Insights into P&C reinsurance

Pricing trends and growth story

Sven Althoff, Member of the Executive Board
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London, 6 October 2022

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Agenda

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Growth story

2

Pricing trends

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Key takeaways

1 Growth story

Our ability to grow is based on strong foundations

Growth is steered by interplay of strategy and risk selection

Strategy

- Client centricity
- Effective capital management
- Focus on reinsurance
- APAC

Risk selection determined by risk appetite and bottom-line contribution

NatCat	Underwriting discipline
US Casualty	Adherence to margin requirements
Mortgage	Cyber
UK motor	Capital requirement

Foundations


Holistic partnership with clients

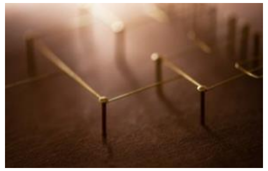

Reliability


Solution driven


Strong execution


Empowered underwriter


Innovative products

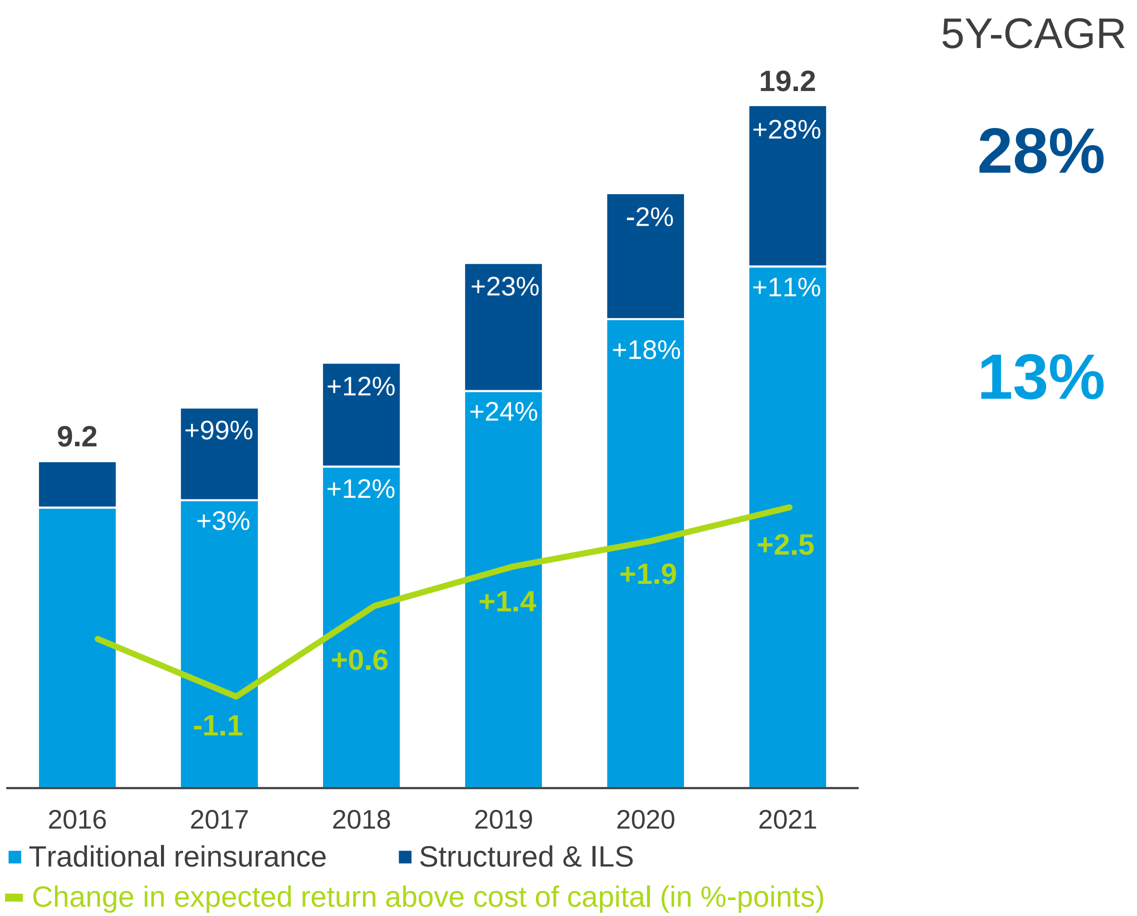

Lean operating model


Financial strength

Growth in traditional P&C reinsurance accelerated with improving profitability

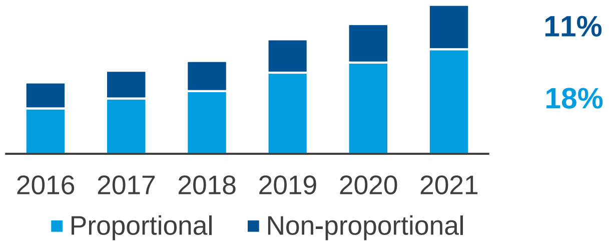
Total P&C premium doubled in five years – on a highly diversified basis

