

Howden Tiger



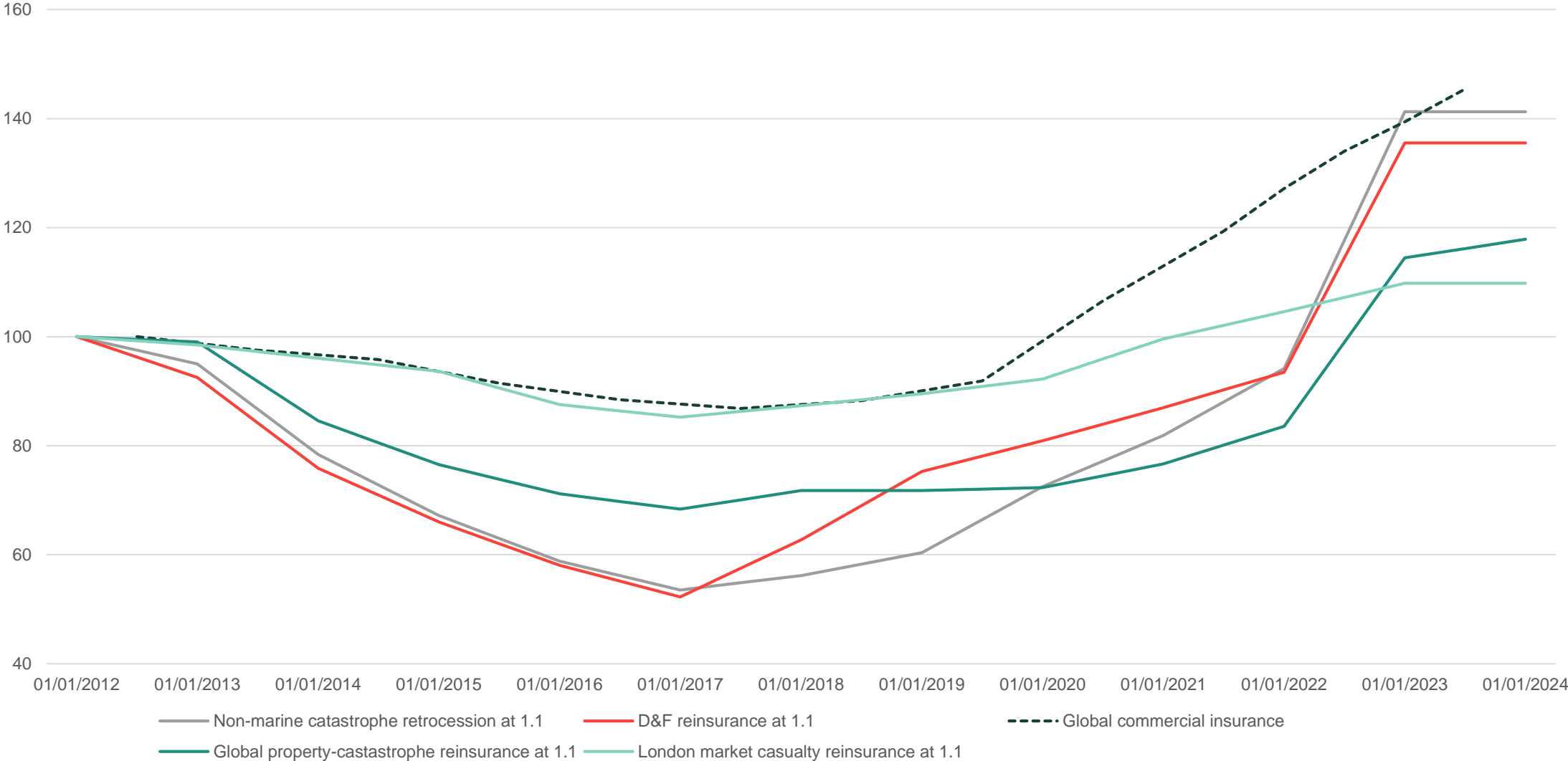
HOWDEN



A New World

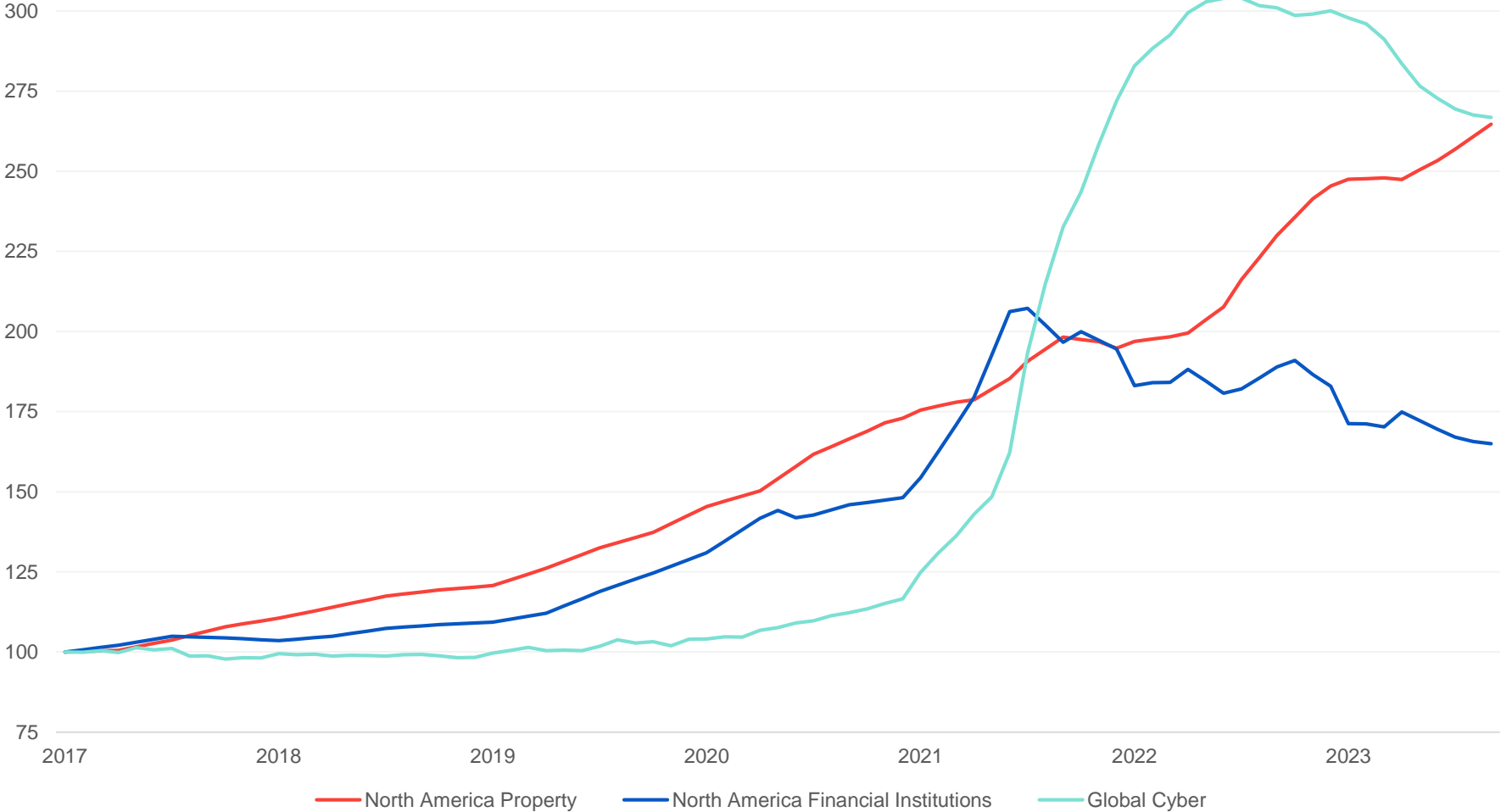
The (re)insurance sector at 1 January 2024

