Insights into Property & Casualty reinsurance

Natural catastrophe protection and social inflation within US Casualty treaty business

Sven Althoff, Member of the Executive Board
23rd International Investors' Day 2020
Hannover, 21 October 2020

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Agenda

somewhat different

1 Natural catastrophe protection 2020

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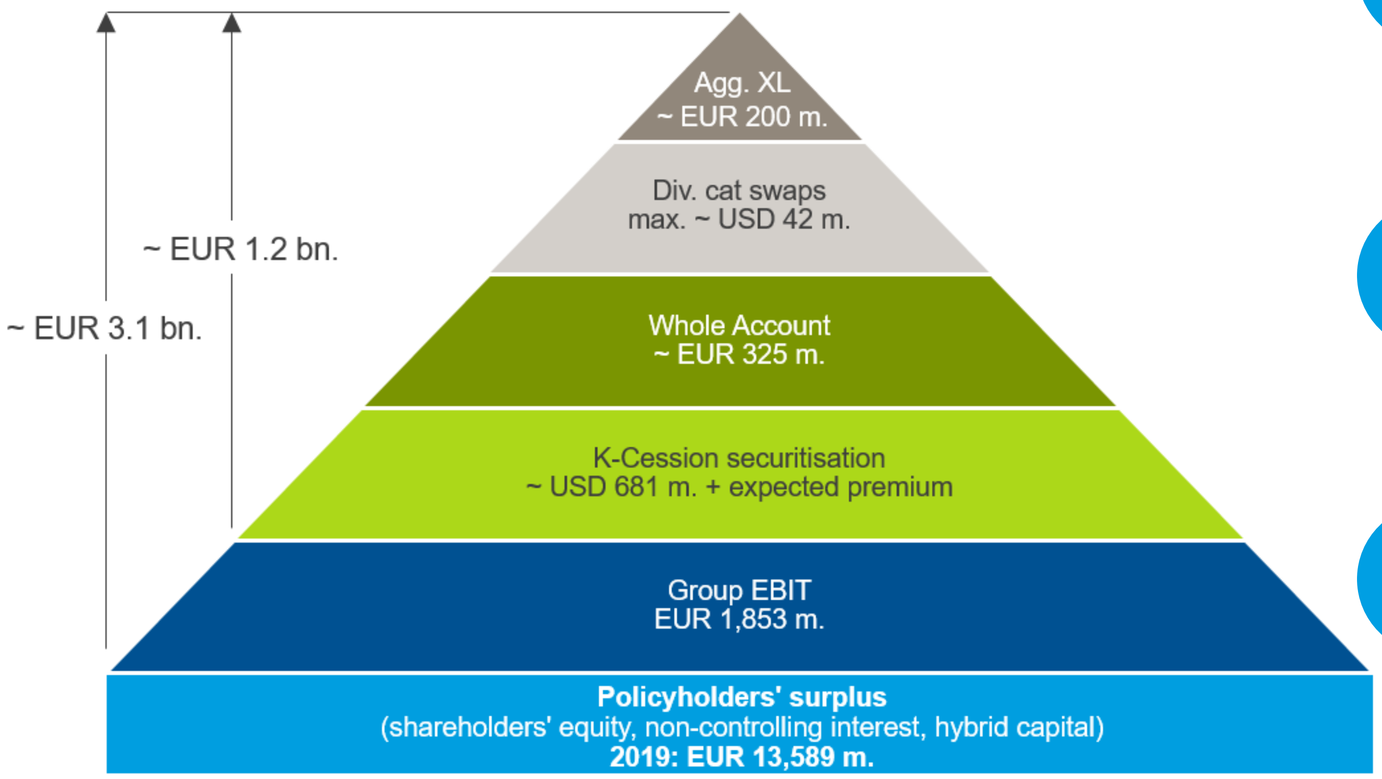
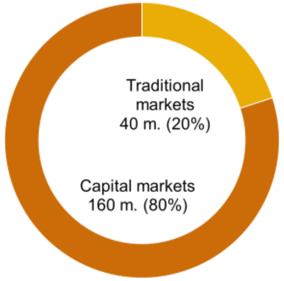
Multiple levels of protection provide more NatCat capacity ...
… and thus create additional earnings at a defined risk appetite



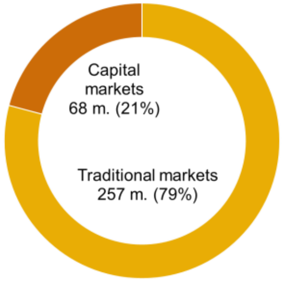
Large Loss Aggregate XL worldwide

Structure: EUR 200 m. xs 650 m.
Participants: 10
Collateralised: EUR 153 m. (77%)



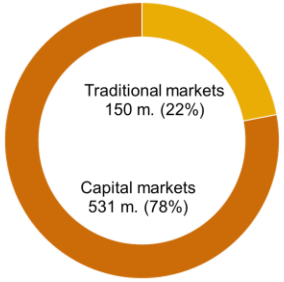
Whole Account worldwide

Structure: EUR 325 m. xs 250 m./350 m.
Participants: 59
Collateralised: EUR 81 m. (25%)



