Baden-Baden 2023
Virtual Media Breakfast

19 October 2023
Clarisse Kopff
Claudia Hasse
Agenda

Demand dynamics & underwriting response
- GDP and inflation prospects
- Natural catastrophes & Political unrest
- Increasing digitalisation

Supply dynamics

Our proposition

Zoom on the German market

1. Demand dynamics & underwriting response
   - Clarisse Kopff

2. Supply dynamics
   - Clarisse Kopff

3. Our proposition
   - Clarisse Kopff

4. Cyber trends
   - Claudia Hasse

5. Zoom on the German market
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(Re)Insurance market geared towards greater uncertainty and complexity

Demand dynamics

- Sticky inflation
- High nat cat activity
- Increasing geopolitical & civil unrest
- Rising cyber threats
- Muted economic outlook
Europe to stagnate in 2023, only weak recovery expected for 2024
Continued fragility in the global economy

Baseline scenario with only weak growth
- No growth drivers in Europe: Largest economies Germany, France and Italy are either in a recession or experiencing very low growth rates
- Headwinds from tight monetary policy limit activity in interest-rate-sensitive sectors
- Robust labour markets prevent even weaker growth and imply substantial wage increases

Downside risks dominate
- Delayed effects of European Central Bank’s tightening could lead to a broader recession
- Geopolitical risks as further drivers of uncertainty
- Risk of renewed energy crisis

Annual real GDP growth in %

2010–19 average 2021 2022 2023 2024

World
Europe (EU 27+UK)
Eurozone

Source: Munich Re Economic Research (September 2023)
Inflation in the eurozone likely to stay above recent historical average
Wage growth currently at historic high – risk of prolonged elevated inflation

**Structural drivers for higher inflation …**
- Deglobalisation could limit the import of cheap goods
- Decarbonisation could increase energy costs
- Demographics imply tight labour markets/wage growth

**… and for lower inflation**
Digitalisation will have price-dampening productivity effects

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**What we’re doing about it …**
- Permanent client dialogue to support informed decisions
- Adjust our models by looking at the inflation-relevant KPI's depending on the sector
- Adjust prices and terms & conditions accordingly
- Conservative loss picks in reserving

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**Source:** Munich Re Economic Research (September 2023)
Increasing nat cat activity across the continent
Non-peak perils drive nat cat losses in Europe

Observation of losses over time
- Increasing number and costs of nat cat for the industry …
- … with non-peak perils representing the majority of the load in Europe
- 2023 is confirming the upward trend
- Over the last two decades an average of 40% of economic losses were insured
- Growing risk of non-peak perils impacted by changing socioeconomic factors as well as climate change

Insured market losses in Europe (in €bn, inflation adjusted)

What we’re doing about it …
- Relevant reinsurance structures, pricing and wordings
- Expand our modelling capabilities, including for non-peak perils
- Use our scale, diversification and financial strength to be a substantial, sustainable and predictable player

Munich Re factors the upward trend in its technical underwriting approach

Source: Munich Re, NatCatSERVICE
High nat cat activity on the continent in 2023
Individual nat cat loss events of over €1bn hit the continent in various places

Estonia, Latvia, Lithuania, Denmark, Norway, Sweden, Finland: Storm (August)

Germany: Severe storm & hail (June)

Italy, Bosnia & Herzegovina, Croatia, Austria: Flood (May)

Turkey (& Syria): Earthquake (February)

Southern Alps (North Italy, Balkans): Severe storm (July)

Slovenia, Austria, Croatia: Flash flood (August)

Geophysical
Meteorological
Hydrological

Insured losses
Munich Re’s nat cat business shows profitable growth
Ready to offer high capacity – but we need to know what we’re covering

- Nat cat risks captured well in risk models
- Increasing industry loss trend manageable through disciplined underwriting strategy

Munich Re nat cat loss ratio vs budget\(^1\)
in % points

<table>
<thead>
<tr>
<th>Year</th>
<th>Loss Ratio vs Budget</th>
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</thead>
<tbody>
<tr>
<td>2019</td>
<td>5%</td>
</tr>
<tr>
<td>2018</td>
<td>5%</td>
</tr>
<tr>
<td>2020</td>
<td>-5%</td>
</tr>
<tr>
<td>2021</td>
<td>5%</td>
</tr>
<tr>
<td>2022</td>
<td>-5%</td>
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5-year average: 0%

Munich Re RI nat cat GWP 2010–2022\(^2\) (global)
in €bn

- Gross-net risk appetite, not relying on retrocession
- Seizing opportunity of attractive nat cat peak risks while keeping well-diversified portfolio

1 Expected major nat cat losses in % of net earned premiums: 2018 – 2021: 8.0%, 2022: 8.5%

2 GSI not included

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19 October 2023
SRCC – Significant increase in frequency of civil unrest events

- Tendency towards populism, nationalism, separatism, erosion of core democratic values
- Inflation and increasing tax burden erode purchasing power fuelling events such as "Gilets Jaunes" in France
- Certain targets, like retailers and key infrastructure, are particularly vulnerable to riots
- Possible spill-over effect on Europe from external conflicts (Middle East)

**Number of riots per decade in Europe 1950s to 2010s**

**What we’re doing about it …**

- Stringent limit management
- Clarify wordings
- Cater for potential accumulation risk

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Supply dynamics: No large capital inflows expected
Neither in the traditional reinsurance market nor in alternative risk transfer solutions