Gross written premium in bn. EUR

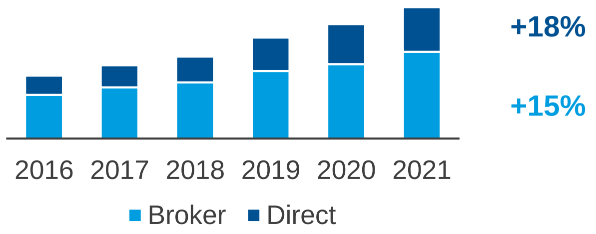


5Y-CAGR

More dynamic price increases in primary insurance

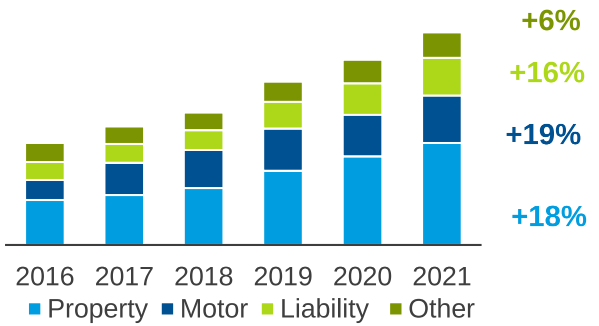


Balanced growth



Diversified growth

Cycle management in specialty lines



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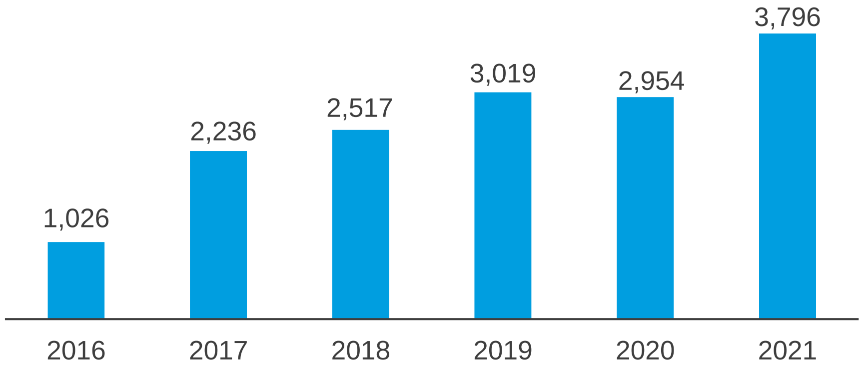
Excellent return for specialised know-how

Reputation for innovative solutions and strong execution enables growth

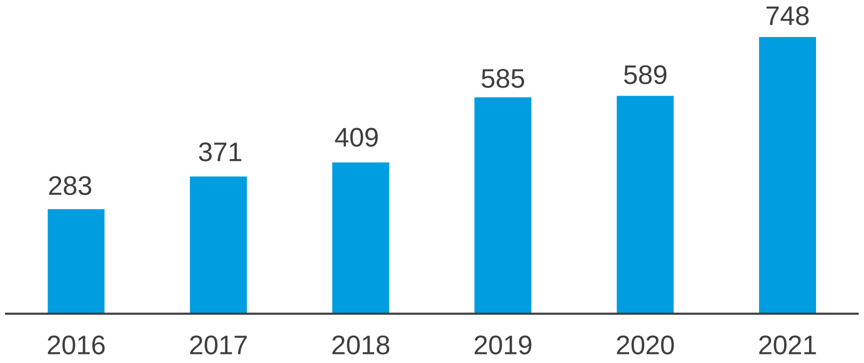
GWP Structured Reinsurance in m. EUR



5Y-CAGR

30%

GWP Insurance-Linked Securities (ILS) in m. EUR



5Y-CAGR

21%

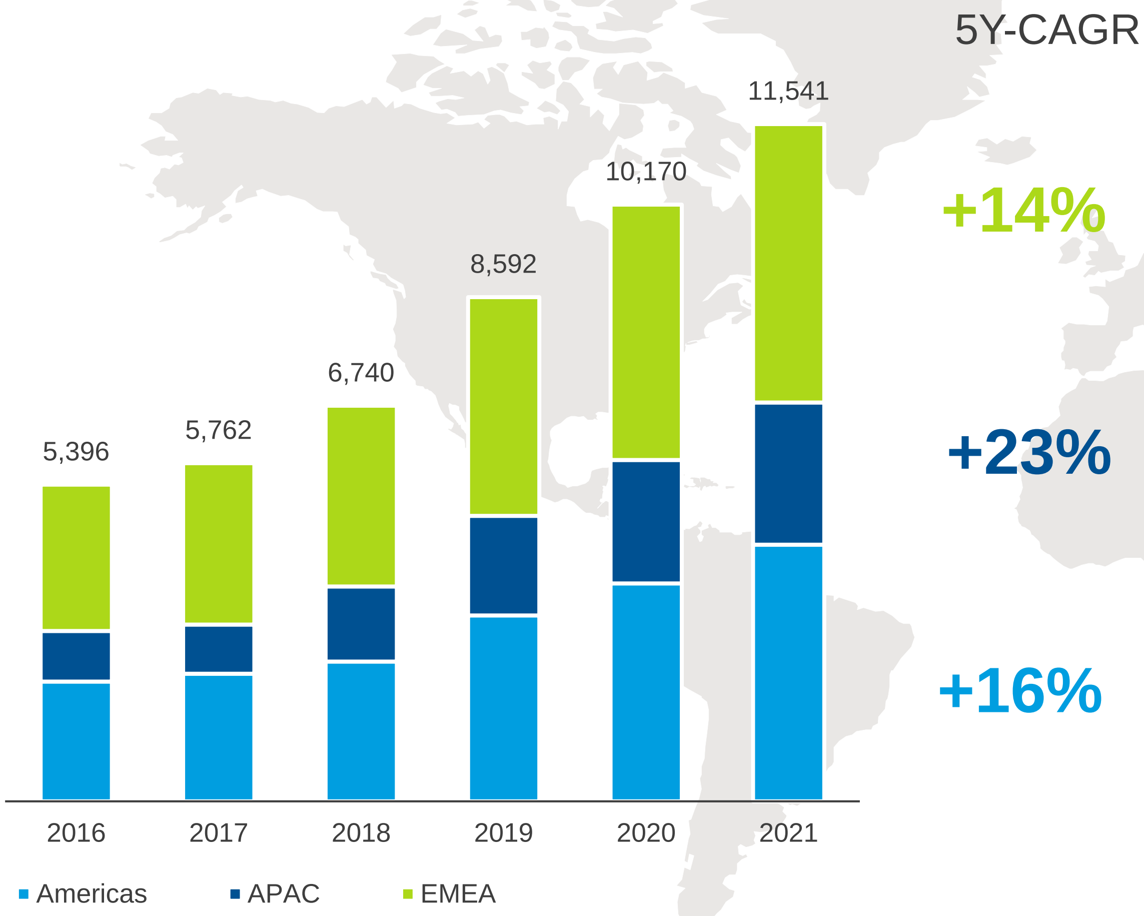
Why did we grow?