K-Quota share

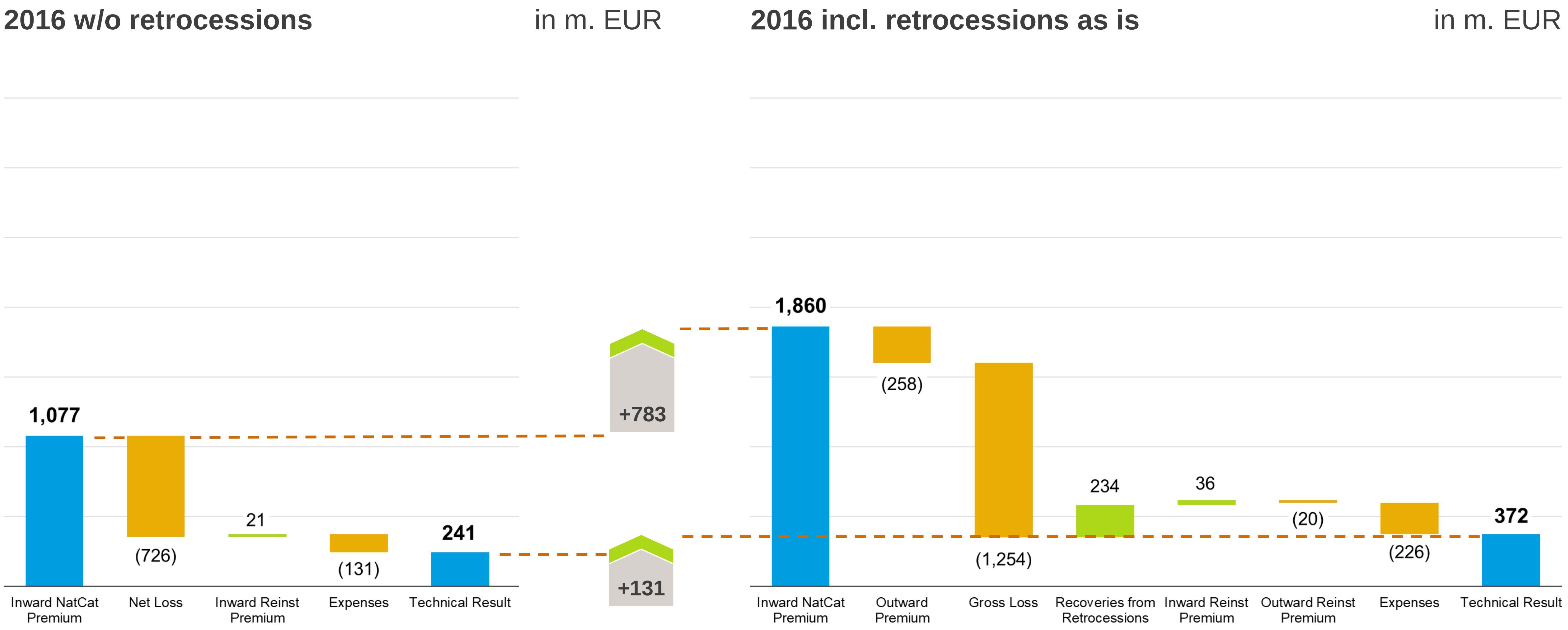
Cat XL / stop loss / specific territories
Participants: 24
Collateralised: USD 681 m. (100%)



As at March 2020

Higher GWP and optimised technical result due to retrocessions (1)

Based on modelled expected loss at same level of risk appetite



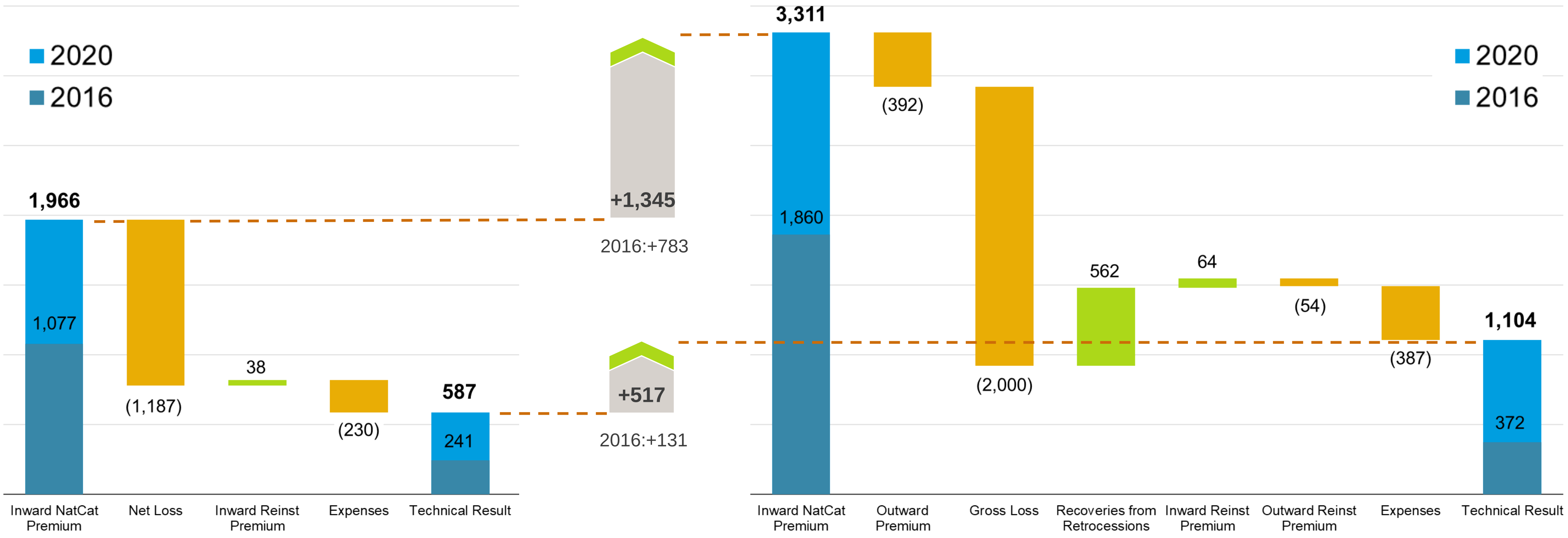
Note: calculated figures based on Hannover Re's total NatCat portfolio and retrocessions as of 1 April 2016 (premium allocated to NatCat, including Cat XL premium, expected gross/net loss including all losses below EUR 10 m.)