Trends

Traditional RI market

- Reduction of reinsurance capital in 2022 driven by mix of effects (real reduction, no deployment, interest rate increase)
- For 2023, some recovery is expected, but capital will remain below the levels seen in 2021
- Some players have become more selective in allocating their capital (e.g., decreasing nat cat risk appetite)

### Dedicated reinsurance capital

| Year | Traditional capital | Fixed-income equity
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>2015</td>
<td>332</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>345</td>
<td></td>
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<td>2022</td>
<td>434</td>
<td>23</td>
</tr>
<tr>
<td>2023P</td>
<td>461</td>
<td></td>
</tr>
</tbody>
</table>

1. Includes fixed-income equity adjustment, capturing anticipated recovered capital as bonds mature over time

Source: AM Best, Guy Carpenter, Munich Re
Alternative risk transfer remains complementary capacity
But no major ART-driven market movements expected

- Alternative risk transfer ("ART") capital has stagnated at around US$ 100bn since 2018
- Cat Bond market currently characterised by high growth rates
- Shift of investor interest within ART: from illiquid Collateralized Re formats to Cat Bonds (tends to imply higher layers)

**Alternative capital deployment**
Limit in US$ bn

Source: Aon Securities, LLC

![Graph showing alternative capital deployment](image-url)
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Munich Re leverages its financial strength and risk expertise to add value to our clients’ business

**Our foundation**
- High resilience through global scale, strong diversification, high solvency and no dependence on retrocession
- Fundamentally client-centric structure and mindset
- Deep underwriting and claims expertise: risk-adequate pricing and coverage, no systemic exposure

**Reliable capacity and partnership**
- We invest in individual, long-term partnerships with clients.
- We have ample capacity to grow our business together with our customers.
- We support our clients with high-quality services and targeted solutions.

**Investing in the future**
- High-resolution modelling for nat cat business expansion.
- Data and technology (e.g., LLMs, generative AI)
- Cyber reinsurance and services
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Cyber trends
Cyber: Insurance market sees strong demand
Expected growth rate (CAGR) of 31% in Europe (2019–2027)
in US$ bn

Source: Estimates by Munich Re

Global markets

US$12.0bn (2022)

8% Rest of the World
19% Europe
73% North America

CAGR 31%

2019 2020 2021 2022 2023 2024 2025 2026 2027

Source: Estimates by Munich Re
Cyber: Munich Re offers market-leading expertise
Shaping a sustainable and profitable cyber insurance market

2022 cyber market size in Europe: ~US$2.3bn (~US$8bn 2027e)
Munich Re has a strong market position in Europe.
Active in all segments, with a focus on SMEs and private lines business.

Steady growth and profitability of Munich Re’s Cyber book – risk and claims trends and accumulation potential are to be factored into pricing.

We strive for improved data quality and quantity.

Sustainable market: While cyber coverage protects against a broad range of risks, systemic risks must be clearly addressed. Munich Re also supports related market efforts (e.g., accumulation modelling).

Cyber war poses a significant systemic accumulation risk, hence tailored exclusion clauses must be implemented to avoid uncontrollable exposure.

Insurance demand on the rise

Cyber Reinsurer of the Year 2017–2023

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Strengthening our core business in Germany: Walking our strategy
Consistent commitment to clients focused on sustainable success

Trust and expertise are the foundation

Providing reliable capacity even in times of high uncertainty, assuming risk-adequate prices

Providing quotes in a timely manner to give the client planning certainty

Providing our home market with Munich Re’s technical and digital expertise

We continue to grow our core business of P&C reinsurance
Munich Re’s added value in a changing insurance world
Digitalisation & AI empower our offer

Experience and expertise
Munich Re combines domain expertise with data analytics know-how to enhance our solutions

Continuous improvement
Munich Re strives to continuously develop both an understanding of client needs and technical capabilities to create targeted and effective solutions.

Our goal
Offer added value in a variety of services and targeted solutions

Example 1
ImRiSc
Evaluation of critical risks in buildings, e.g., water leakage, and detection of root causes
- Analysis of internal/external data allows insurers to take targeted action and …
- reduce loss ratios

Example 2
REALYTIX ZERO
Global technology platform with a low-code approach for underwriting digitalization, featuring seamless API integration.

REALYTIX ZERO Copilot¹
GenAI-based Copilot that aids in questionnaire design, simplifies product launches/modifications, offers context-aware guidance, and improves time and cost efficiency.

¹ (to be launched End of 2023)
Munich Re offers expertise and capacity at risk-adequate prices
German insurance market faces pressing challenges

Our clients’ current challenges

Nat cat: Events are still rising in frequency; insurance industry needs to offer solutions to stay relevant.

Inflation: Currently easing, but still driving insured values and hence losses.

Motor: Overall profitability compromised by claims inflation.

Fire: In terms of commercial/industrial business, needs to be brought to sustainable profitability levels.

Volatility: Insurers carry more risks on their own books.

Munich Re remains the partner of choice, as we

- Support the market-wide drive to address challenges via compulsory or individual solutions
- Reflect exposure to inflation in our prices on a line of business and client-by-client basis
- Support a turnaround via targeted digital solutions and consulting services
- Cooperate with the market to understand the root causes and identify solutions
- Explore strategic answers, develop tailored solutions to manage volatility and capital positions

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