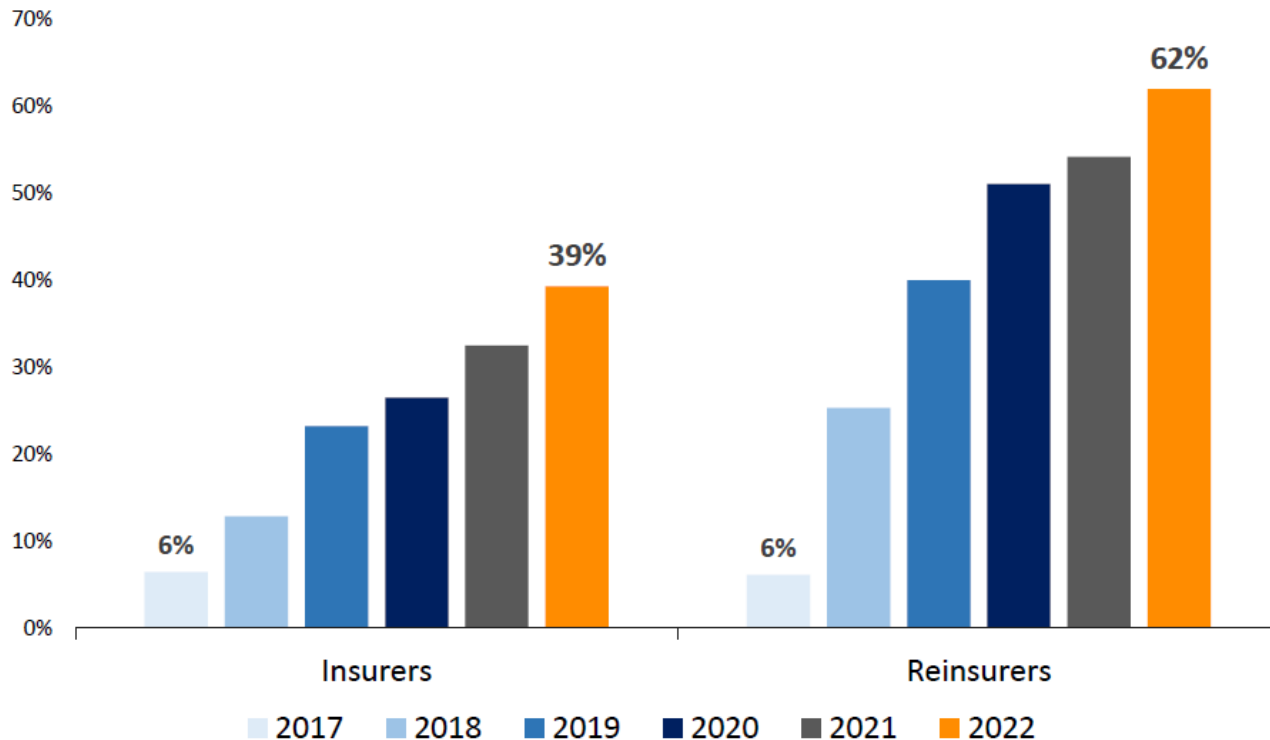
- Assessing “true” performance maybe more complicated than hoped
- Expect period of adjustment

# 5 ESG

The story so far...