Higher GWP and optimised technical result due to retrocessions (2)

Based on modelled expected loss at same level of risk appetite

2020 w/o retrocessions in m. EUR

2020 incl. retrocessions as is in m. EUR



Note: calculated figures based on Hannover Re's total NatCat portfolio and retrocessions as of 1 April 2020 (premium allocated to NatCat, including Cat XL premium, expected gross/net loss including all losses below EUR 10 m.)

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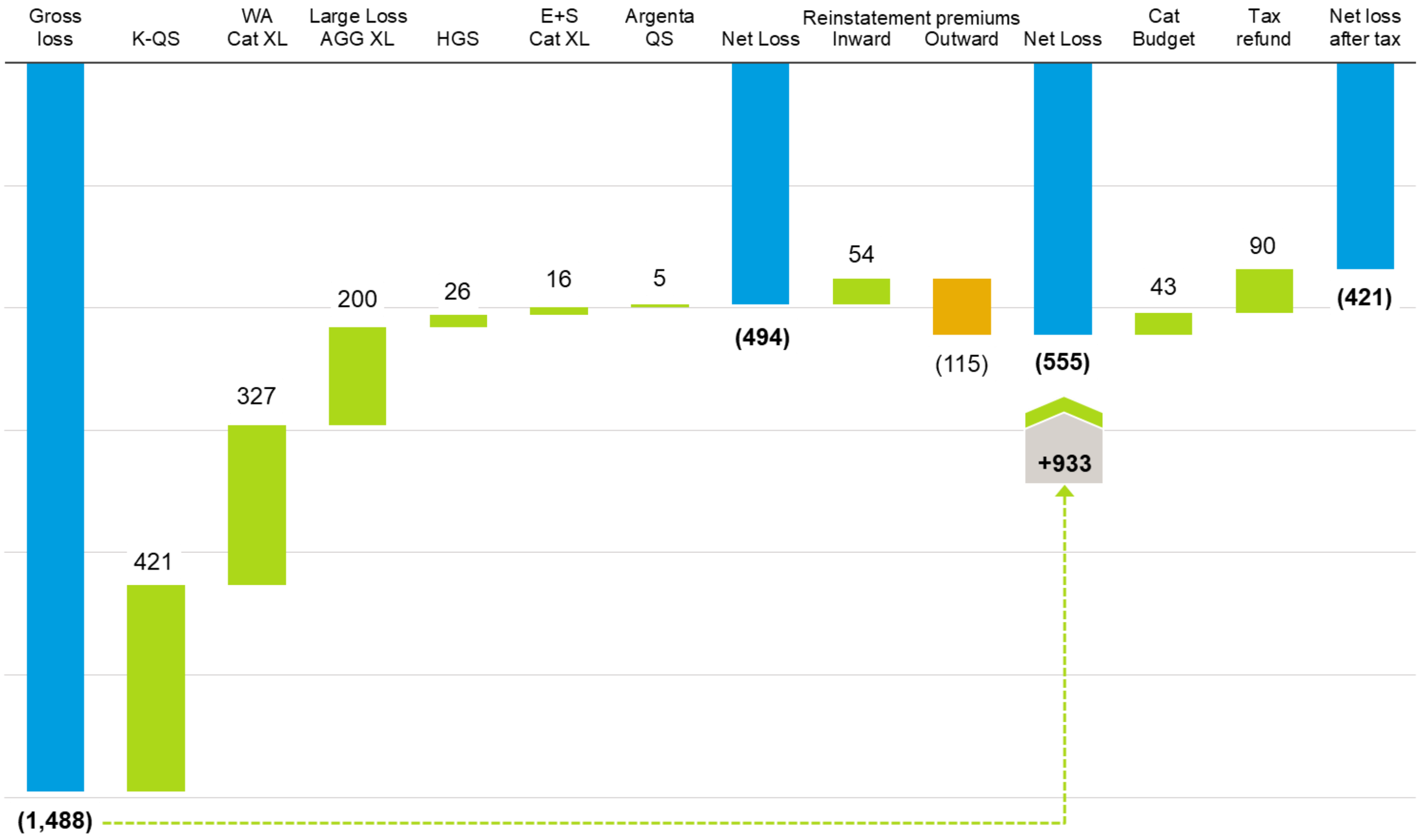
Retrocessions significantly reduce net NatCat exposures (1)

Gross / net impacts for the scenario EU winter storm

250y event (market loss of EUR 31 bn.)

in m. EUR



Retrocession structure reduces market share of loss1) from 4.8% to 1.4%

- Gross loss based on aggregates as of 1 Jan 2020, FX rates as of 31 Dec 2019
- Retrocessions as of 1 Jan 2020, Large Loss AGG XL with net occurrence limit of EUR 650 m.
- Results (incl. market loss) are based on the average of 21 events around the 250y event on the annual occurrence loss curve (min. / max. market loss: EUR 20.9 bn. / EUR 50.2 bn.)

1) Based on modelled figures. Market share of loss is the proportion of the gross loss (respectively net loss after tax) of the market loss.