Pricing indices for primary, reinsurance and retrocession markets



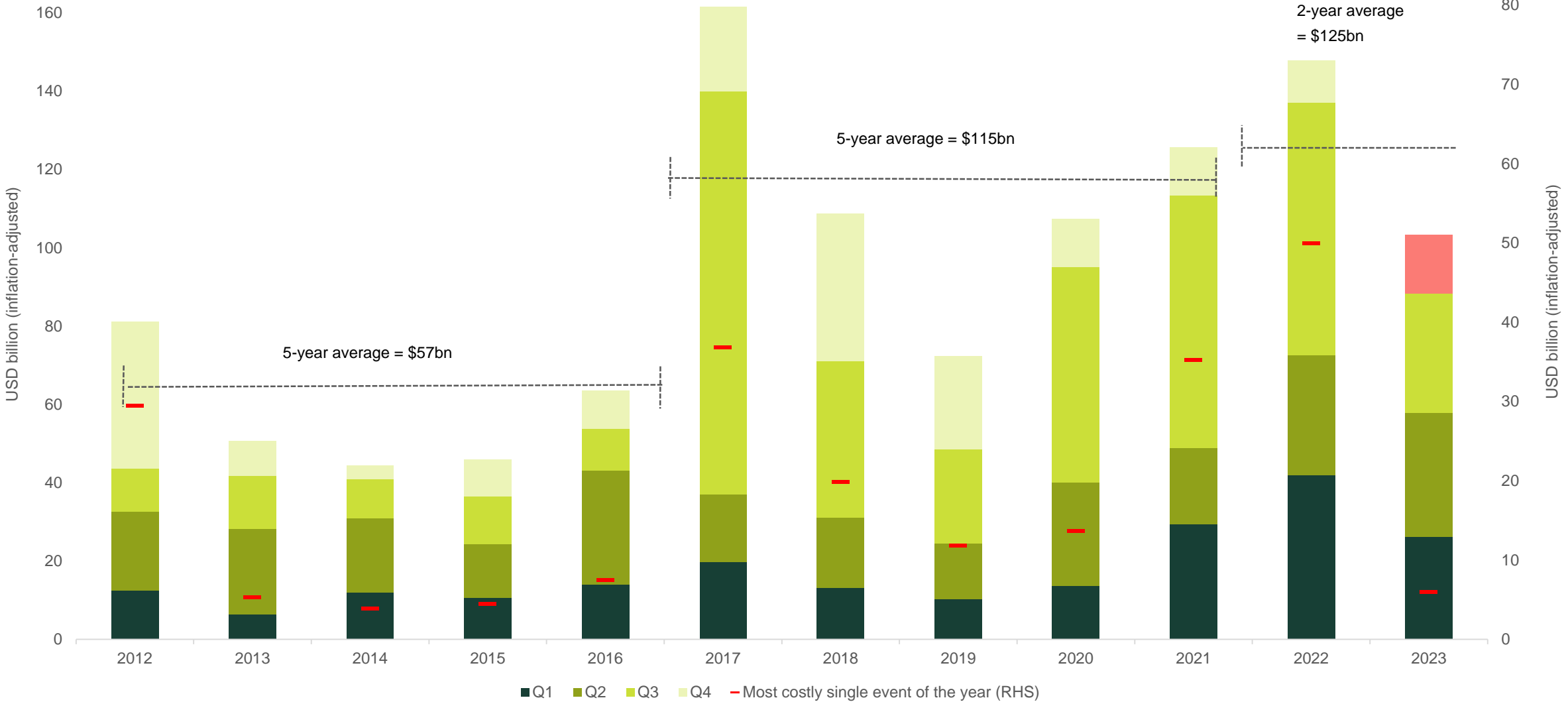
Source: NOVA

Commercial insurance pricing bifurcation



Source: NOVA

Global insured cat losses by quarter vs largest single annual loss



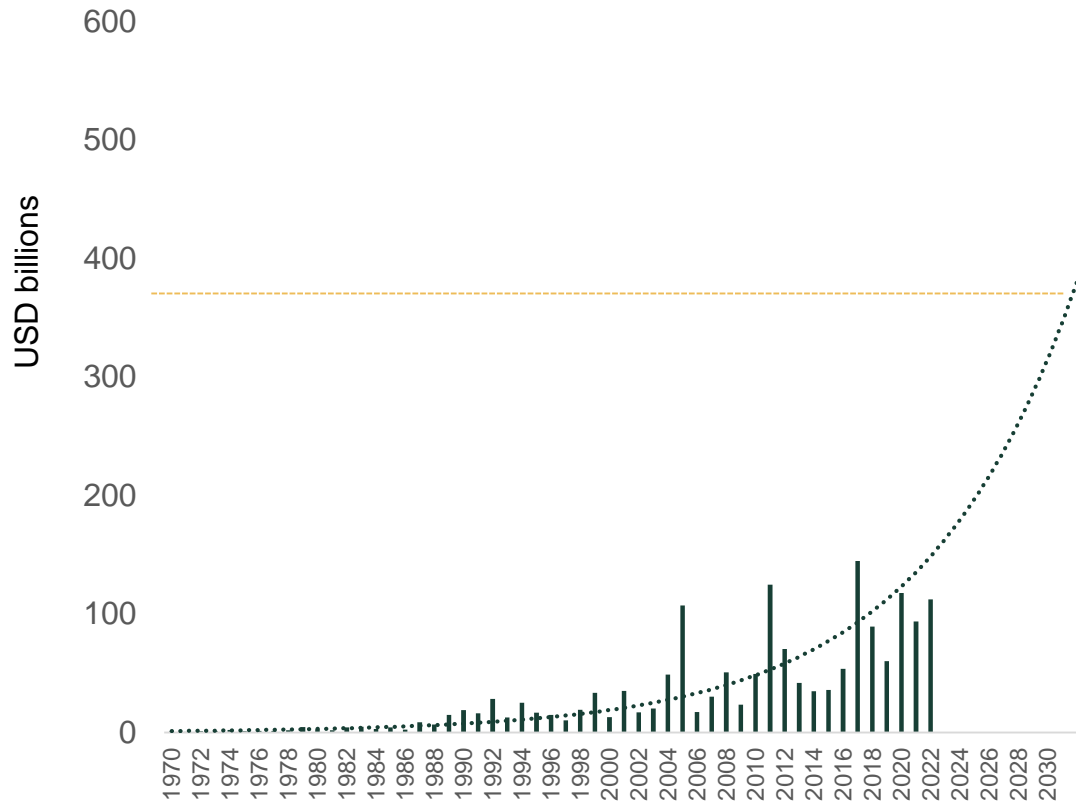
Source: NOVA

Higher cat losses – projected insured cat losses (tail risk)

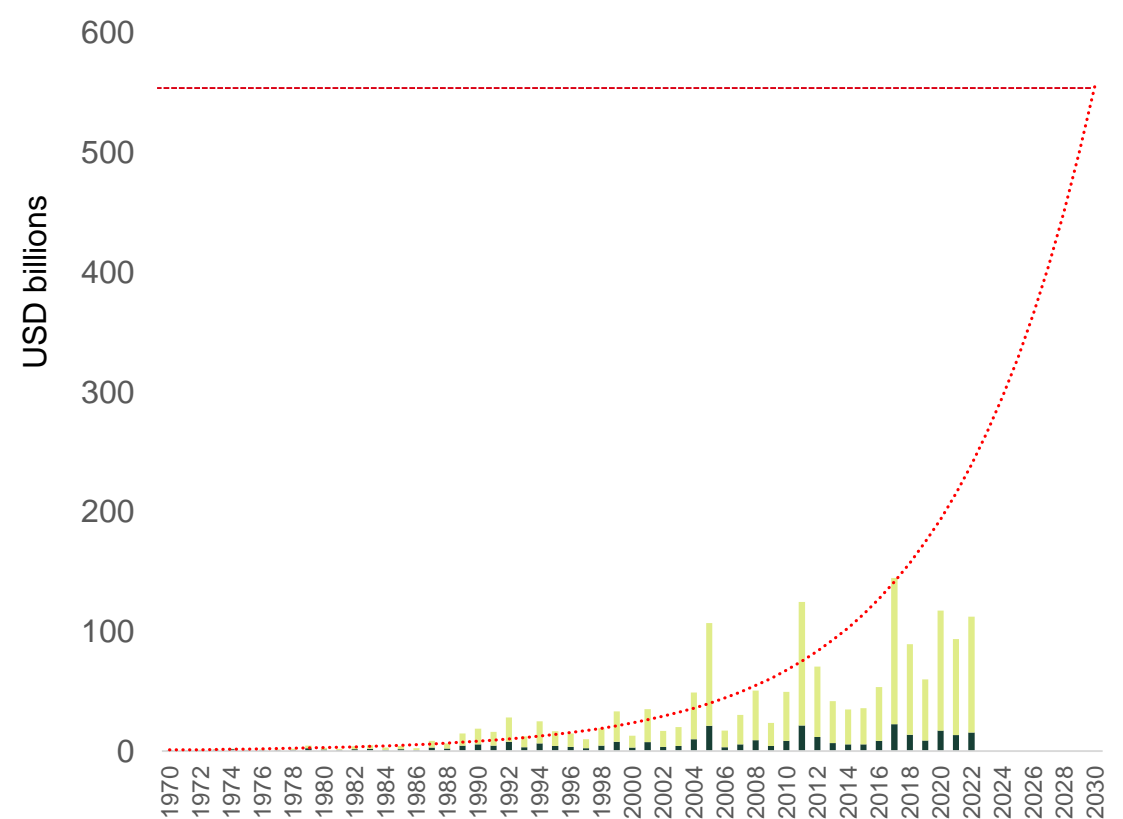


Are we on track for a ½ trillion dollar loss year?

Insured catastrophe losses in 2022 dollars with exponential projection



Insured catastrophe losses in 2022 dollars with peak loss year curve fitting

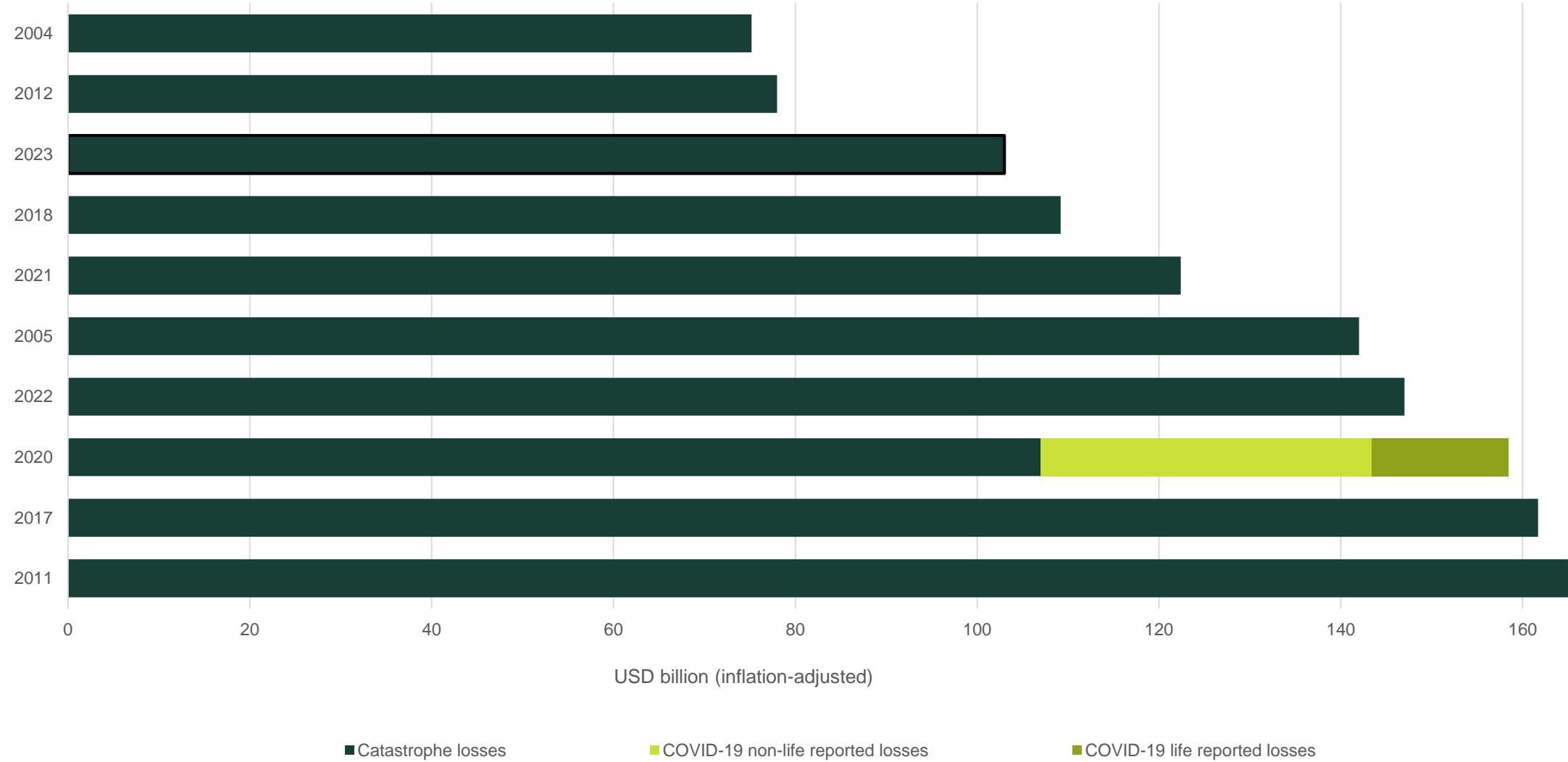


- Proportion of insured losses attributable to risk factors
- Proportion of insured losses attributable to inflation
- ⋯ Losses projected exponentially per trend (2022 dollars)

Source: Nova

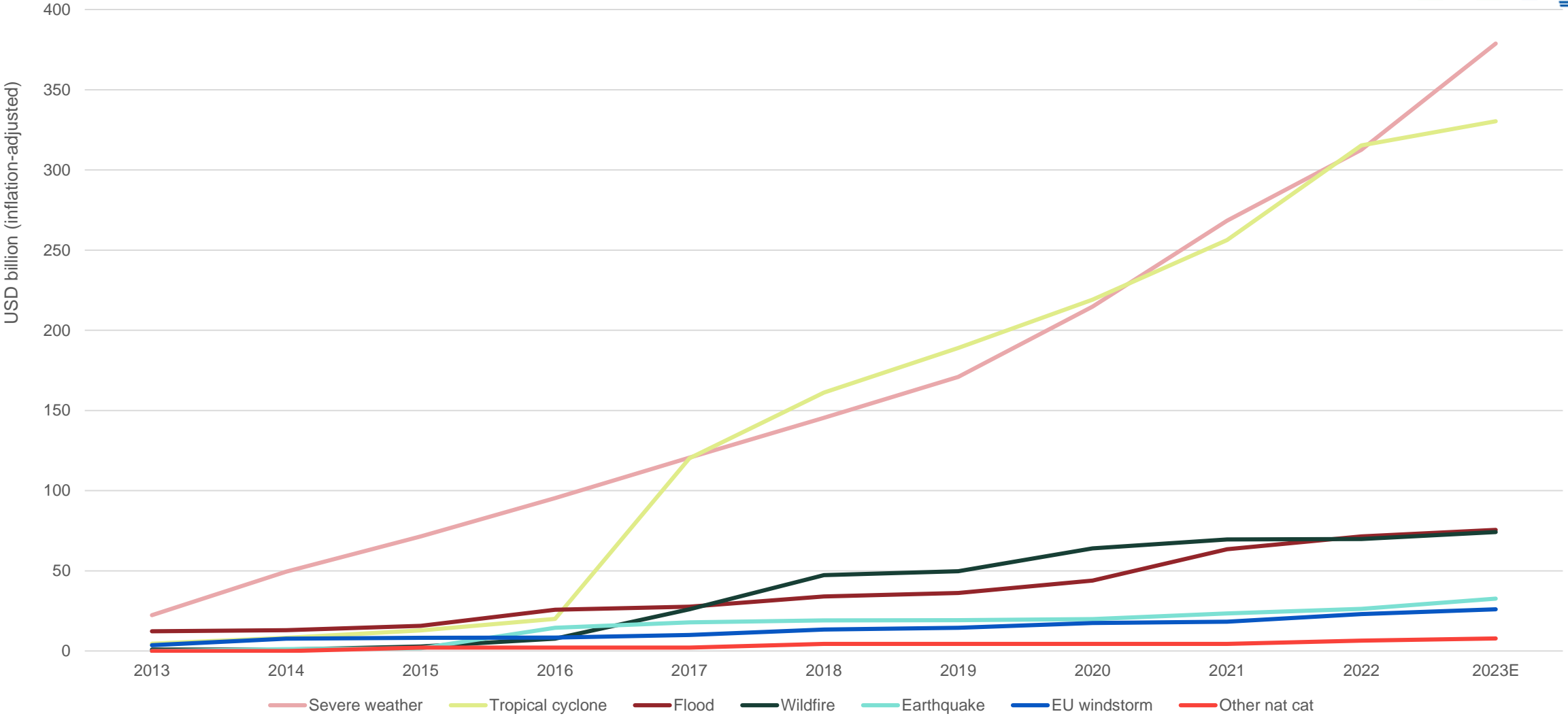


Top 10 largest loss years on record



Source: NOVA, Swiss Re, Insurance Information Institute
Note: does not include NFIP losses

Cumulative global insured natural catastrophe losses by peril



Source: NOVA

Climate change: potential effect on recent loss volatility



- More La Niña cycles to come?
- More pronounced ENSO cycles?