It seems you'll skip as covered in conference today

### Share of Global Non-Life Premium Income Written by Re/insurers with Coal Restrictions



### Some acronyms to know:

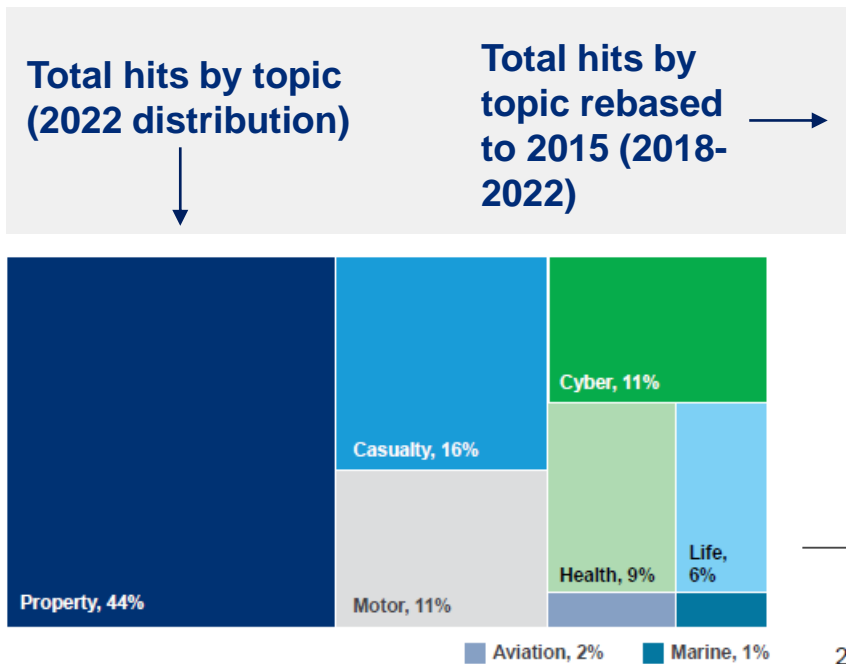
- TCFD
- PCAF
- NZIA
- Scope 1, 2 & 3
- EU Taxonomy
- EU Regulations

Drivers for change  
Coal - a current focus  
How to prepare  
What next?

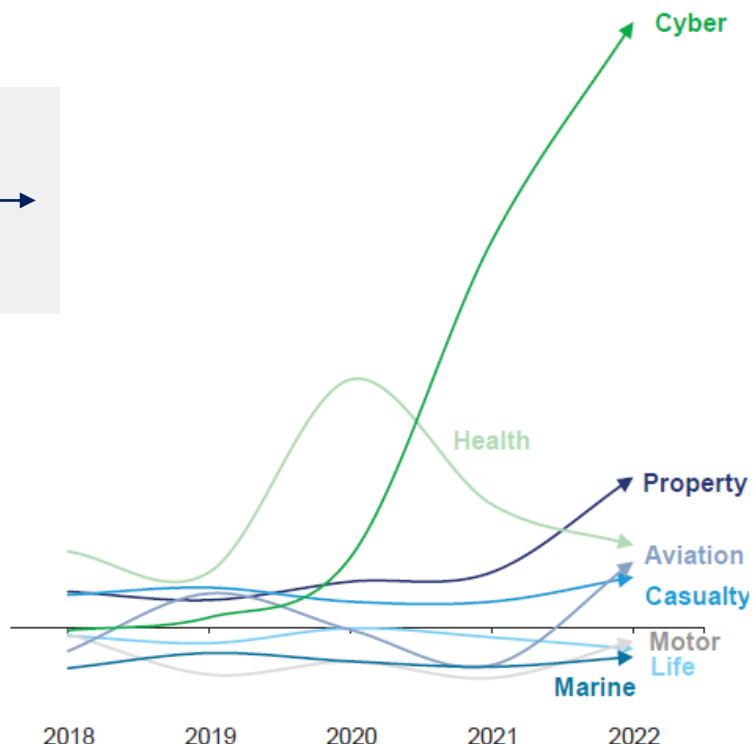
# 6 Cyber - An increasingly heavyweight class of business

Cyber has achieved the critical mass reflective of a core insurance product line

The below infographics set out the relative “mentions” of different classes of business on earnings calls among a cross-section of the insurance industry. It is apparent that cyber is **now increasingly an overarching strategic theme for the industry.**