- Increasing demand due to uncertainty and volatility in recent years, further supported by increasing focus of brokers on Structured R/I
- Leading provider of structured and tailor-made solutions for insurers and corporates
- Very attractive return on capital with comparatively low volatility xRoca ≥ 10%

- Competitive advantage based on experienced team with strong track record of fast and professional execution
- Reputation attracted new clients
- Growth with existing clients based on long-term relationships
- Very attractive return on capital with very limited risk for Hannover Re's balance sheet

Diversified growth in regional markets

GWP by regional markets in m. EUR



Why did we grow?

EMEA

- Diversified growth across regions and lines of business
- Increased support of Lloyd‘s (incl. Argenta) benefitting from market hardening
- Continuous expansion of strategically strong position in Germany

APAC

- Increasing local footprint and local hub
- Growth in China driven by successful client-relationship management with strategic clients
- Growth in Australia predominantly with existing clients, deepening the relationships

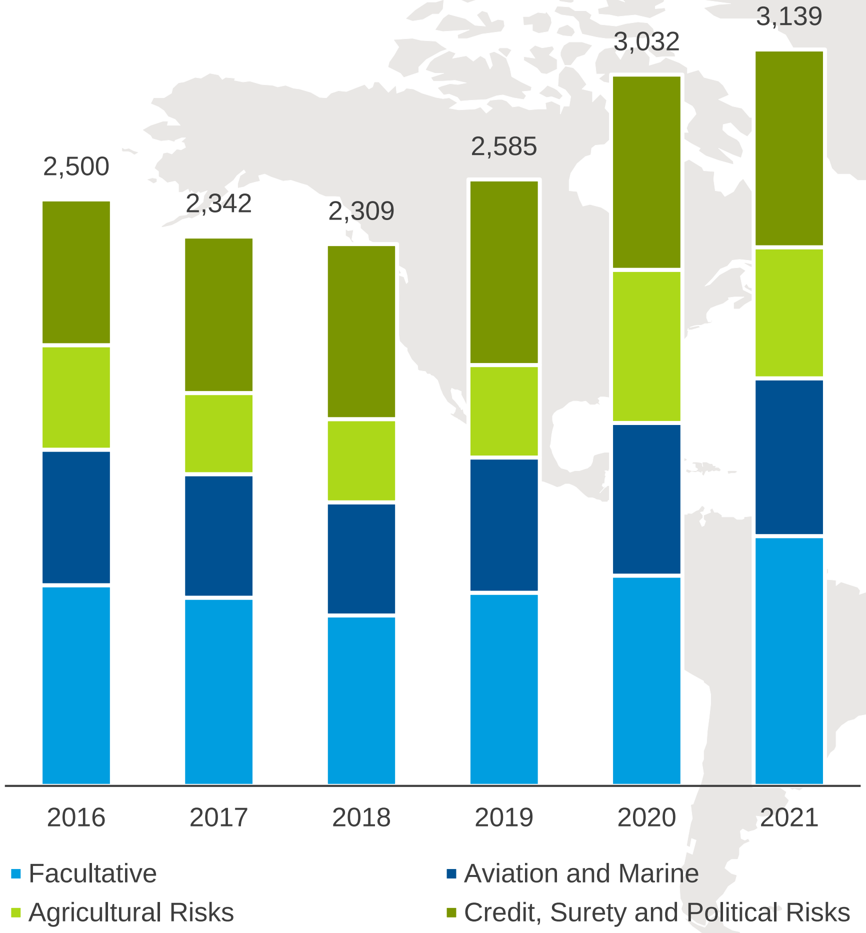
Americas

- Loss activity and resulting rate increases in (US) property (re-)insurance
- Significant growth of cyber business (US liability)
- Shift to proportional business due to dynamic price development in primary insurance
- Growth is mainly driven by expansion of existing relationships
- Growth in LatAm focused on property lines (incl. parametric solutions)

Selective growth based on strong market position in specialty lines

Active cycle management reflected in premium development

GWP by worldwide markets in m. EUR



5Y-CAGR

+6%

+5%

+3%

+4%

Why did we grow?