El Niño vs La Niña counts and probabilities

Metric	El Niño	La Niña
Count of events (1950-2022)	26	25
Average duration of event (months)	8.0	9.1
Number of Years with an event (1950-2022)	44	40
Probability of an event in a year (1950-2022)	60%	55%
Number of Years with an event (2010-2022)	6	9
Probability of an event in a year (2010-2022)	46%	69%
2 consecutive NH winters / SH summers	6	9
3 consecutive NH winters / SH summers	1	2

The loss impact of climate-related events has increased from 2017 onwards after a period of relatively benign activity

2010 - 2016 had significantly below average annual expected weather-related loss activity

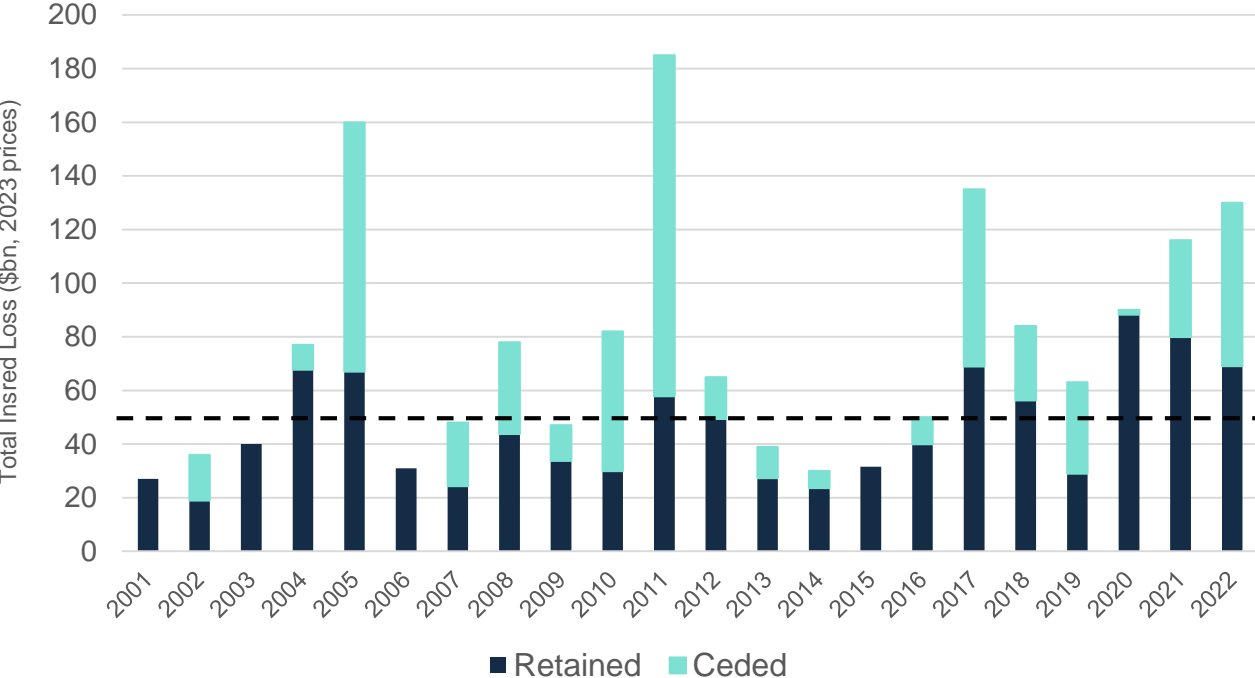
The occurrence of La Niña increased from 55% to 69% (long-term averages) between 2010 and 2022

Increased insurer retentions; reduced aggregate reinsurance cover



Insurers are bearing a greater share of natural catastrophe losses

Global insured losses split by cedent and reinsurer share - inflated to 2023 USD



Cedents retained around 54% of nat-cat losses over the 2001-2022 period

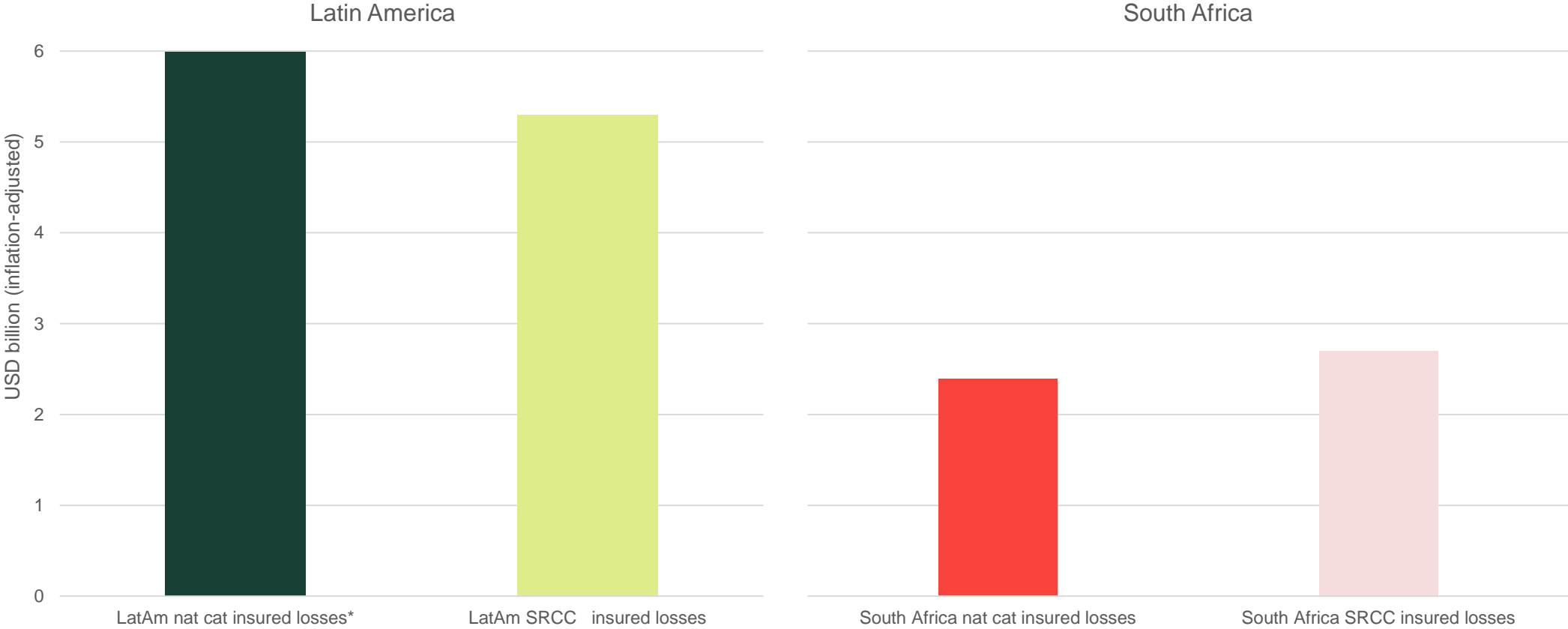
At 2023 retention levels, cedents would have absorbed 64% of the same nat-cat losses in 2001-2022

Higher natural catastrophe driven earnings volatility for cedents will result

Average 2001-2022 reinsurer / cedant share = 54%

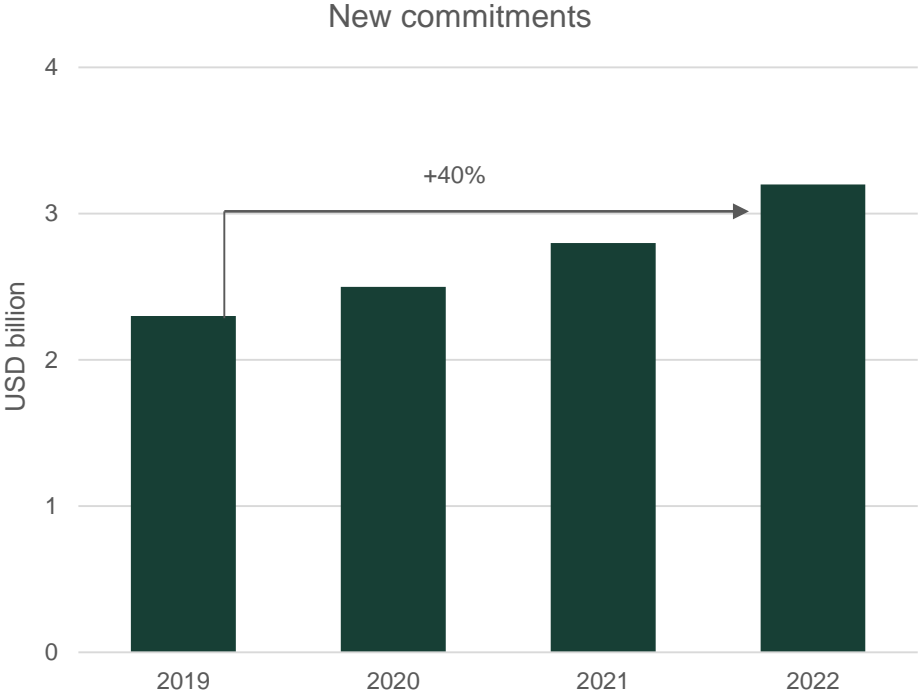
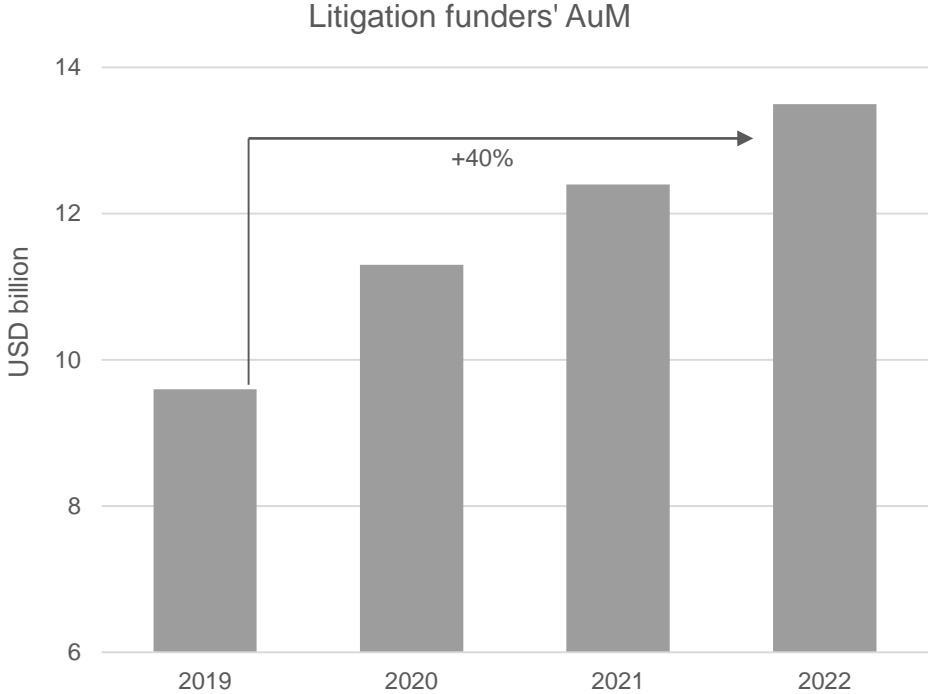
Source: NOVA, TigerEye