Source: Alpha Sense—Earnings conference call transcripts



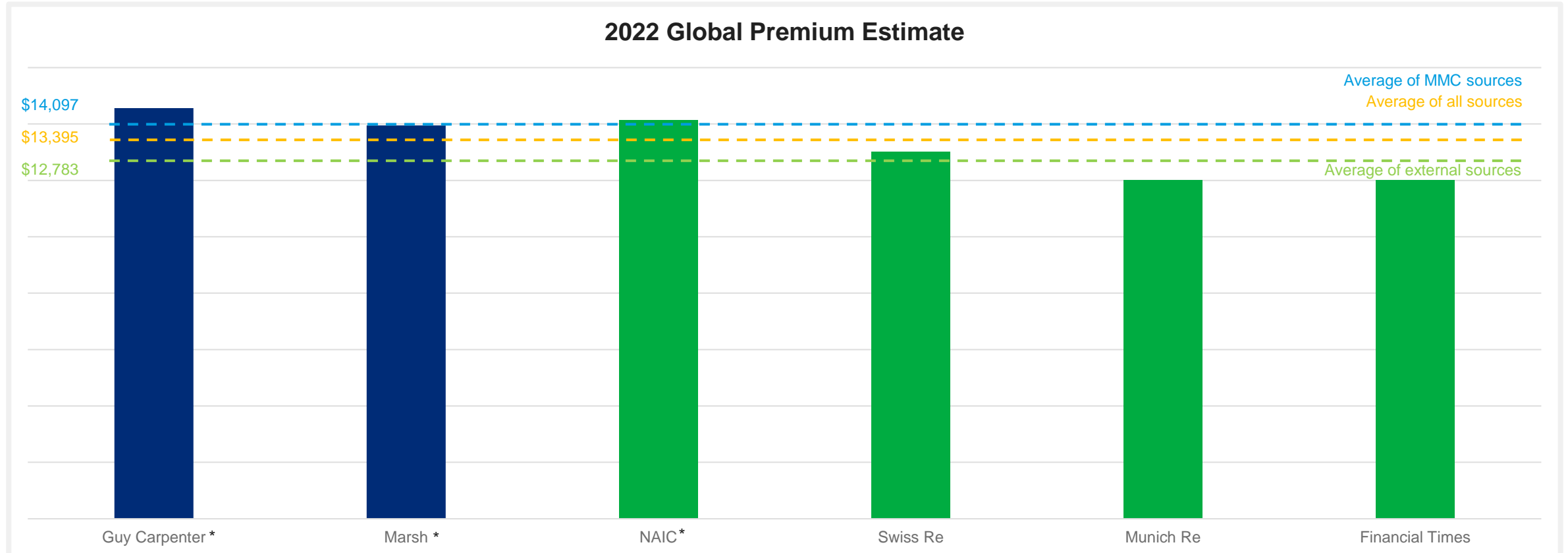
Source: Alpha Sense—Earnings conference call transcripts

Themes impacting the Cyber market currently:

- Successive years of rate hardening
- Focus on the extent of coverage
- Growth of new product distribution channels such as managing general agents
- Growing penetration in historically under-accessed global markets

# 6 Cyber Global Premium Estimate

Preliminary estimates indicate the 2022 Global Premium at approximately \$14bn.



NAIC: <https://content.naic.org/sites/default/files/cmte-c-cyber-supplement-report-2022-for-data-year-2021.pdf>

*\*extrapolated from source data*

Swiss Re: <https://www.swissre.com/dam/jcr:6fd9f6dd-4631-4d9f-9c3b-5a3b79b321c0/2022-11-08-sri-expertise-publication-cyber-insurance-strengthening-resilience.pdf>

Munich Re: <https://www.carriermanagement.com/features/2023/04/20/247405.htm>

Financial Times: <https://www.ft.com/content/753e76db-e9cc-4c90-985a-f354dbc5c9a4>