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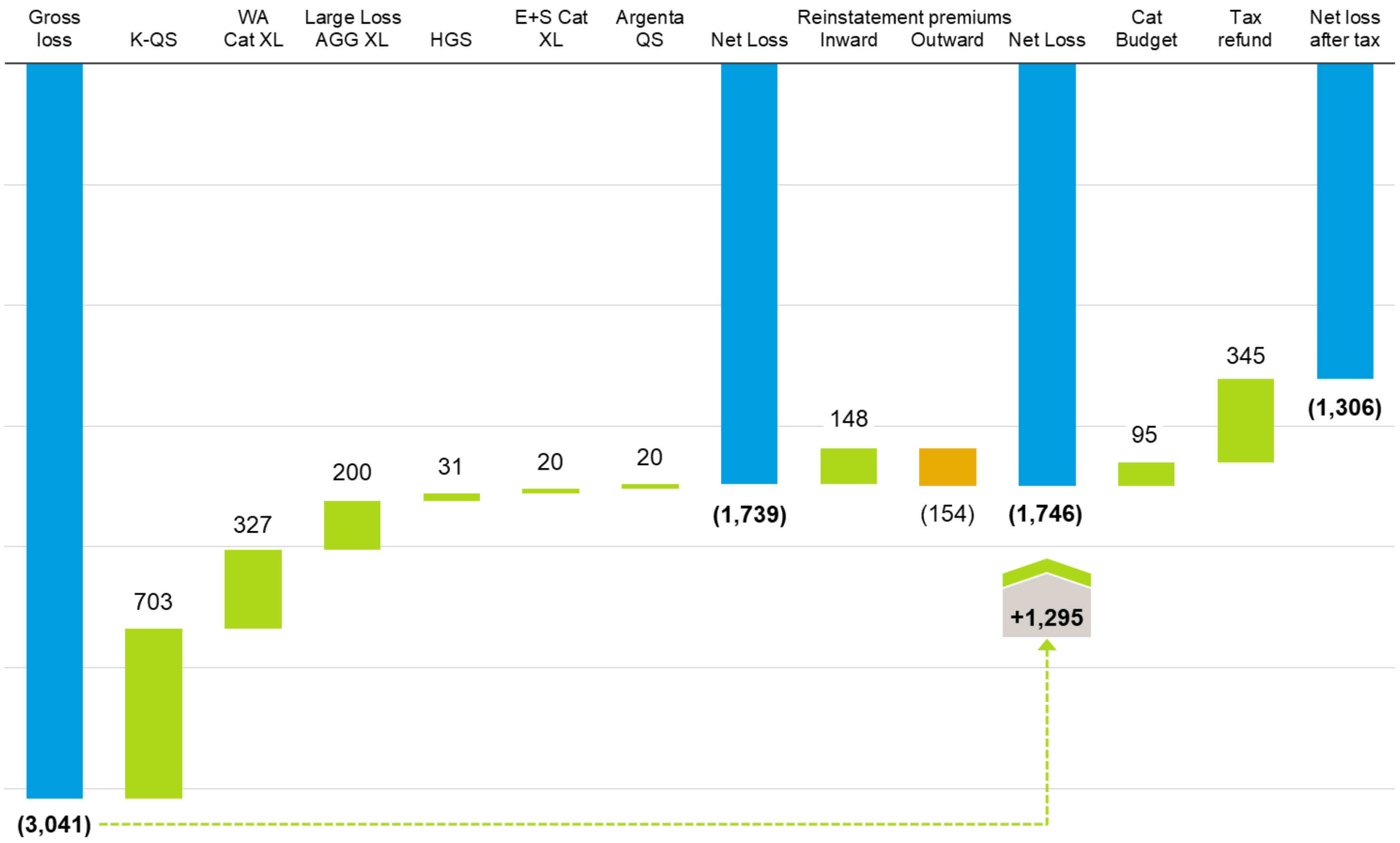
Retrocessions significantly reduce net NatCat exposures (2)

Gross / net impacts for the scenario US tropical cyclone

250y event (market loss of EUR 202 bn.)

in m. EUR



Retrocession structure reduces market share of loss[1)] from 1.5% to 0.7%

- Gross loss based on aggregates as of 1 Jan 2020, FX rates as of 31 Dec 2019
- Retrocessions as of 1 Jan 2020, Large Loss AGG XL with net occurrence limit of EUR 650 m.
- Results (incl. market loss) are based on the average of 21 events around the 250y event on the annual occurrence loss curve (min. / max. market loss: EUR 96.8 bn. / EUR 365.9 bn.)

1) Based on modelled figures. Market share of loss is the proportion of the gross loss (respectively net loss after tax) of the market loss.