Natural cat insured losses vs SRCC insured losses 2015 – 1H2023



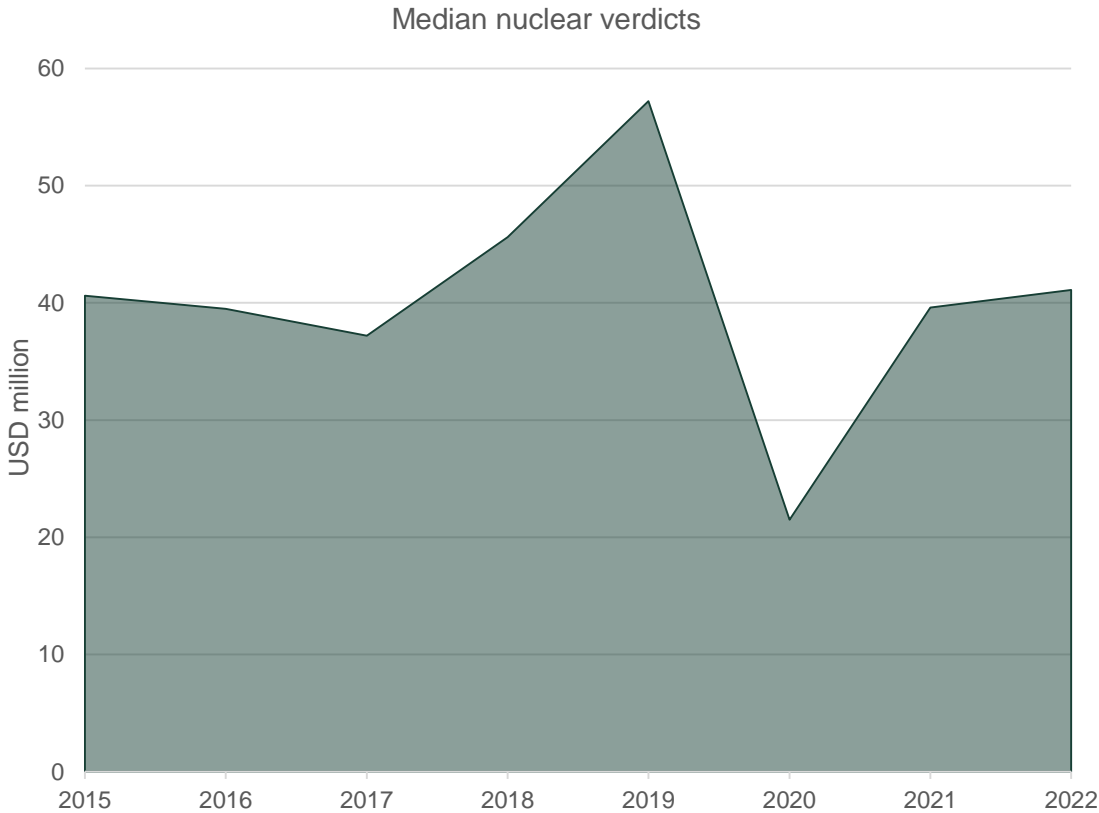
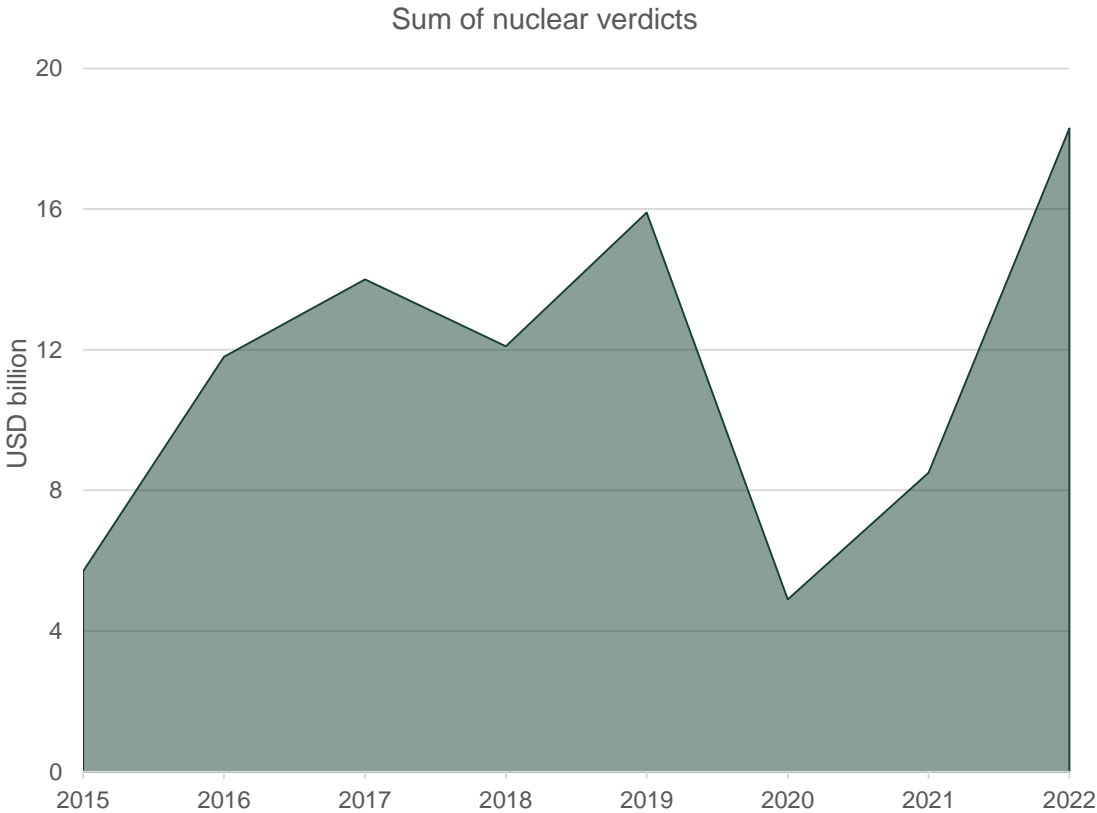
Source: NOVA
 Note: excludes drought