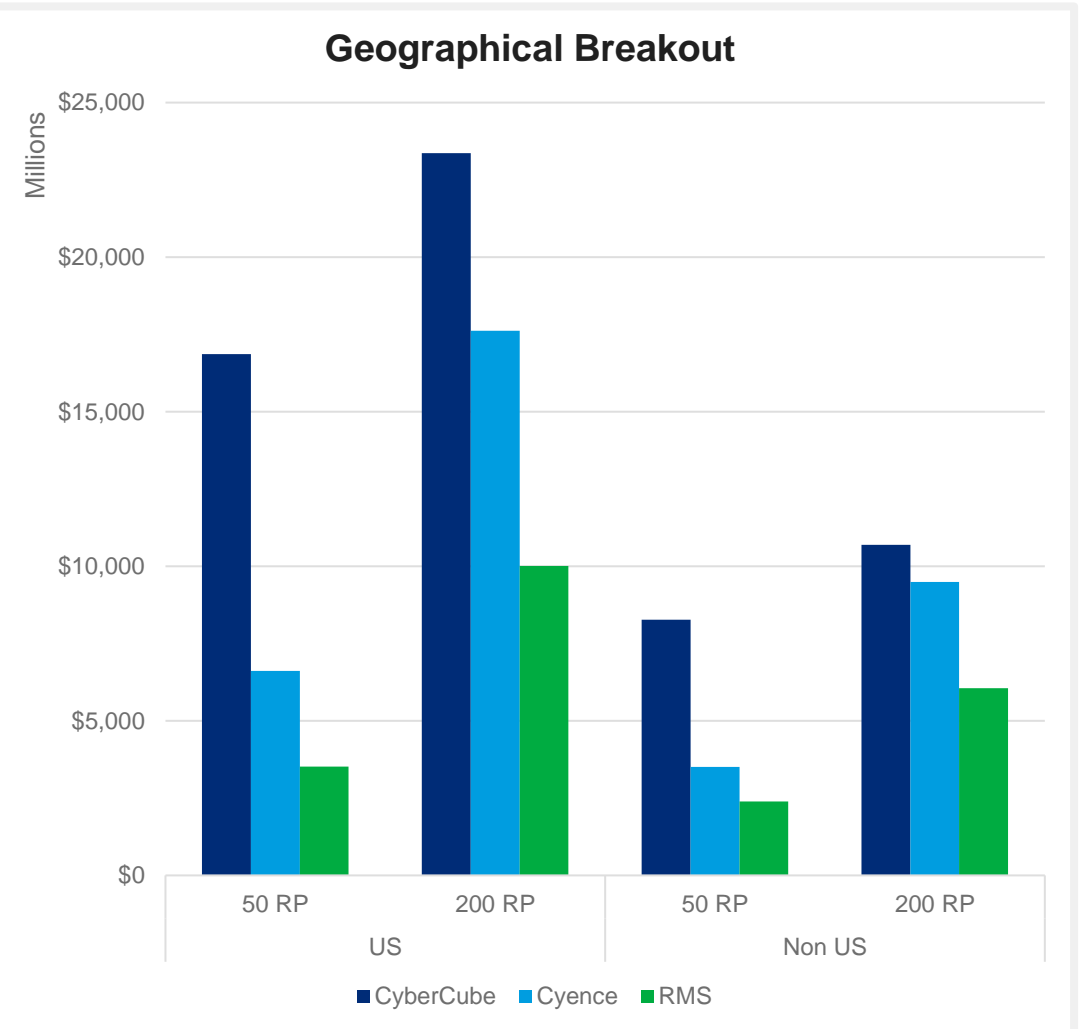
## 6 Cyber - Global Modelled Losses

A 1:200 global catastrophe modelled loss up to \$33bn by the end of 2022

Global			
OEP	CyberCube V4	Cyence M5	RMS V6
50	24,373 m	9,964 m	5,530 m
200	33,370 m	25,768 m	15,631 m

**A healthy cyber market needs to be built on the foundation of a strong modelling framework. The expertise, tools and technology have advanced significantly since the inception of the first cyber vendor models c. 8 years ago. As exposure data has improved, the potential exists to explore the size of an industry loss.**

- When comparing the impacts of a modeled cyber event across the world, the vendors have a different view of the relative impacts of a non-US event versus one that is localized to the US.
- However, there is further research and data required as the suitability of the scenarios and the accuracy of parameters linked to these jurisdictions will be more closely scrutinised as the international market develops.



# 7 Scarcity

Borne out of Environmental, Societal and Technological risks

## Top ten risks perceived to be most severe in the next decade

### Average Severity Rank



■ Economic ■ Environmental ■ Geopolitical ■ Societal ■ Technological

Note: WEF Global Risk Perception Survey (1249 responses worldwide). Respondents were asked to rank each risk on a scale of 1 (low severity) to 7 (high severity).  
Source: World Economic Forum, MMC analysis

### Top risks

- World Economic Forum
- Global Footprint Network

### Issues

- Water, Food & Waste disposal
- Biodiversity & Air
- Key metals
- Youth, Skills & Education

### Implications

### Solutions

*Market value of scarcity themes  
USD191tn according to BoA global  
Research*

## 8 AI, Singularity, Q-Day

What's new on the block?