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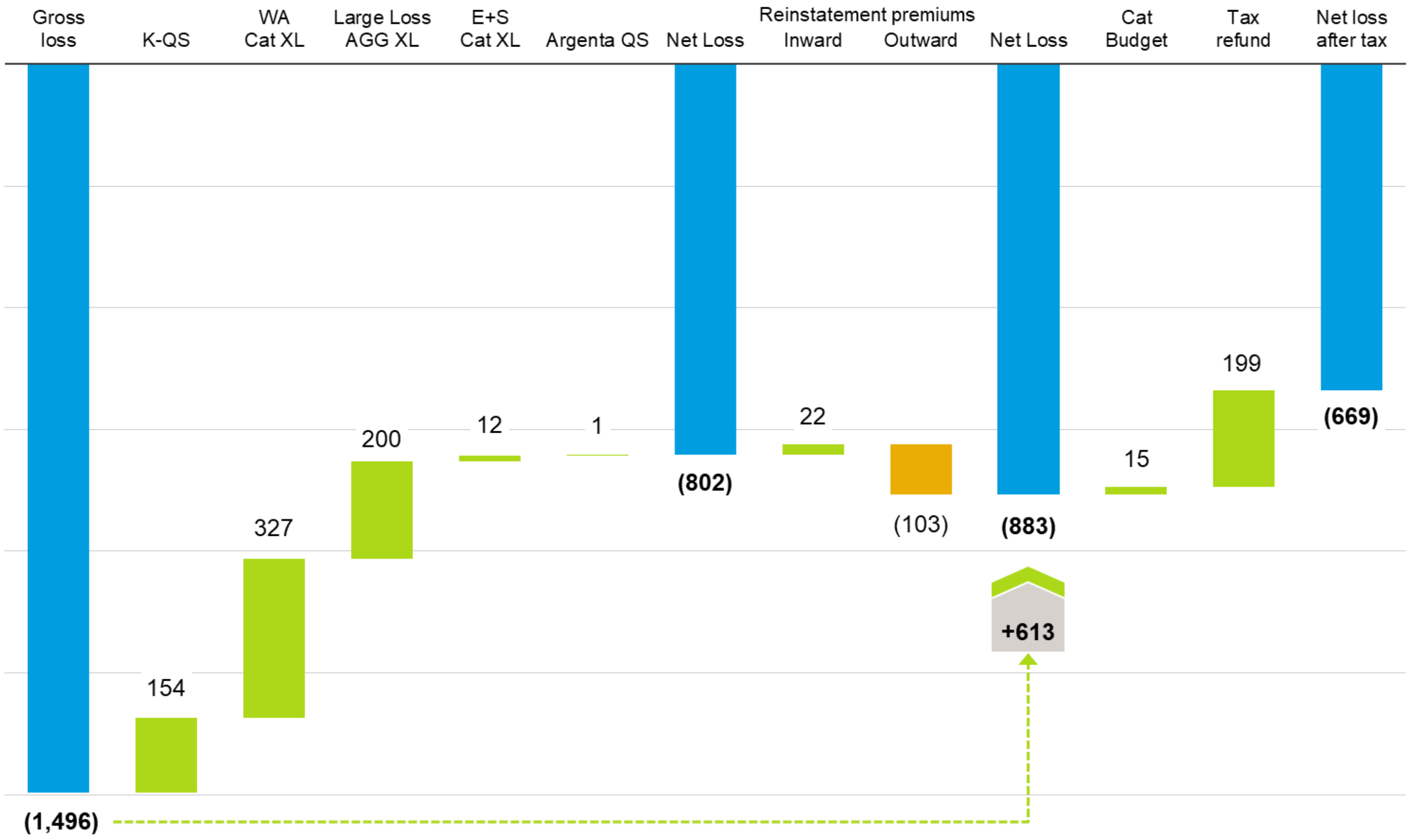
Retrocessions significantly reduce net NatCat exposures (3)

Gross / net impacts for the scenario Chile earthquake (largest non-peak scenario)

250y event (market loss of EUR 13 bn.)

in m. EUR



Retrocession structure reduces market share of loss[1)] from 11.5% to 5.1%

- Gross loss based on aggregates as of 1 Jan 2020, FX rates as of 31 Dec 2019
- Retrocessions as of 1 Jan 2020, Large Loss AGG XL with net occurrence limit of EUR 650 m.
- Results (incl. market loss) are based on the average of 21 events around the 250y event on the annual occurrence loss curve (min. / max. market loss: EUR 10.0 bn. / EUR 19.4 bn.)

1) Based on modelled figures. Market share of loss is the proportion of the gross loss (respectively net loss after tax) of the market loss.

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Strategic objectives and measures of our NatCat protections

Strategic objectives and thresholds

- Capital protection
  - Protections shall ensure that the Hannover Re Group is in a position to fully profit from hard markets, i.e. that there is sufficient capital available after a market-changing event
- Risk tolerance
  - Risk appetite based on 200y net underwriting result (max. 90% of risk budget NatCat)
- Financial threshold
  - The 50-year net loss from the largest single event shall not exceed the EBIT P&C Plan

Measures

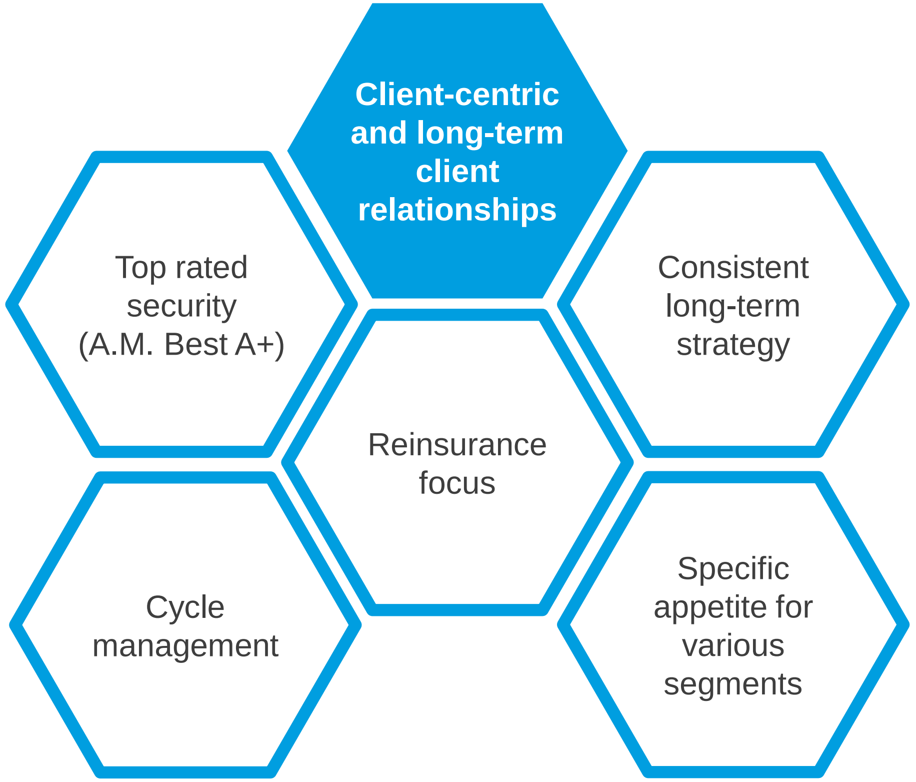
- Balance of gross earnings with ceded margins
  - Placements at adequate pricing level
- Sufficient risk transfer
  - >40% for non-proportional protections
- Independence from reinsurers
  - Overall retro involvement per reinsurer shall be limited to a maximum of EUR 200 m. (EUR 250 m. per reinsurer group)
- Independence from retrocession products
  - Access various sources of retro capacity by making use of traditional reinsurance and capital market products