Growth of US litigation funding



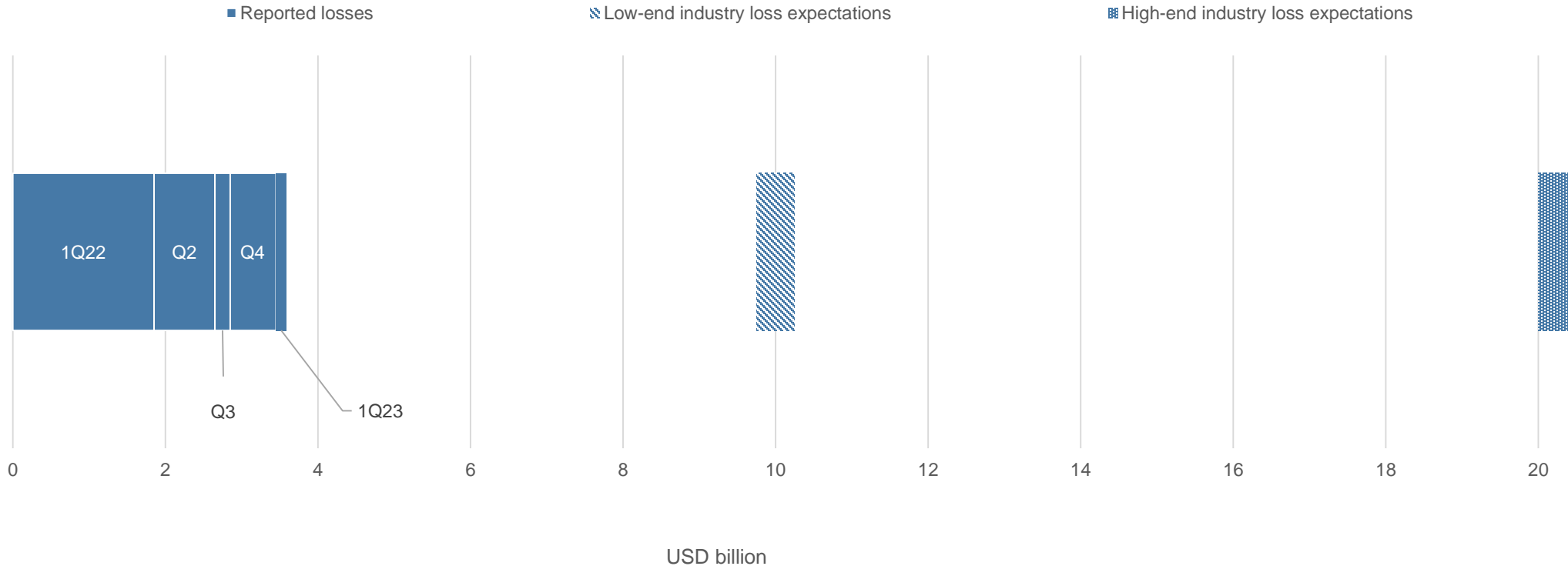
Source: Howden, Westfleet Advisers

US nuclear verdicts



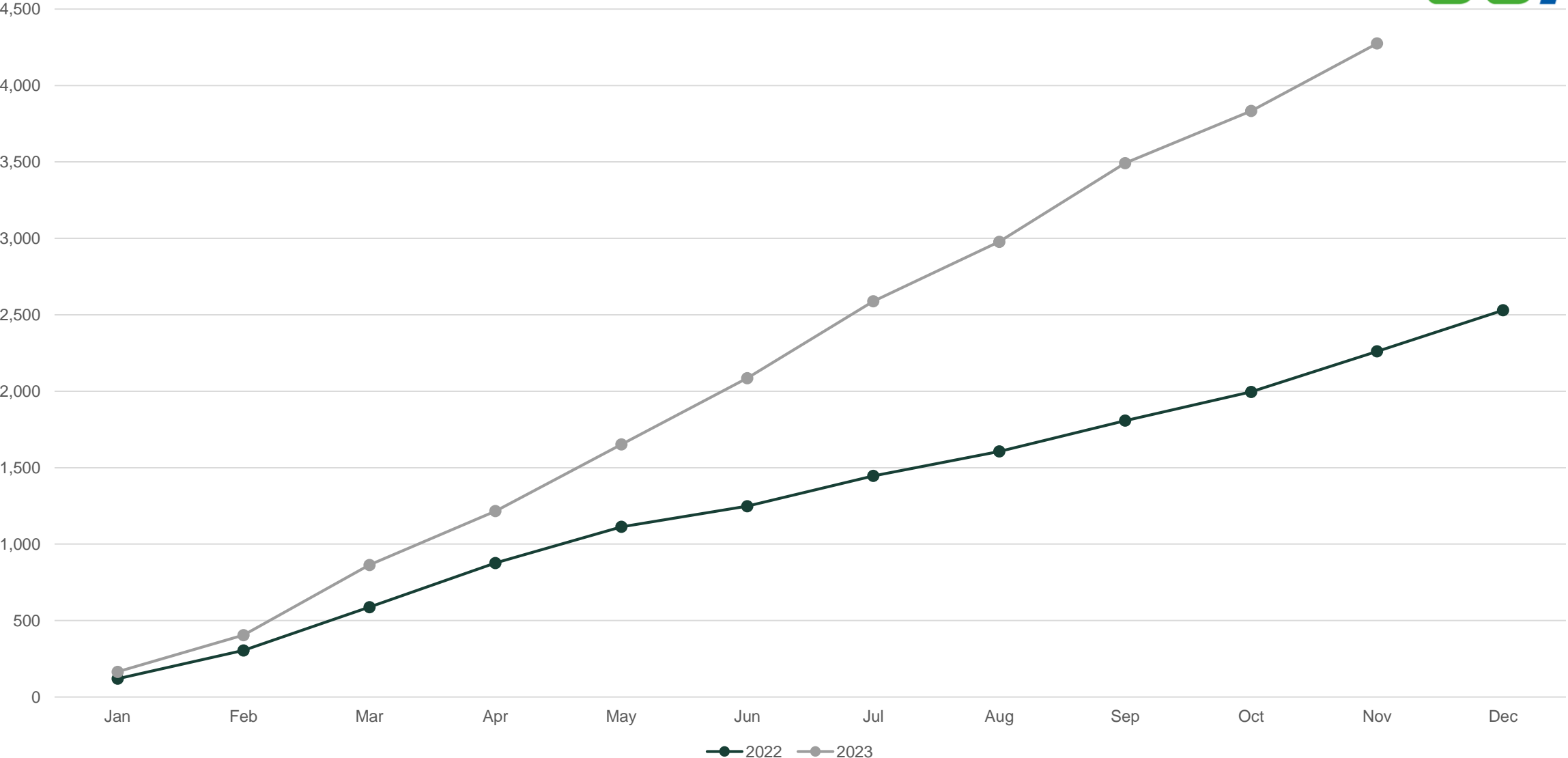
Source: Howden, Marathon Strategies

Reported Ukraine insured losses vs ultimate industry estimates



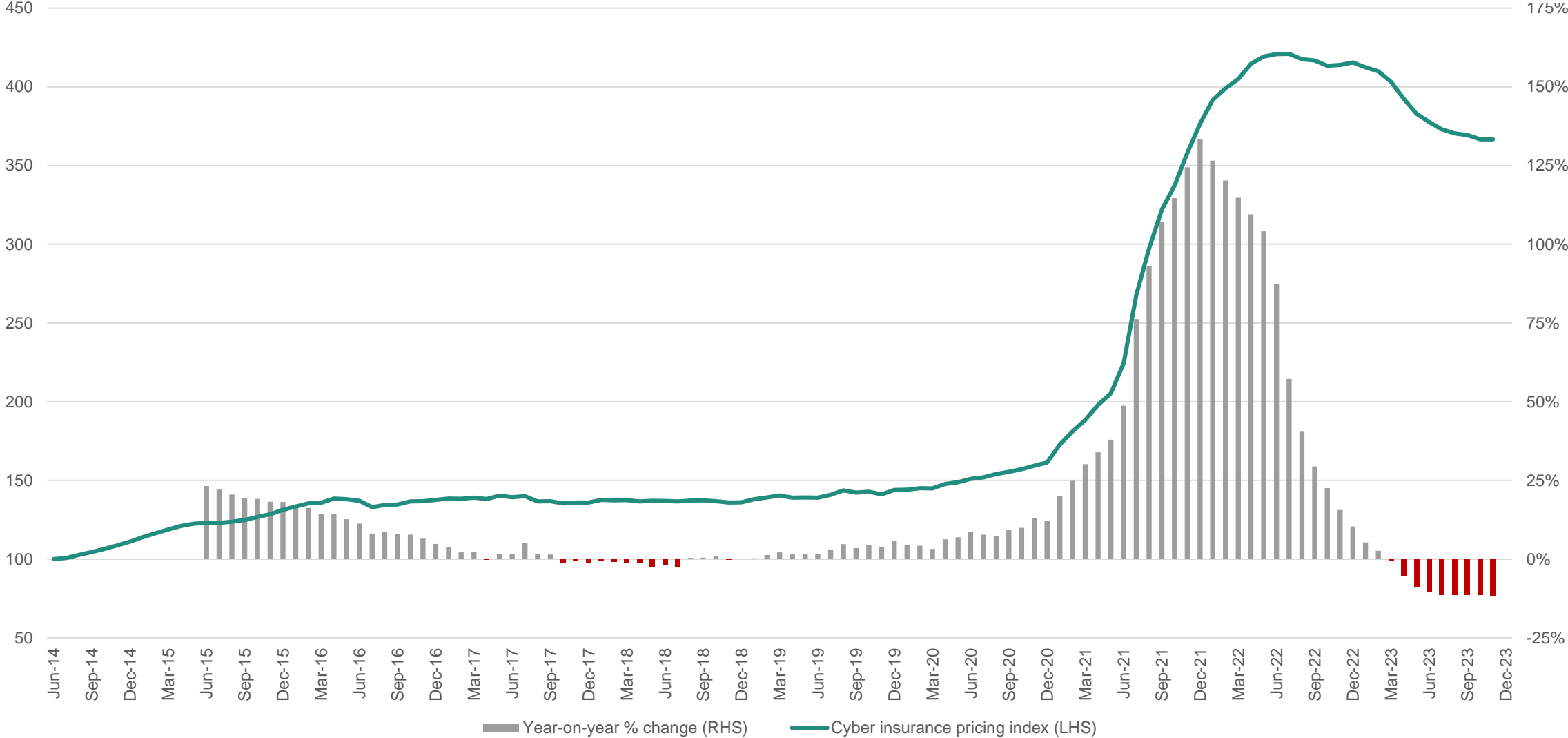
Source: Howden, company reports

The hackers are back – cumulative global ransomware activity



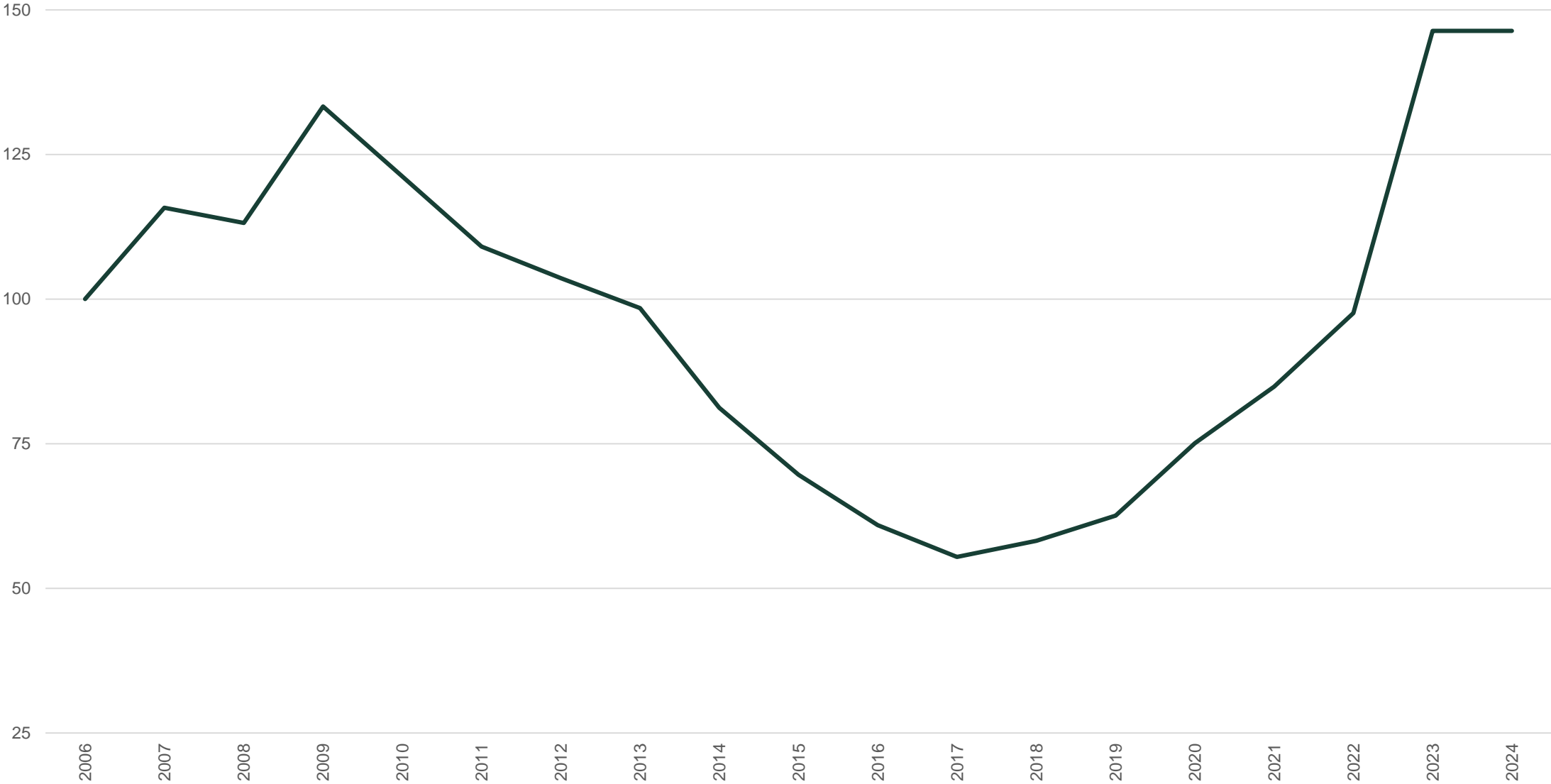
Source: Howden, NCC Group

Global cyber insurance pricing index



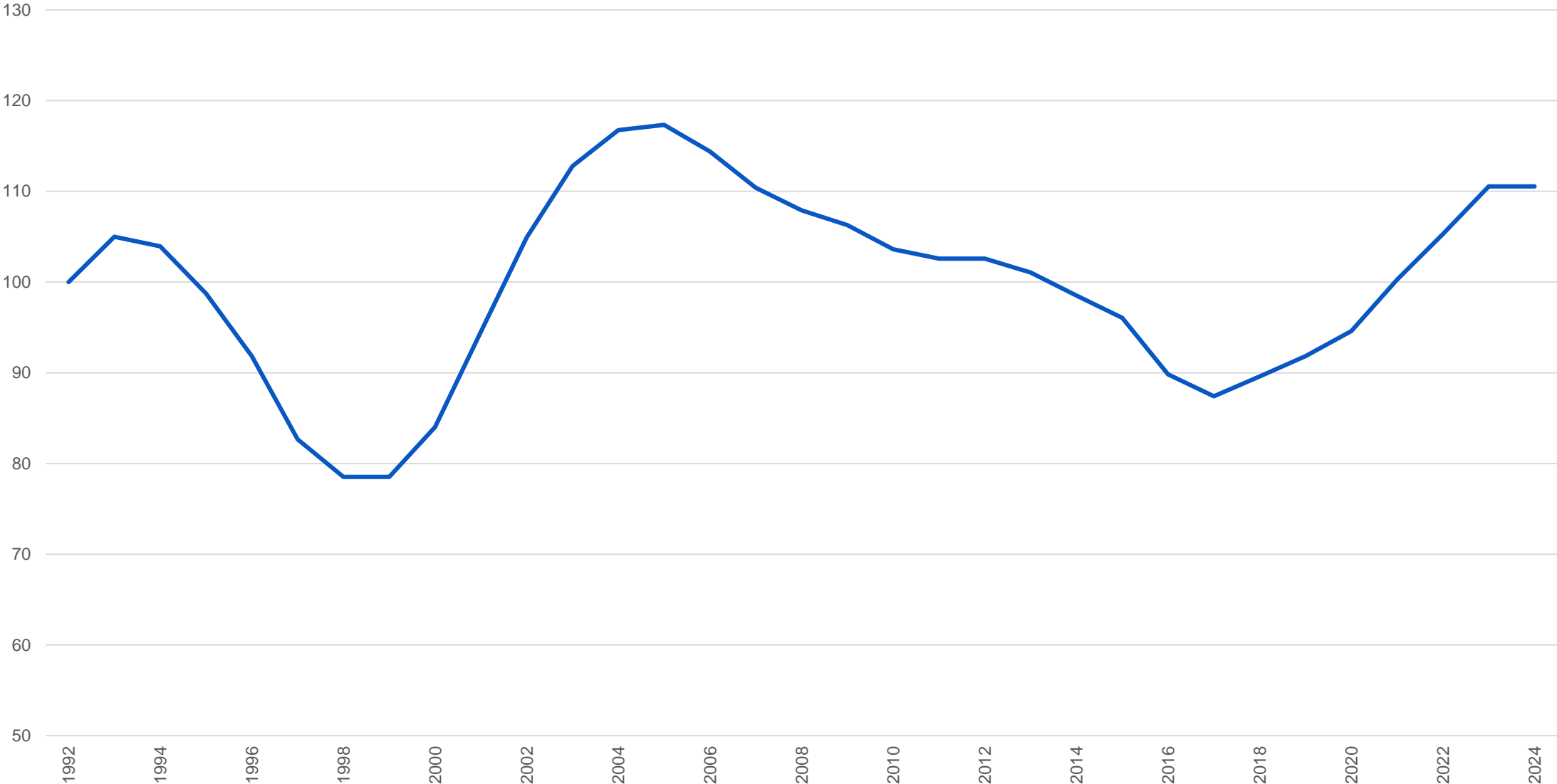
Source: NOVA

Risk-adjusted non-marine retro cat rate-on-line index