- Expanding a leading market position in Credit, Surety and pol. risk
  - Increasing volume from economic growth
  - Client relationship management resulted in higher shares and new clients

- Agro: Focus on core markets (e.g. US-MPCI) and parametric solutions
- Favourable underlying growth masked by mandatory cession to state-owned reinsurer in China in 2021

- Active cycle management in Aviation & Marine
  - Reduction in soft-market years
  - Growth following pronounced rate increases in recent years

- Increasing demand to manage volatility with facultative reinsurance
  - Substantial price increases
  - Strategic partnership with HDI Global Specialty

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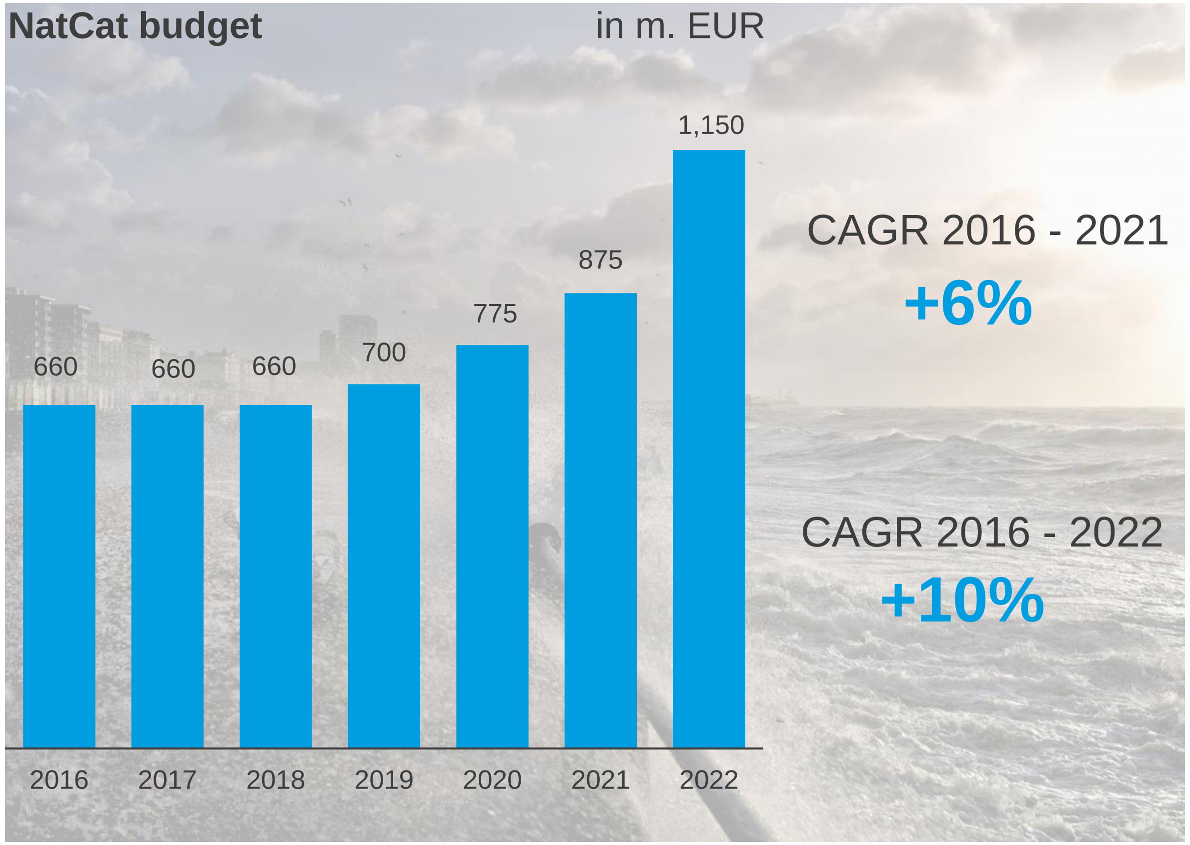
Exposure growth in NatCat below overall business growth

Accelerated growth in most recent years builds on consecutive rate increases



- Stronger growth in 2022 reflects growth, model changes and cycle management for retrocession protection

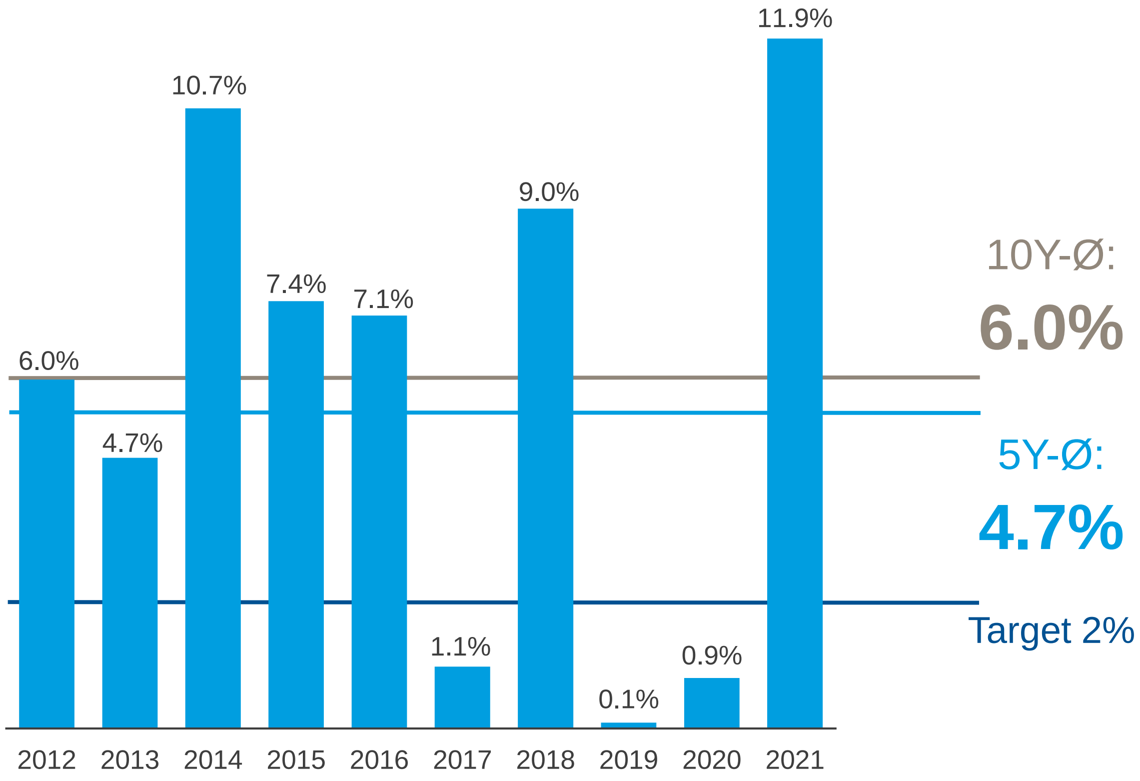
Why did we grow?