All targets met in 2020

2 Social inflation within US Casualty treaty business

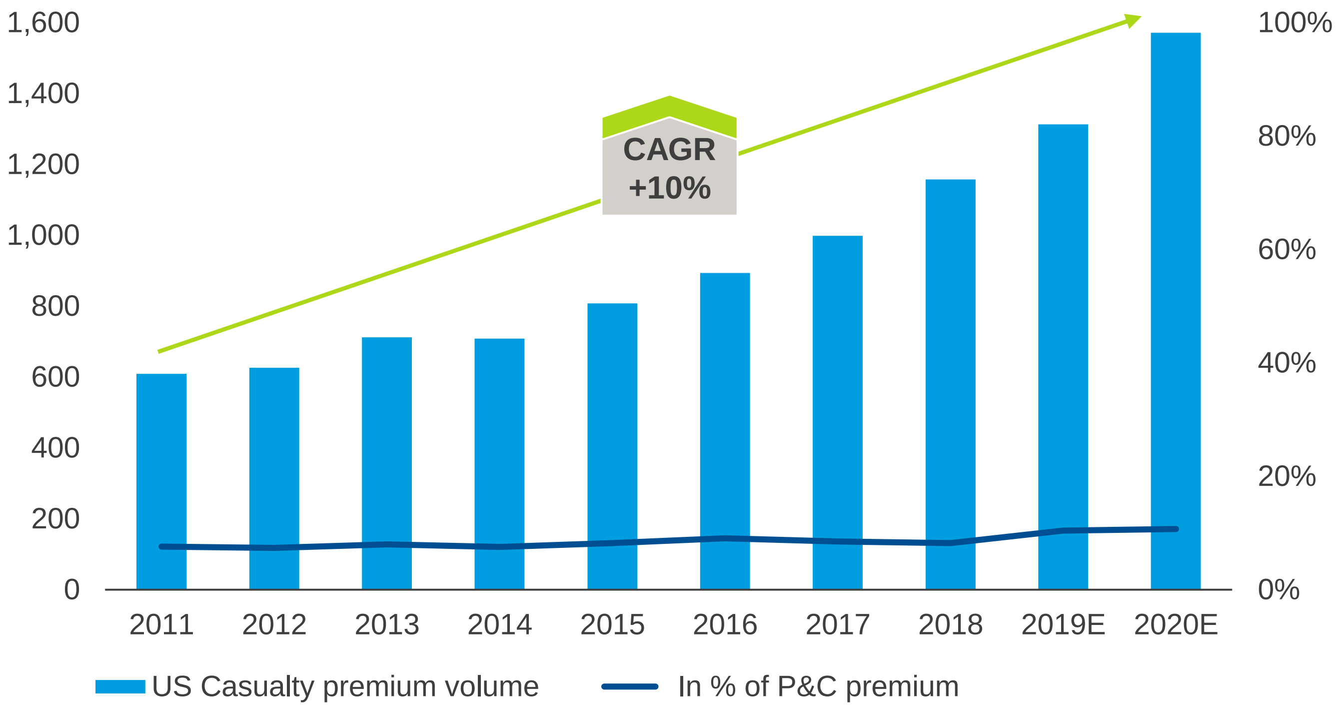
US Casualty treaty business: continuity and solid growth
We steer our portfolio with a client-centric and long-term focus

Building blocks of our US Casualty underwriting



Gross written premium by UY[1)]

in m. USD



US Casualty consistently at ~8% to 10% of total P&C premium

1) Business from US cedents only; excluding Advanced Solutions and Facultative business; underwriting years (UY) 2011 - 2018 booked IFRS figures; UY 2019 - 2020 estimated figures; as at September 2020

"New" market dynamics as a result of social inflation?
The challenges are well known to Hannover Re

- The term social inflation is often used, but a marketwide standard definition does not exist
- Social inflation is a phenomenon characterised by changed juries' opinions and thus higher verdicts by courts, mainly in the US
- Hannover Re's actuarial reinsurance pricing has always taken social inflation into account through the use of superimposed inflation assumptions

Social inflation ultimately leads to an increased number and higher liability of insurance claims

Several factors contribute to social inflation

- Litigious culture (e.g. third party litigation funding)
- Erosion in the trust of Corporate America
- More liberal treatment of claims
- Erosion of the tort reforms build into the legal system during the last century
- Populistic media coverage
- Society's desensitisation to large jury verdicts and settlements

Exemplary claims complexes (1)
Opioid Litigation

What is insured?

The insured defendants involved in opioid litigation purchased various different types of liability insurance coverage over an extended period of time.

What is the issue?

Allegations by claimants against a multitude of defendants including

- pharmaceutical manufacturers
- distributors
- retailers and drugstores

for false marketing and violating various acts and common law.

Effects on Hannover Re?

The opioid litigation constitutes an important threat to the insurance and reinsurance industry and could result in major claims. Hannover Re may have exposure to this claim complex although we have always had a limited appetite for pharmaceutical risks and for Fortune 1,000 companies.

Exemplary claims complexes (2)

Medical Malpractice

What is insured?

The insureds are healthcare professionals and/or organisations in the US. This includes hospitals, which generally tend to purchase larger limits than e.g. physicians. As such, hospital insurance programs are more likely to be targeted by the plaintiff's bar and are more susceptible for large verdicts.

What is the issue?

US medical malpractice insurance experienced a record year in terms of large court verdicts in 2019. Two verdicts for single claims, for example, exceeded the USD 100 m. mark.