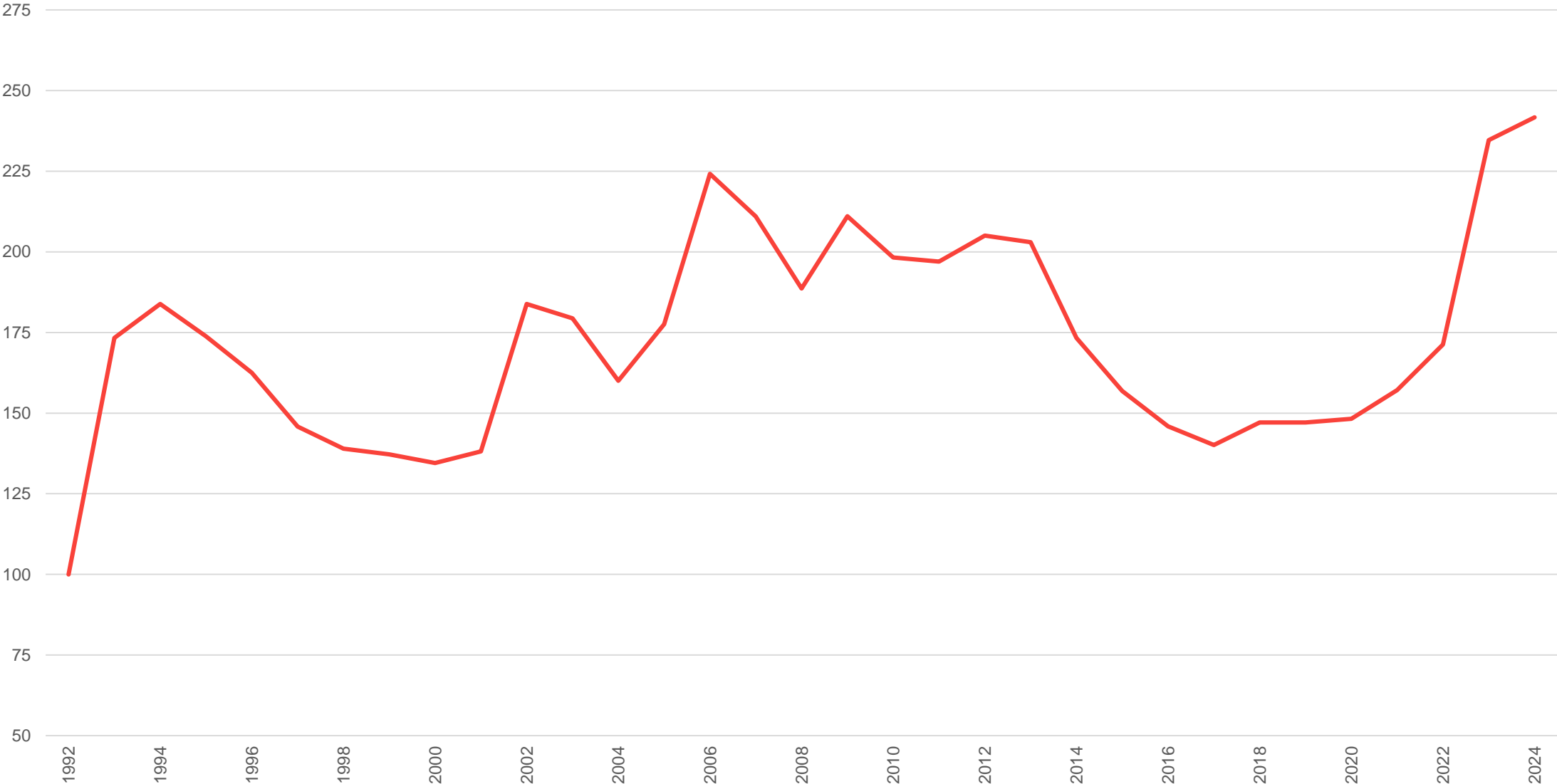
Source: NOVA

Global casualty excess-of-loss reinsurance rate-on-line index



Source: NOVA

Global risk-adjusted property-cat reinsurance rate-on-line index



Source: NOVA

Capacity is more constrained than it has been since the GFC . . .



Generally heightened risk premia
mean less underwriting capacity

Inflation ➤

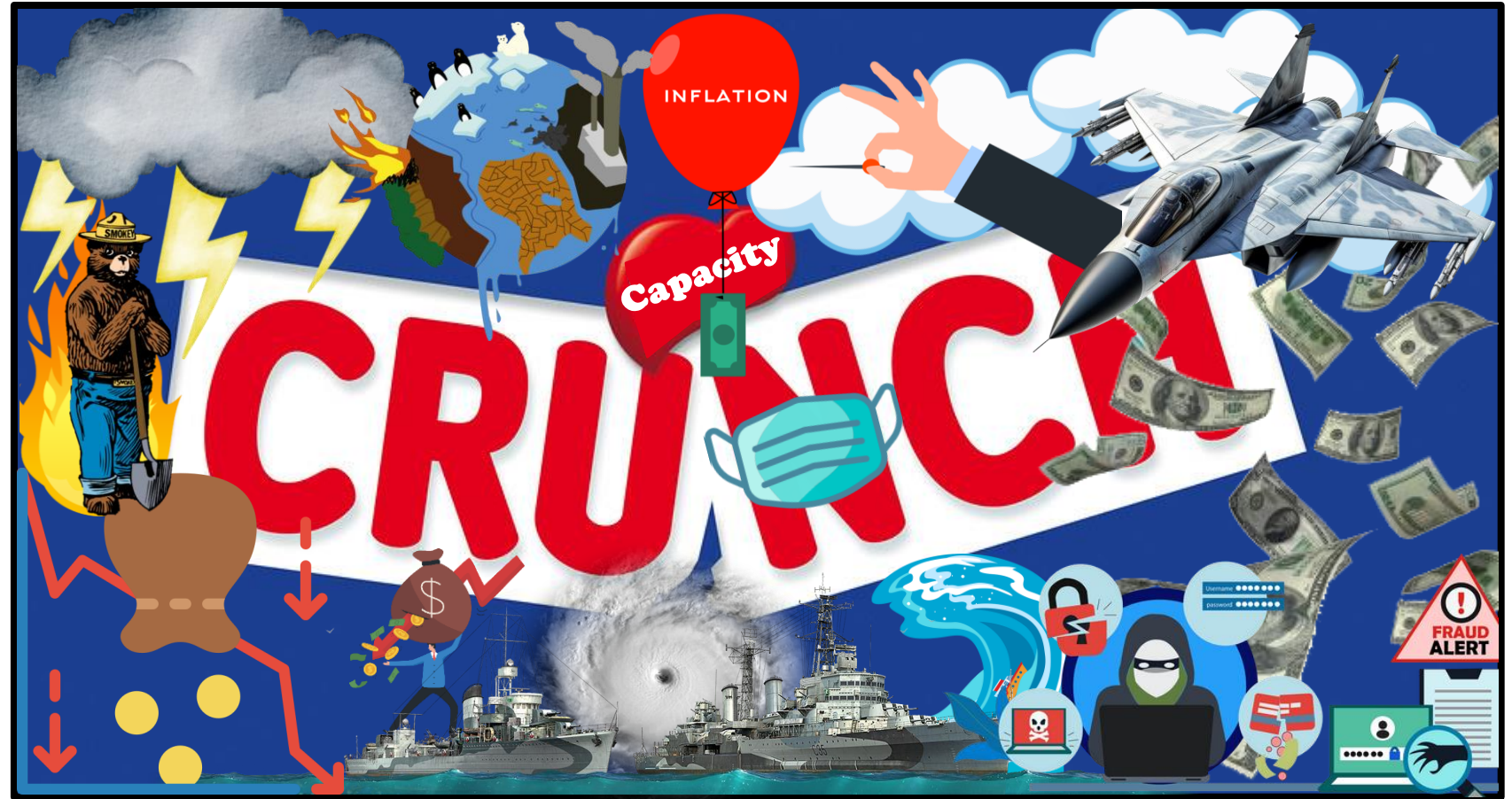
Asset impairments ➤

Geopolitical risk ➤

Poor investment returns ➤

Slower capital re-entry ➤

Carrier withdrawals ➤

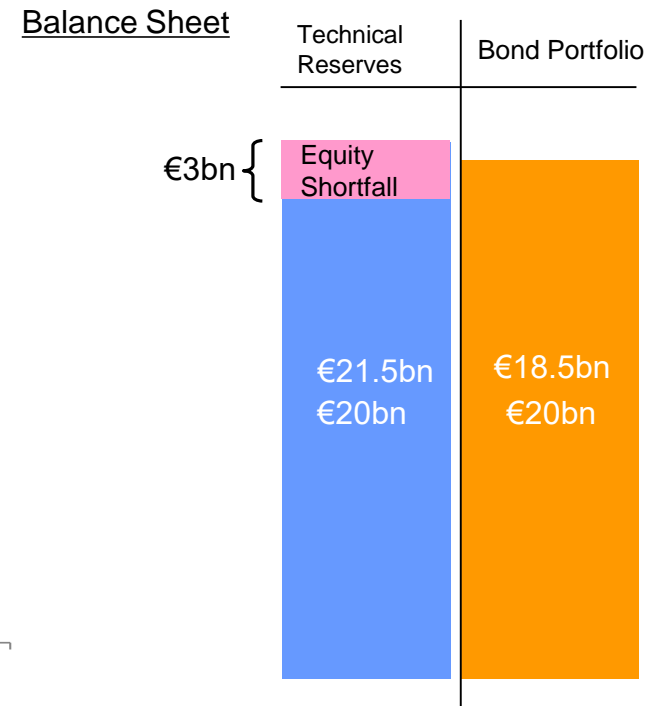
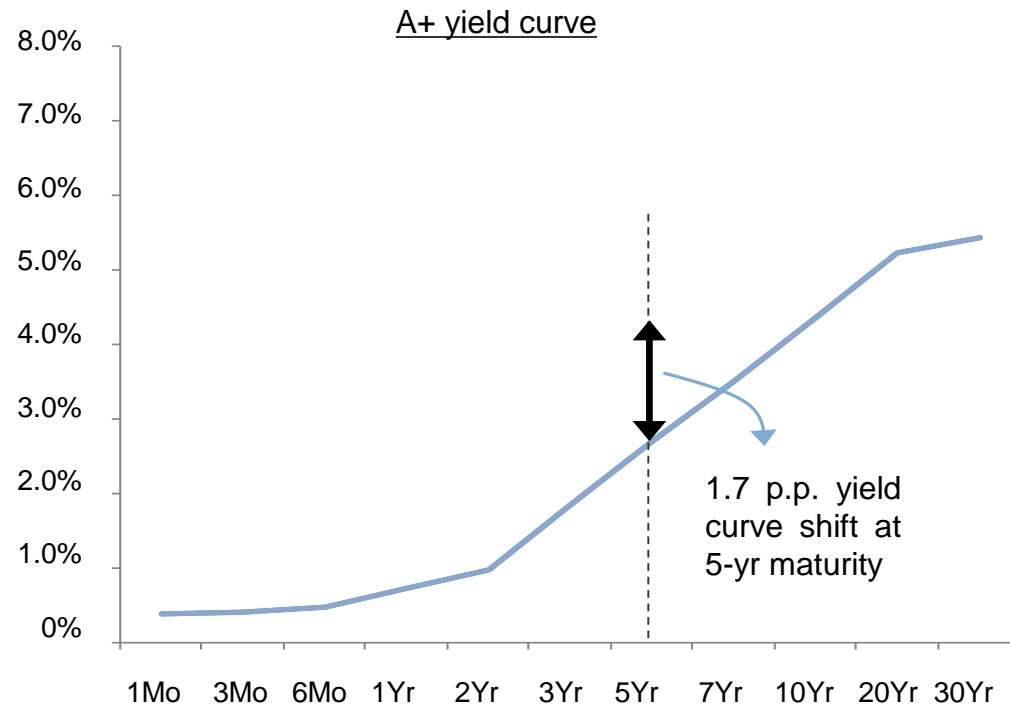