- Deepfake and malware
- Cyberborgs
- Implications
- Solutions
- Insurance – friend or foe



# RSA

*“As an AI language model, I do not have personal beliefs or expectations about the singularity, which is a hypothetical event in the future where artificial intelligence surpasses human intelligence and triggers an unprecedented technological transformation”*



# 8 Space

2050 is coming closer

Expanded space club

Planet B and space habitats

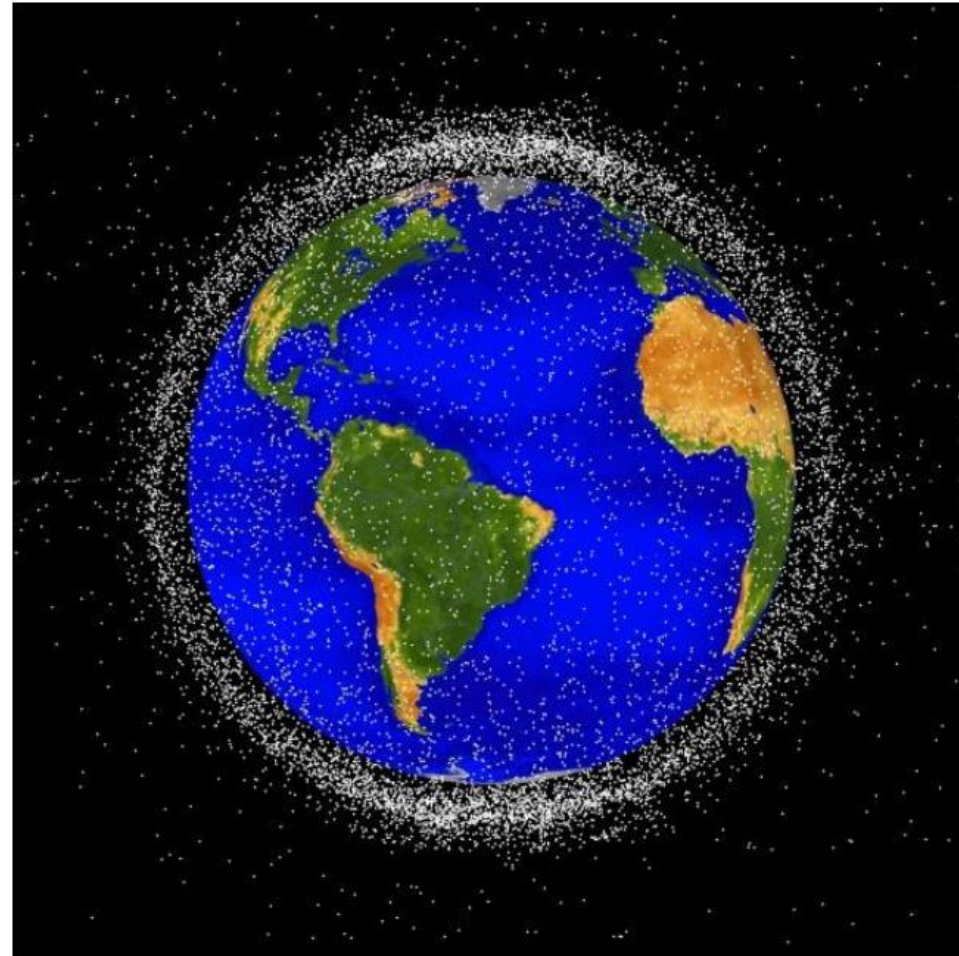
- Mining
- Energy
- Industry 4.0

Governance, legal & regulation

Space market worth

- 2021 USD386bn
- 2040 est. USD1tn p.a.
- 2050 est. USD3 10tn p.a.
- Compare and contrast to the internet economy's growth

Insurance opportunities



Low Earth orbit shown concentrated with orbital debris  
Photo by NASA Orbital Debris Program Office