- Active cycle management
  - Moderate growth in first phase of hardening market (until 2018)
  - Accelerated growth since 2019 driven by rate increases accompanied by higher demand
  - Rate increases made more business adequately priced for Hannover Re
- Improved diversification driven by expansion of cat business in Europe, Canada, Japan and Australia in a very capital-efficient way
- Premium growth based on nominal and risk-adjusted rate increases and hence outweighing growth in exposure

Diversification is key for the profitability of our reinsurance portfolio

Long-term xRoCA well above 2% target; outperformance in 7 out of 10 years

xRoCA



10Y-average xRoCA by underwriting center[1)]

xRoCA = Excess return on capital allocated

1) Not adjusted for volume, includes underwriting center with < 10Y-history

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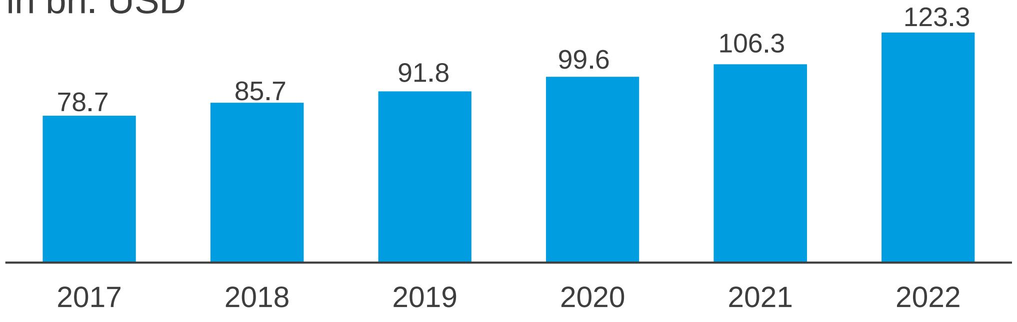
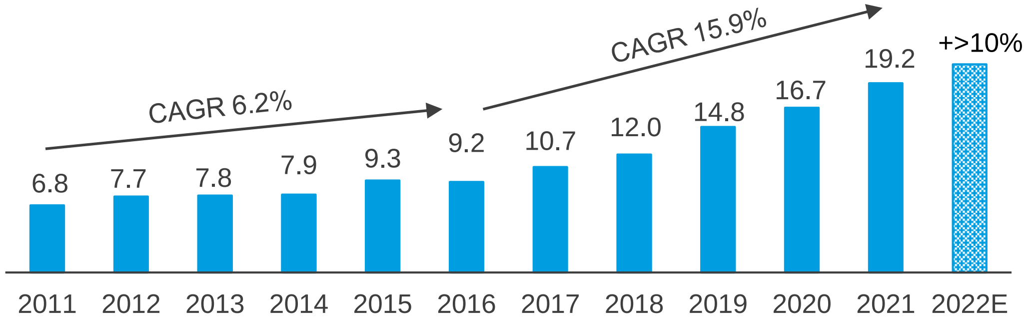
Favourable outlook for demand in P&C reinsurance
Underlying growth of P&C (re-)insurance will be driven by volatility

Modelled global insured aggregate average annual loss[1)]
in bn. USD



Gross written premium P&C reinsurance in m. EUR



1) Verisk
2) Allianz Global Insurance Report 2022

P&C insurance market

expected annual growth of
+4.6%
over next 10 years[2)]

Drivers for (re)insurance demand
- Climate change
- Uncertain geopolitical environment
- Growth of economies and increasing insurance penetration in Emerging markets