Interest rate sensitivity: balance sheet impact

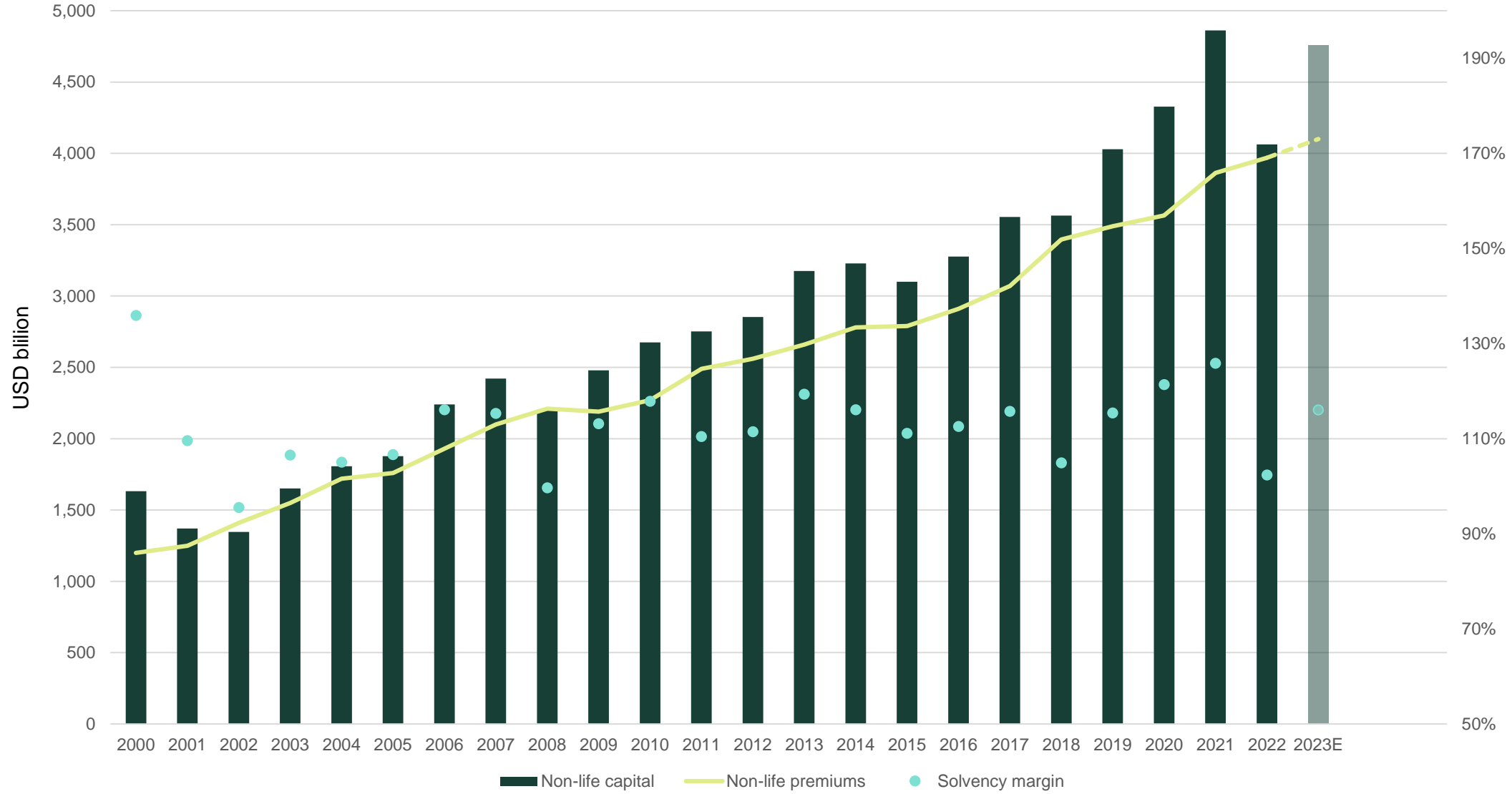


What happens to a €20bn, 5-year duration A+ rated bond portfolio backed by a duration-matched reserve position in the event of a rapid 1.7 percentage point increase in interest rates?

- Interest rate increases are normally accompanied by rising forward inflation expectations
- Longer-duration fixed income assets diminish in value while reserves increase
 - Capital by definition decreases

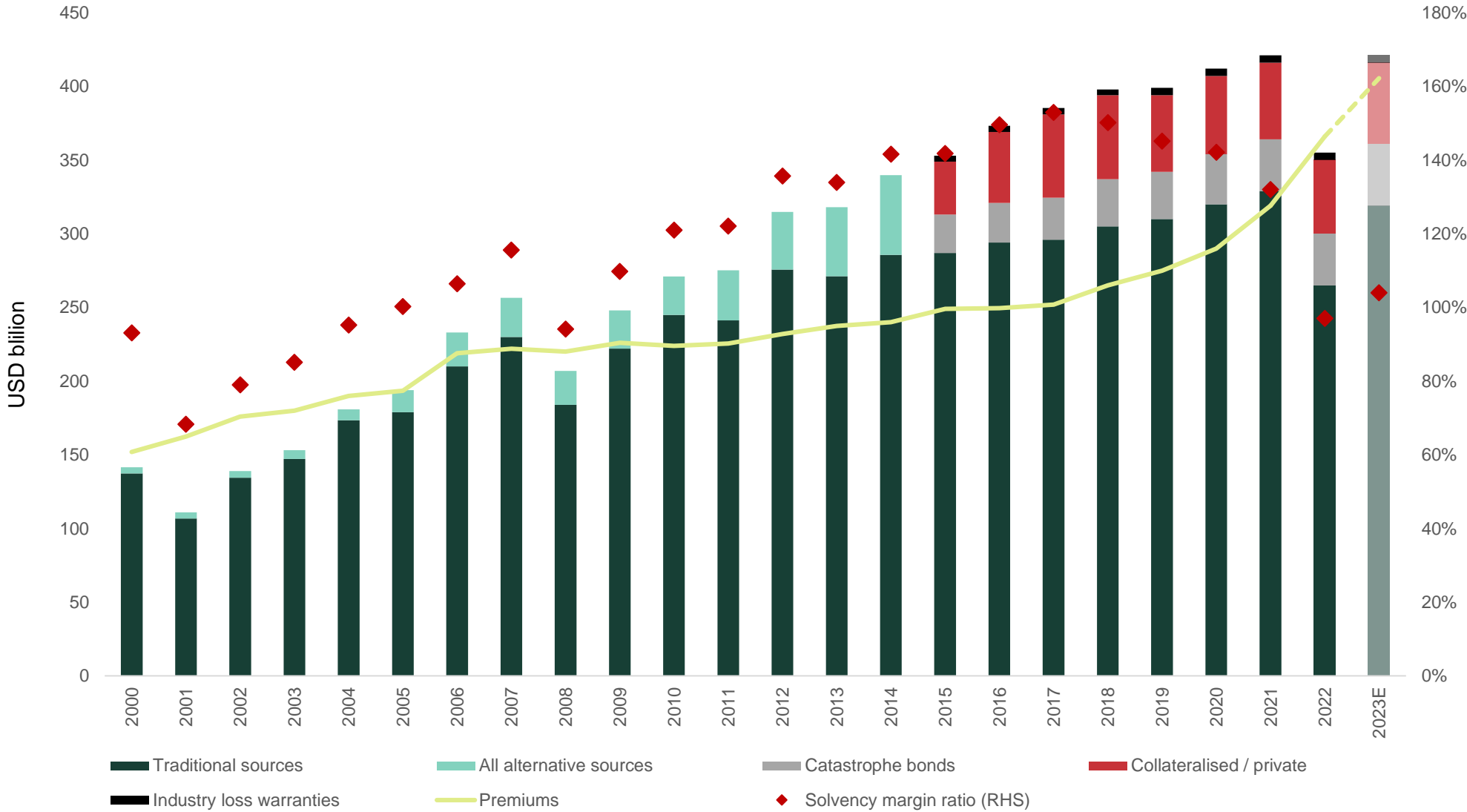


Global P&C insurance capital and premiums



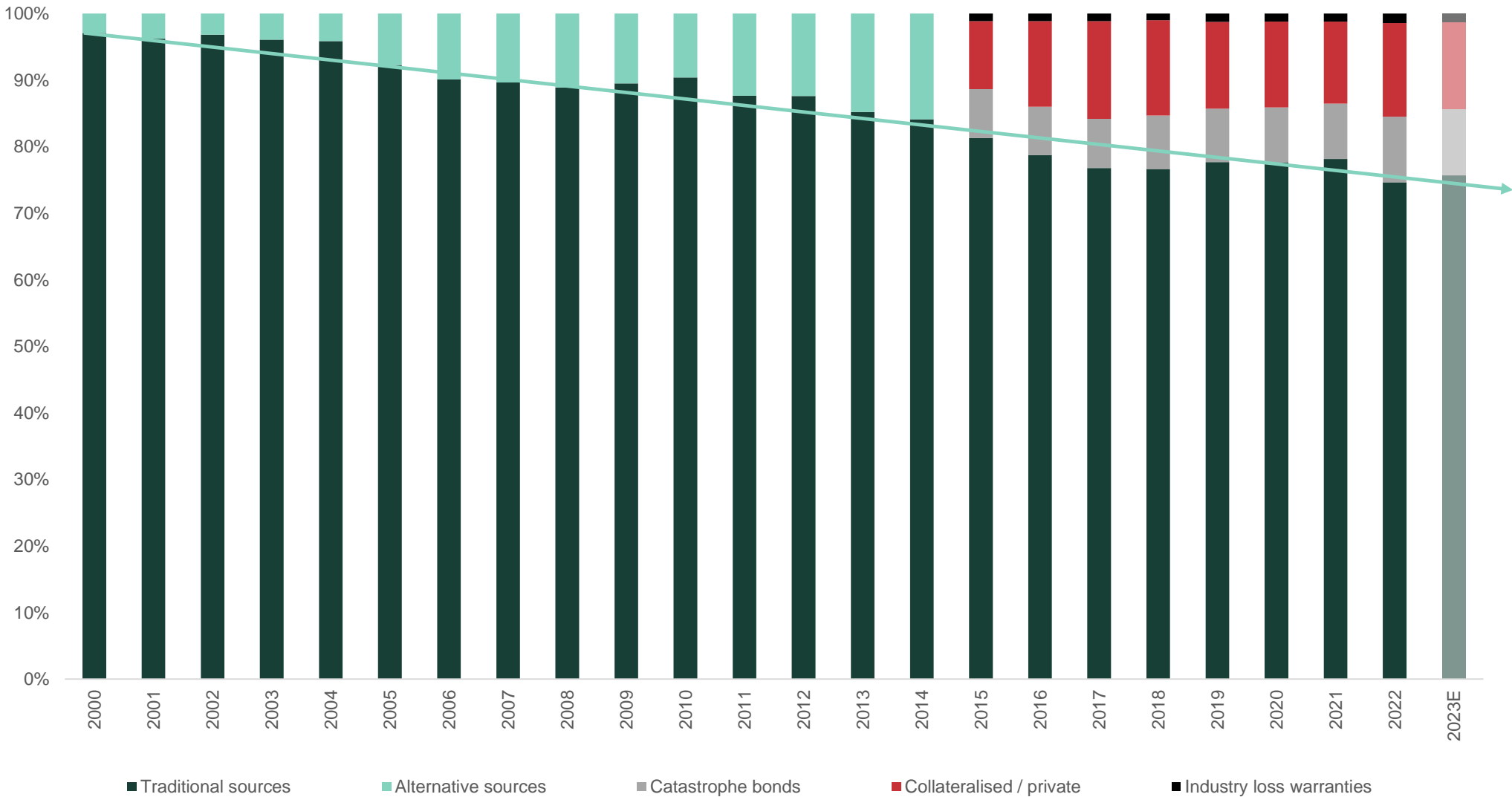
Source: NOVA, Bloomberg data, NAIC, Swiss Re Sigma