Main drivers are high life care plans for individual claimants given more sophisticated medical treatment methods developed over time in combination with social inflation.

Effects on Hannover Re?

We only reinsure US medical malpractice insurance if it is written on a strict "claims-made" basis. Also, we avoid high excess layer business.

We further structure our reinsurance contracts in such a way as to safeguard against the severity potential inherent in this class.

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Exemplary claims complexes (3)

Public D&O

What is insured?

Publicly traded companies generally purchase public D&O (Directors & Officers) insurance to indemnify the company and its directors and officers for losses or defence costs arising out of alleged wrongful acts committed by the respective directors and officers.

What is the issue?

D&O insurance policies have seen a strong rise in claims frequency and severity trends in the last several years.

This also includes a rise in federal court securities fraud class action filings by investors.

Effects on Hannover Re?

Hannover Re has a stronger appetite for private and not-for-profit D&O insurance relative to public D&O and considers public D&O to be a rather cyclical business segment.

Impact of social inflation on Hannover Re is well addressed

HR has limited exposures to certain loss complexes due to our underwriting strategy

We focus on strong relationships

- Building and growing long-term relationships with loyal ceding companies and brokers leads to Hannover Re being amongst their number one choices for reinsurance capacity
- We are 100% dedicated to distribution through reinsurance brokers
- We deliver solutions that fit our clients' needs and act quickly thanks to our efficient communication
- We show continuity, transparency & predictability in our decisions because our underwriting and management staff has a very low staff turn-over rate and all underwriting is centrally located in Hannover, Germany

We avoid the following business segments

- Fortune 1000 companies
- Stand-alone commercial auto and trucking/transportation
- Non-standard auto
- Pharmaceutical business
- Life sciences business
- MGA-driven business
- Fronted business

We have a conservative underwriting policy

- We avoid writing large limits and manage our involvement via maximum line sizes of 50%
- Depending on the line of business we lead or follow the market
- We avoid large "take it or leave it" whole account treaties as we have individual strategies per line of business

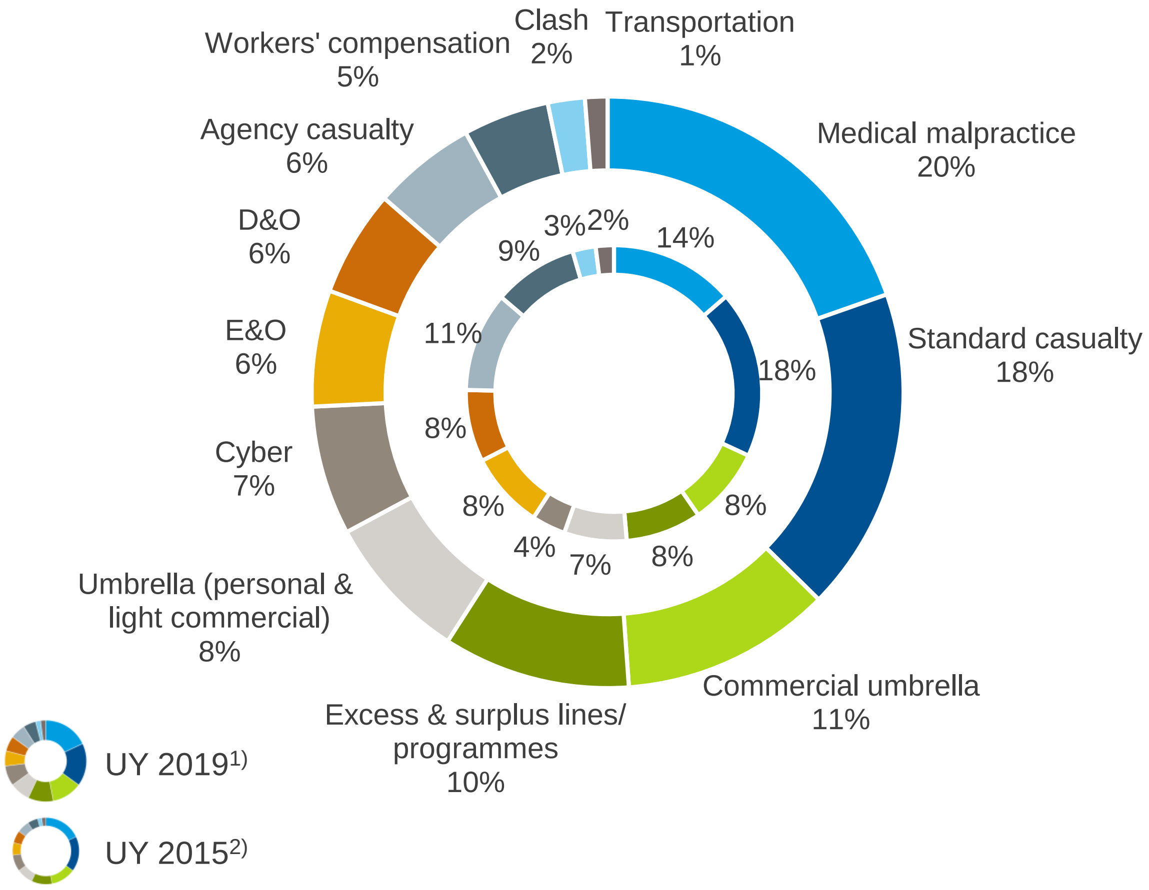
We are cautious regarding

- Start-up books and digital start-ups in long-tail lines of business
- Clients with an aggressive growth strategy in a declining market
- Cedents without a meaningful net retention

Highly diversified portfolio mitigates possible effects from social inflation

Being selective leads to stability and long-term focus ensures continuity

Lines of business in our US Casualty book



UY 2019 portfolio split: 49% proportional and 51% non-proportional

Less than 2% of total US Casualty premium from excess casualty business with Fortune 1000 companies