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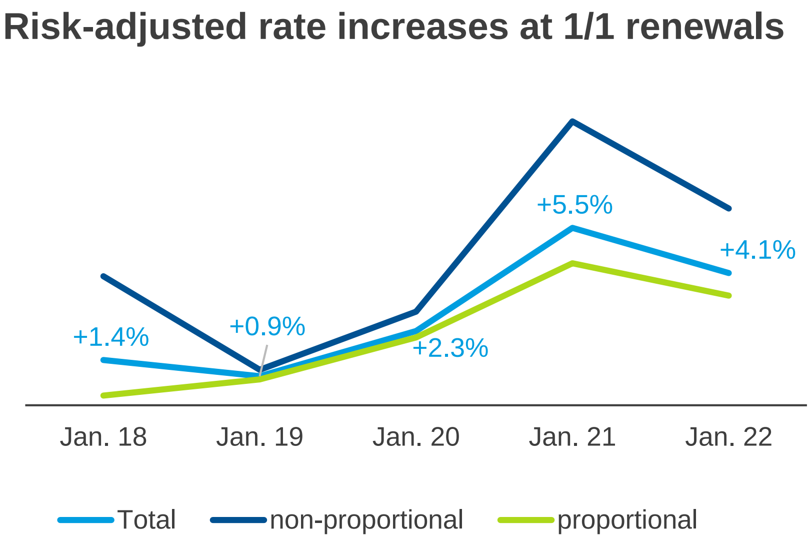
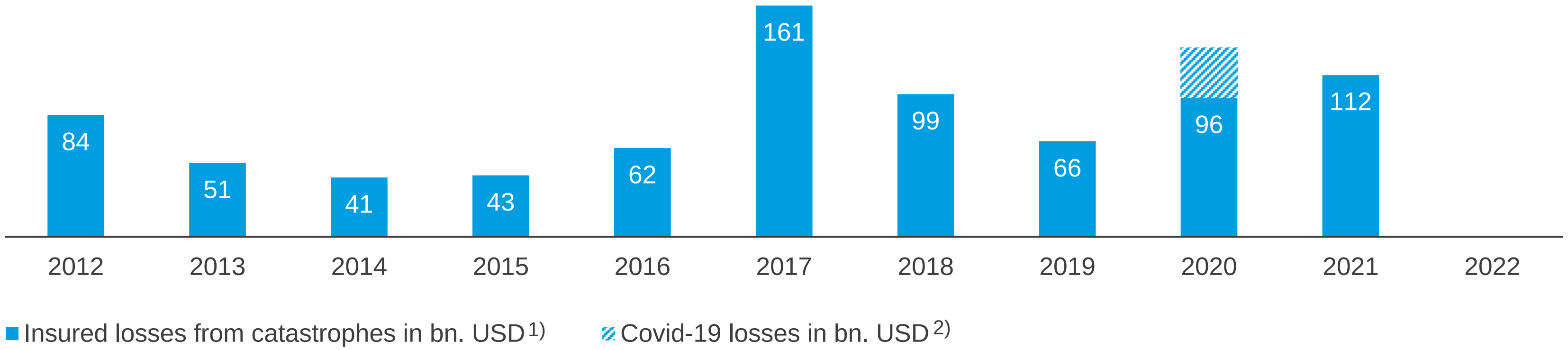
P&C reinsurance
> 7%
medium-term outlook

Improving market environment





Drivers for rate increases

Loss experience and trends (incl. climate change)

Low interest rates (until 2021)

Inflation started to increase in 2021

1) Swiss Re Sigma Explorer
2) HSBC claims tracker

somewhat different

2 Pricing trends

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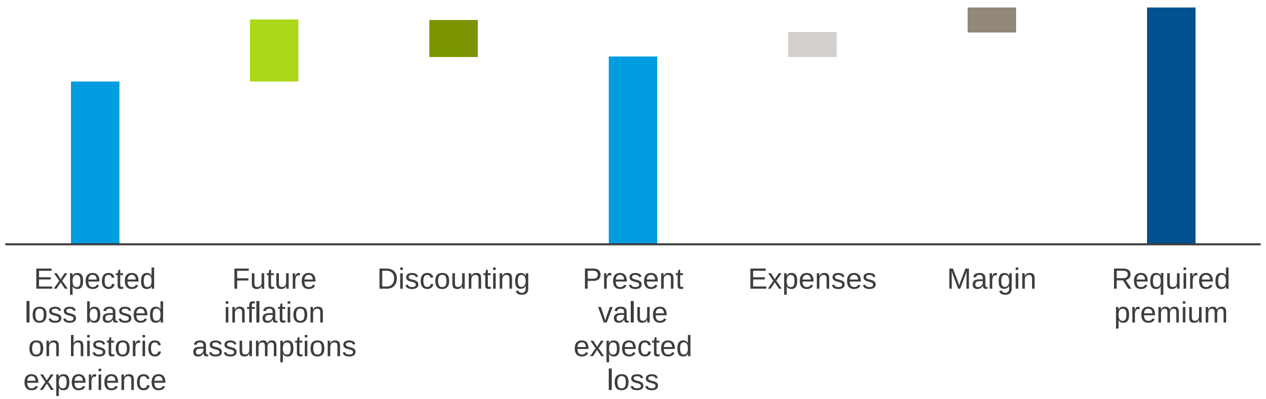
Inflation is fully embedded in our pricing

Historical inflation and future outlook differentiated by line of business and region

~25%
of traditional business protected by indexation clauses



384
different inflation indices used in pricing

Short-tail property

- Forecast for building costs already adjusted early 2021
  - Uncertainty of only one year until payment of the losses