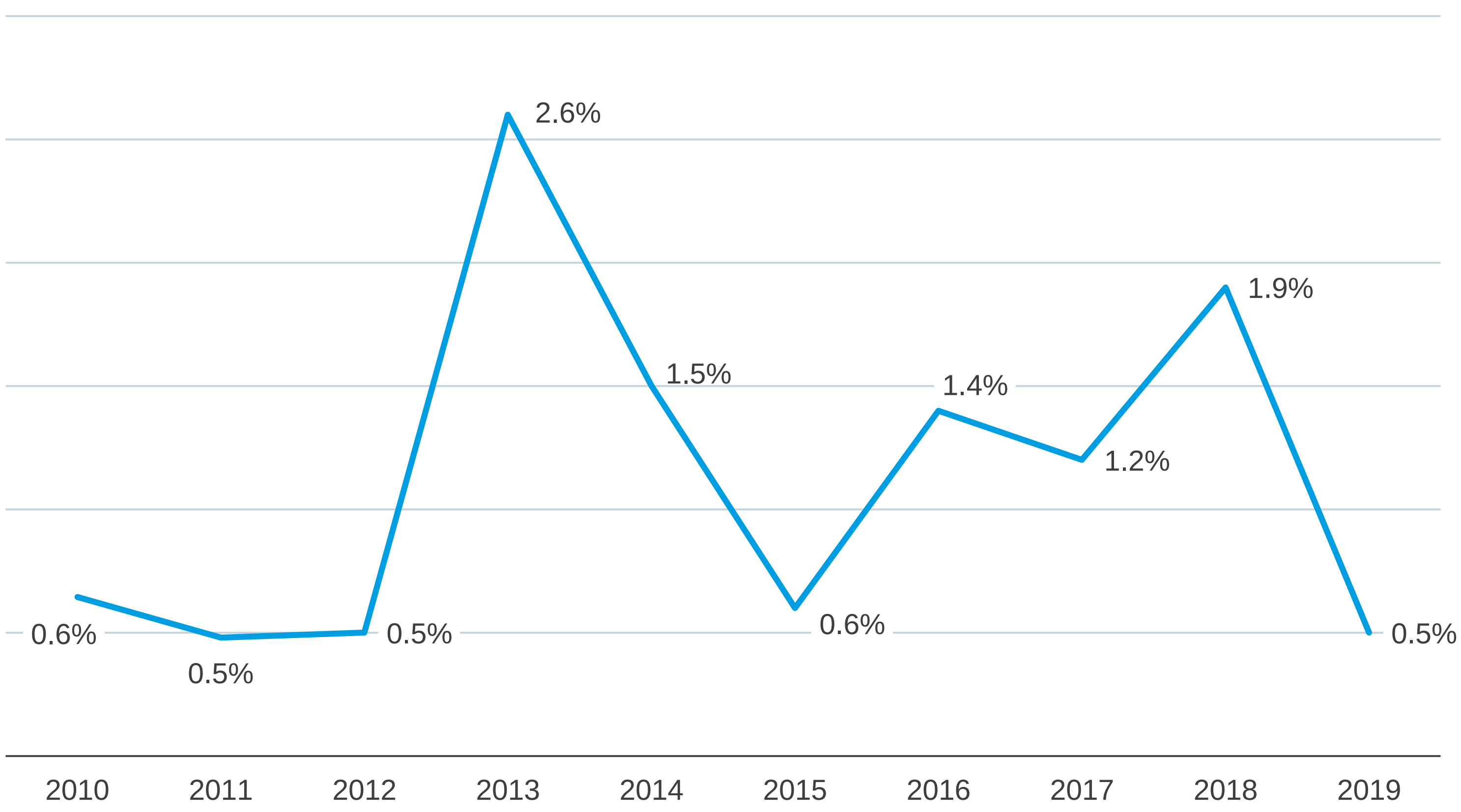
We achieve a very high diversification by line of business and by type of client

Comparison over the years: consistently diversified portfolio

1) UY 2019: estimated figures
2) UY 2015: booked IFRS figures as at September 2020

Reserving policy and reserve development
Conservative reserving enables positive actuarial run-off

Positive actuarial run-off by FY[1)]



- Total US Casualty reserves: EUR 4.5 bn. (thereof EUR 3.7 bn. derive from 2010 - 2019)
- Conservative reserving with high level of IBNR contributes well to Hannover Re’s reserve redundancies
- Social inflation is taken into account in our reserving approach, avoiding negative actuarial and financial effects

IBNR = Incurred But Not Reported
1) FY = Financial Year; based on underwriting years 2000 - 2019; basis earned premium and actuarial ULR

Outlook: Hannover Re is well positioned to benefit from market developments

Social inflation is and has been reflected within our US Casualty underwriting

Market Environment

Original rates are increasing

Important drivers:
loss activity and social inflation

Reinsurance terms and conditions are hardening

Competitive environment is generally less stable and less consistent than Hannover Re's approach

Hannover Re's positioning

- Hannover Re's very experienced team is driven by continuity, an unchanged risk appetite and underwriting discipline but there are many more opportunities that fit as a result of the current market developments
- US Casualty is a specific segment we aim to grow where the rate development supports even better profitability and is in line with our margin requirements
- In order to manage the volatility of the results, our cautious underwriting approach has proven to be of paramount importance

The risk of rising social inflation is obvious, but well considered in our underwriting strategy and pricing approach

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3 Key take-aways

Key take-aways

- We use retrocessions to significantly reduce our NatCat net exposure
- At the same time we create additional earnings due to increased gross capacity at the defined risk appetite

- The risk of rising social inflation is obvious, but well considered in our underwriting strategy and pricing approach
- We benefit from an experienced, stable team with continuity in risk appetite and underwriting discipline
- We grow only where the rate development supports even better profitability

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