Long-tail liability

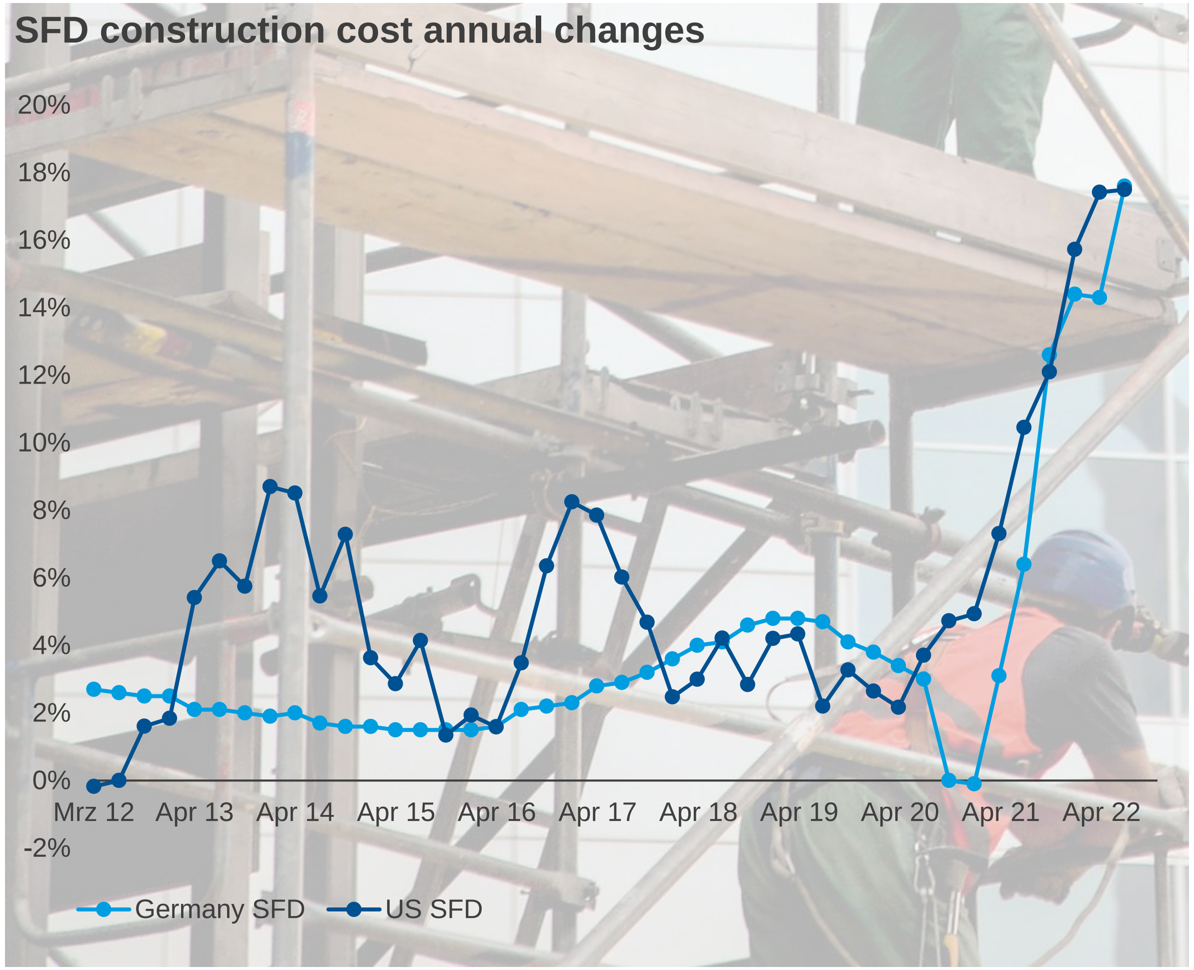
- Increased expectation for wages & salaries and consideration of superimposed inflation (e.g. medical cost + life expectancy)
- Outside the US, terms for long-tail business include indexation clauses on the non-proportional side

Proportional business

- Analysis, if inflation is reflected in increasing primary insurance rates; sliding scale commissions on parts of the portfolio

Inflation in NatCat business

Construction cost development – Germany vs US



- Significant differences in the development of prices between different materials and labour.
- Depending on the damage, labour or material may be the main driver of loss
- Loss ratio has a significant impact on insured losses as destroyed buildings need to be built according to today's regulations
- Lack of material increases time element losses (BI/ALE)

SFD = Single Family Dwelling
Sources: Germany: Statistisches Bundesamt (destatis.de), US: Construction Price Indexes (census.gov)

Inflation is considered on individual program level to reflect cedent-specific approaches in exposure valuation

Consideration of provided exposure data

Vintage of data

Inflation/ Increased reconstruction costs considered

Growth and inflation often difficult to separate

Whenever possible consideration of amount of risks and TIV development

Consideration of future effects

Underwriting estimates growth excluding inflation

Pricing unit to add inflation forecast by country

Combination of future growth (program-specific) and country-specific inflation to scale TIV to mid-term of R/I contract

Add future inflation to cover underestimated inflation effects for the past year

Example: How we deal with inflation during renewal (pricing and aggregates)

Final factor: 1.06 * 1.03 * 1.06 = 1.16 = 16% increase

Missing previous inflation:
Inflation 2021 → 2022: 12%
minus cedent's own inflation 2021 → 2022: 6% (estimated)
12% - 6% = 6% "missing" inflation

2021 **Example** 2022

TIV[1)] +8%

#risks +2%

average risk increases: 8% - 2% = 6%

Pure growth assumption
2022 → 2023 by underwriting: 3%

6% **future inflation**
2022 → 2023 forecast via official country-specific assumptions, not program-specific estimates

Inflation and **Growth factors** will be saved for future reporting/statistics

Current inflation levels are a global phenomenon and influence all programs

1) Total insured value

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Climate-change risks are included in modelling and pricing

2021

Development of internal tool to derive climate change-conditioned NatCat modelling catalogues from traditional cat models

Updated stress tests by adding climate change litigation risk to the previously covered segments

2019

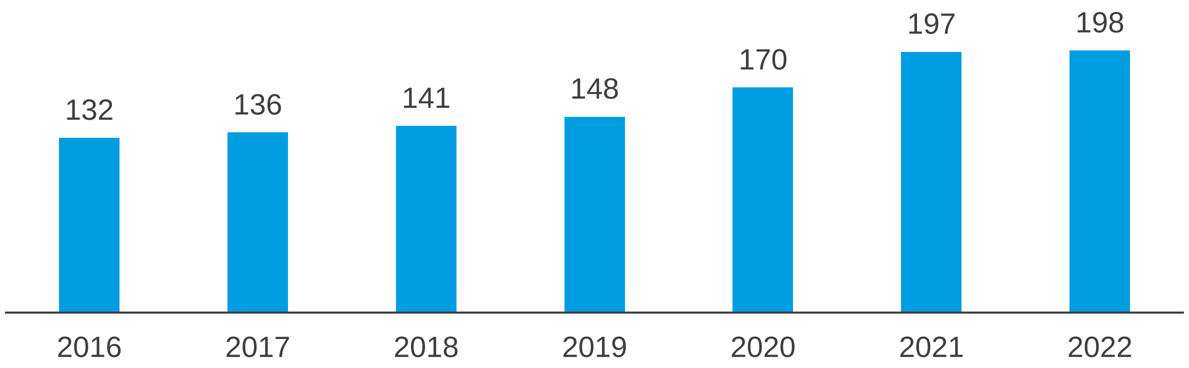
Adjustment of models based on systematic investigation of the impact of climate change on new or updated atmospheric NatCat models

Climate change stress test on Hannover Re's NatCat portfolio for USA tropical cyclone, Japan typhoon, and top 10 flood scenarios

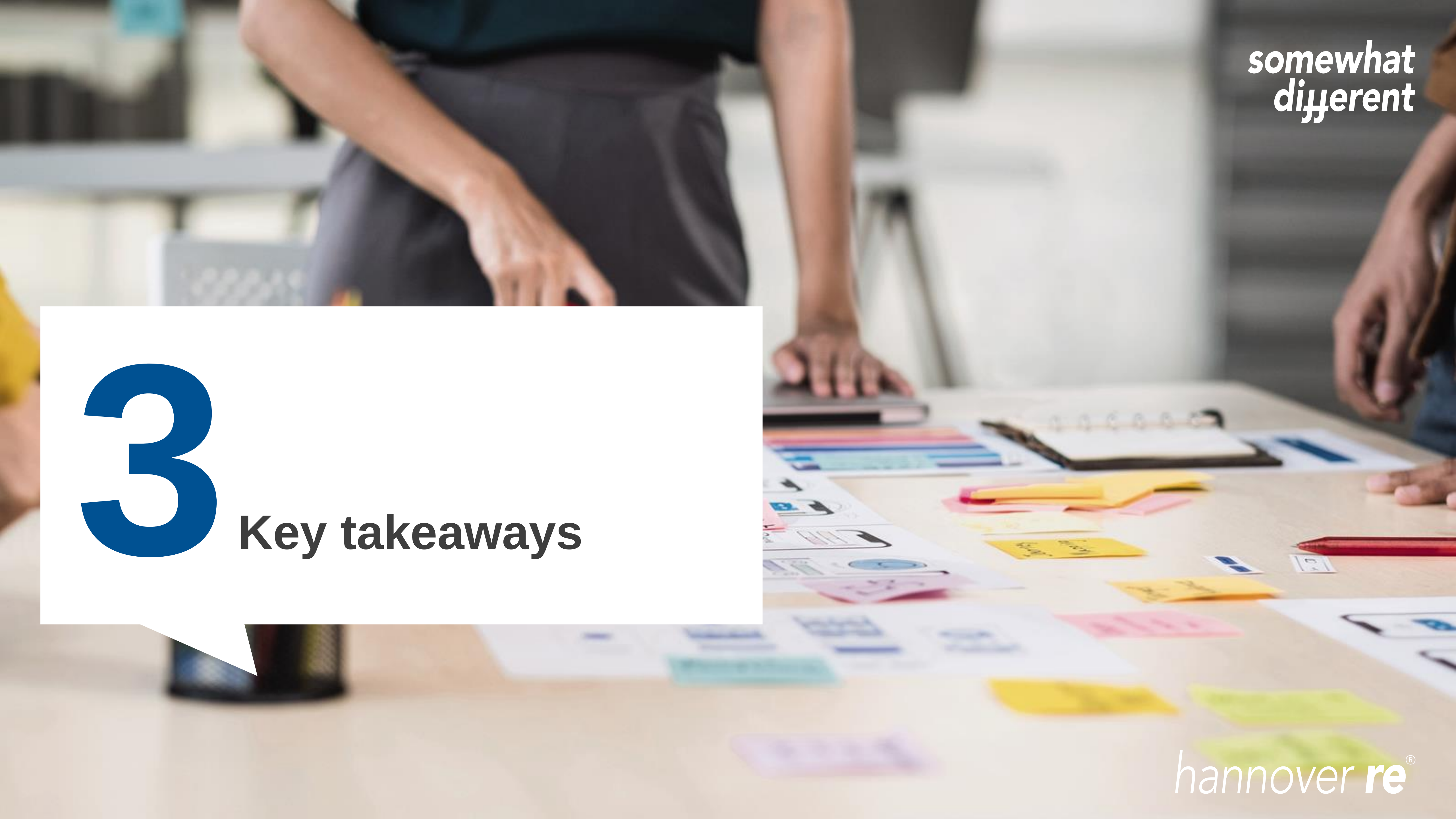
2017

Development and execution of Group-wide climate-change realistic disaster scenarios

Number of country-peril combinations included in our internal model



- All top 10 NatCat scenarios (representing 2/3 of total TVaR) are adjusted regarding climate change; more than 90% per TVaR/scenario is modelled based on validated vendor models
- Regular climate-risk stress tests
- Climate change-related adjustments are implemented consistently in pricing and accumulation control
- Vendor models adjusted for own view, which is overall more conservative



somewhat different

3 Key takeaways

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Key takeaways

Profitable growth

- Track record of diversified and profitable growth
- Increasing demand for (re-)insurance and positive pricing trends
- Increased trend towards tailor-made solutions

Pricing

- Inflation is reflected in our pricing assumptions
- Climate change is embedded in our models and reflected in pricing

Favourable outlook for further growth.

Inflation and climate change risks are manageable.

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