Dedicated reinsurance capital



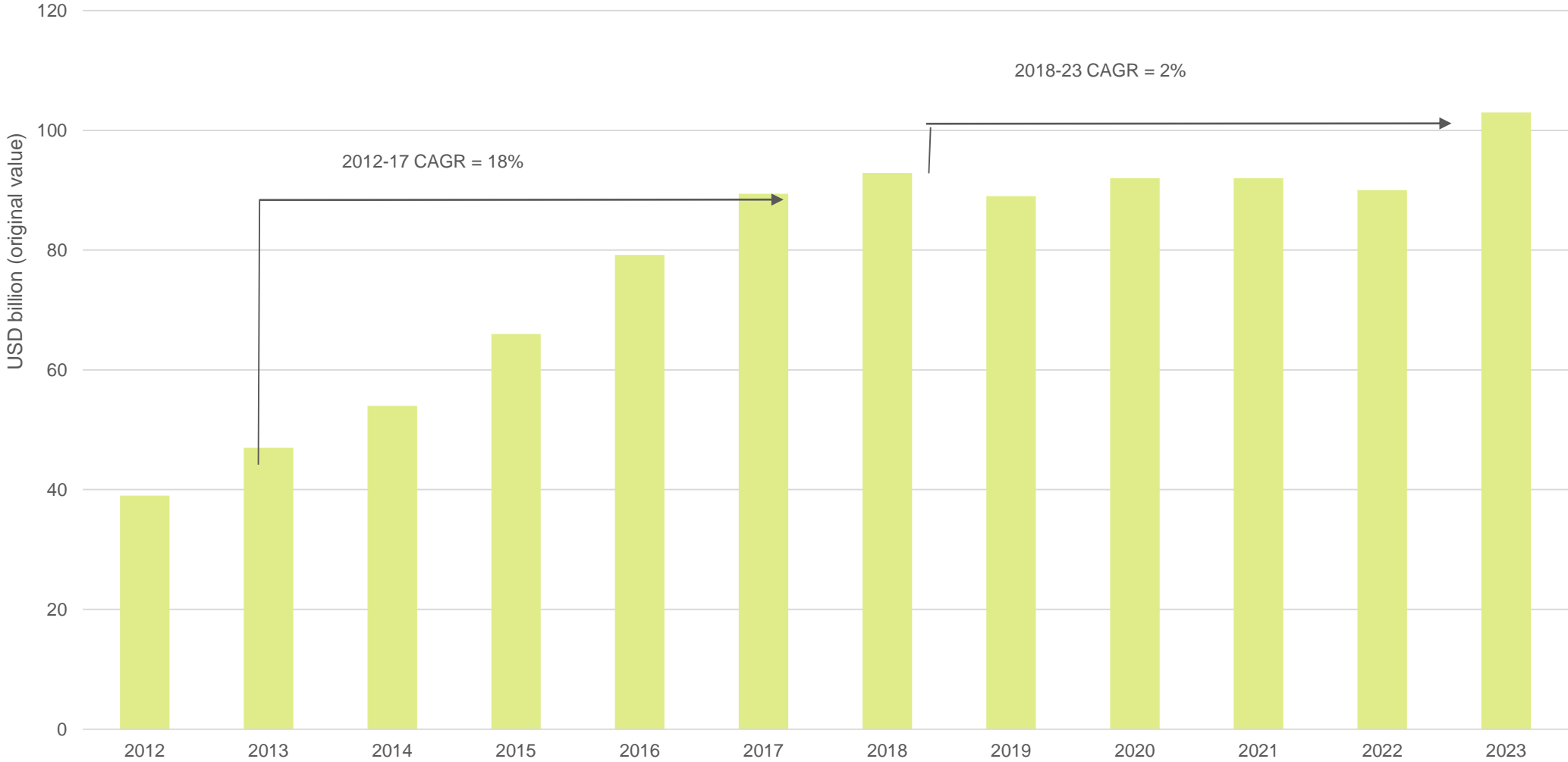
Source: NOVA

Dedicated reinsurance capital (percentage of total by source)



Source: NOVA

Size of alternative (re)insurance market

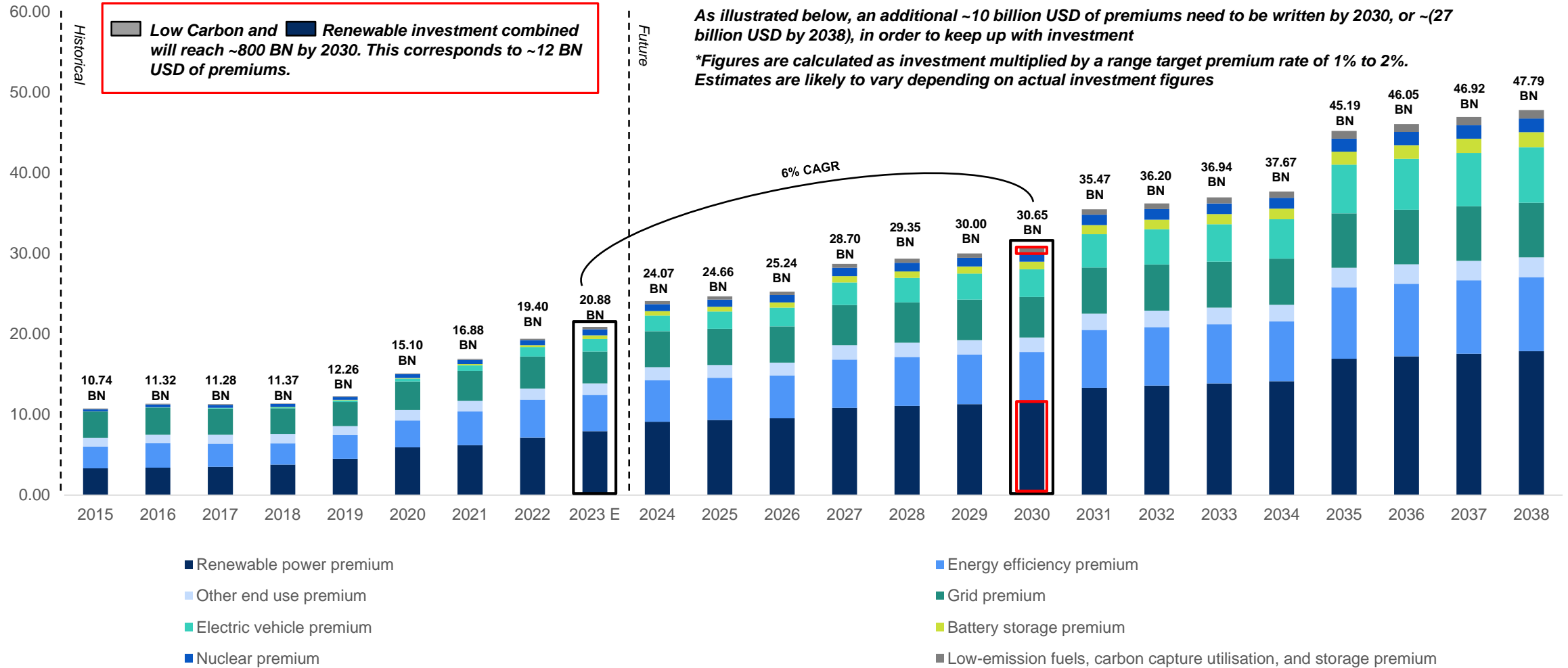


Source: NOVA

We still need USD 12 billion of new renewable capacity by 2030



Premium growth in line with renewable investment by renewable type (in billions) (2015 -2038 future)

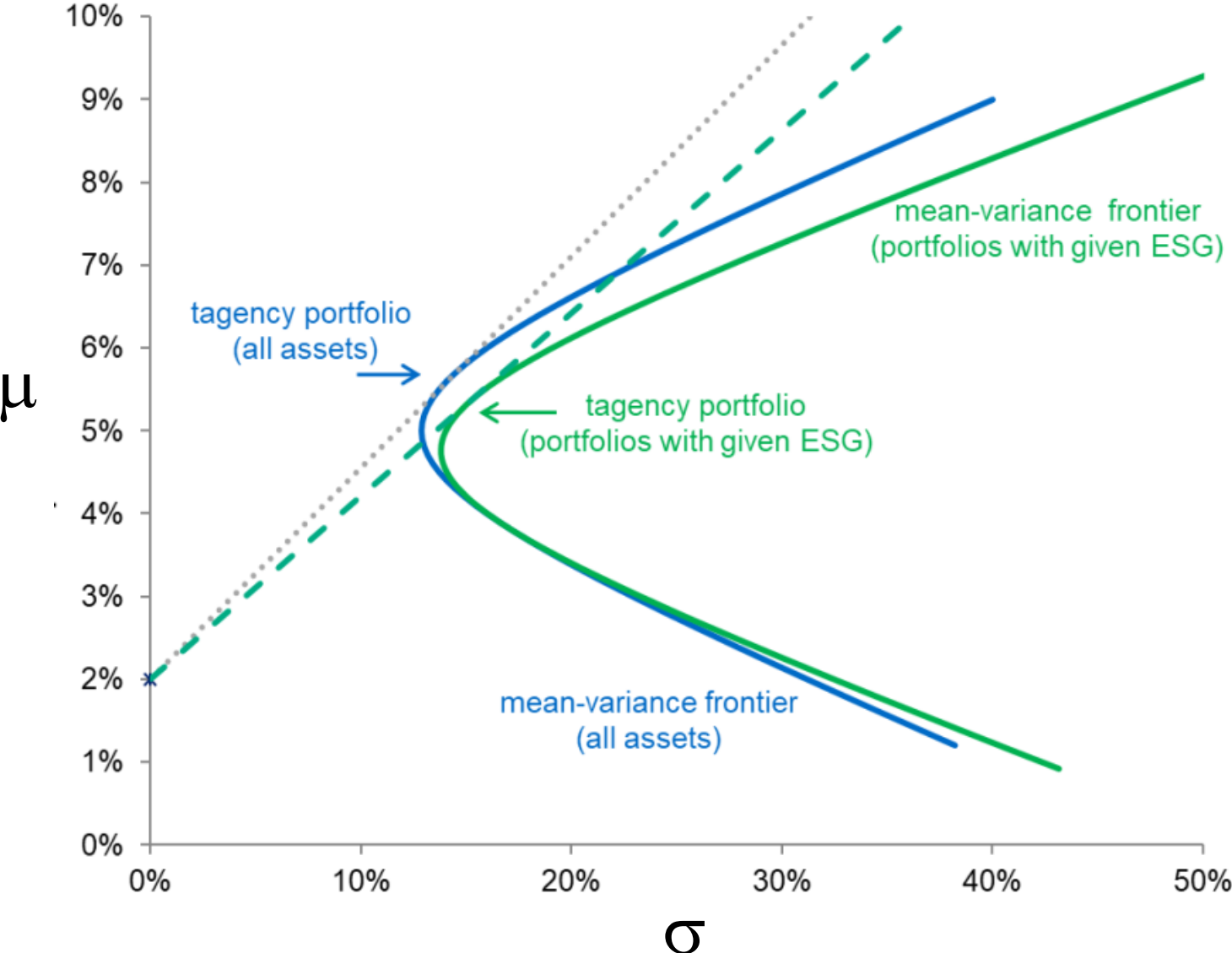


As illustrated below, an additional ~10 billion USD of premiums need to be written by 2030, or ~(27 billion USD by 2038), in order to keep up with investment

*Figures are calculated as investment multiplied by a range target premium rate of 1% to 2%. Estimates are likely to vary depending on actual investment figures

Low Carbon and Renewable investment combined will reach ~800 BN by 2030. This corresponds to ~12 BN USD of premiums.

Capital availability for 'green' investments

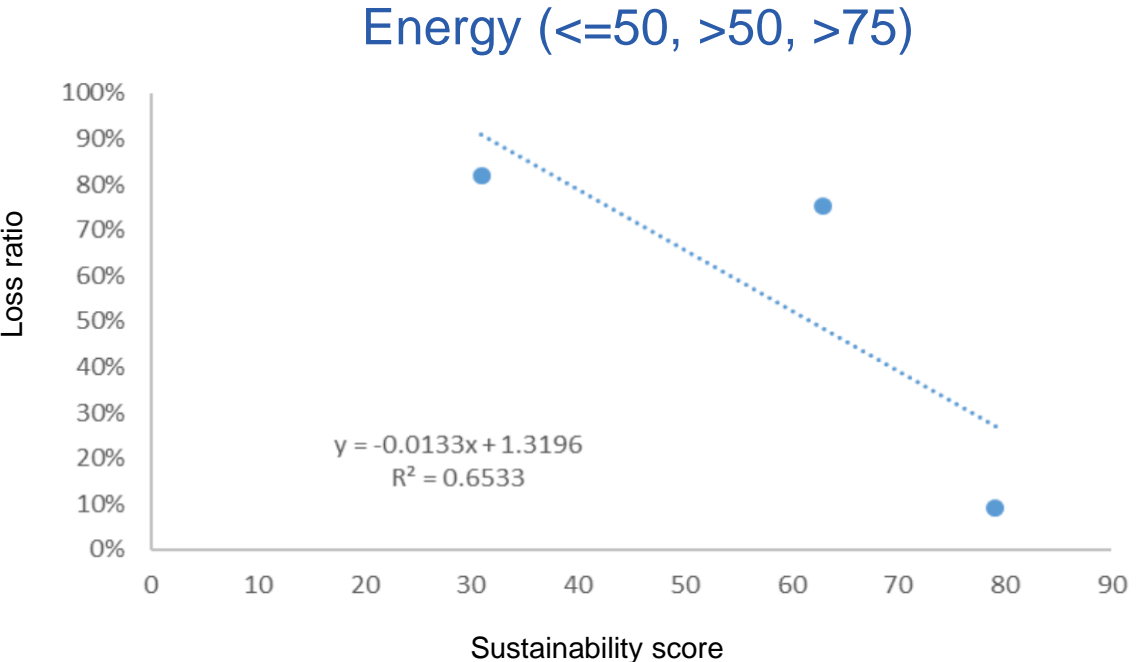
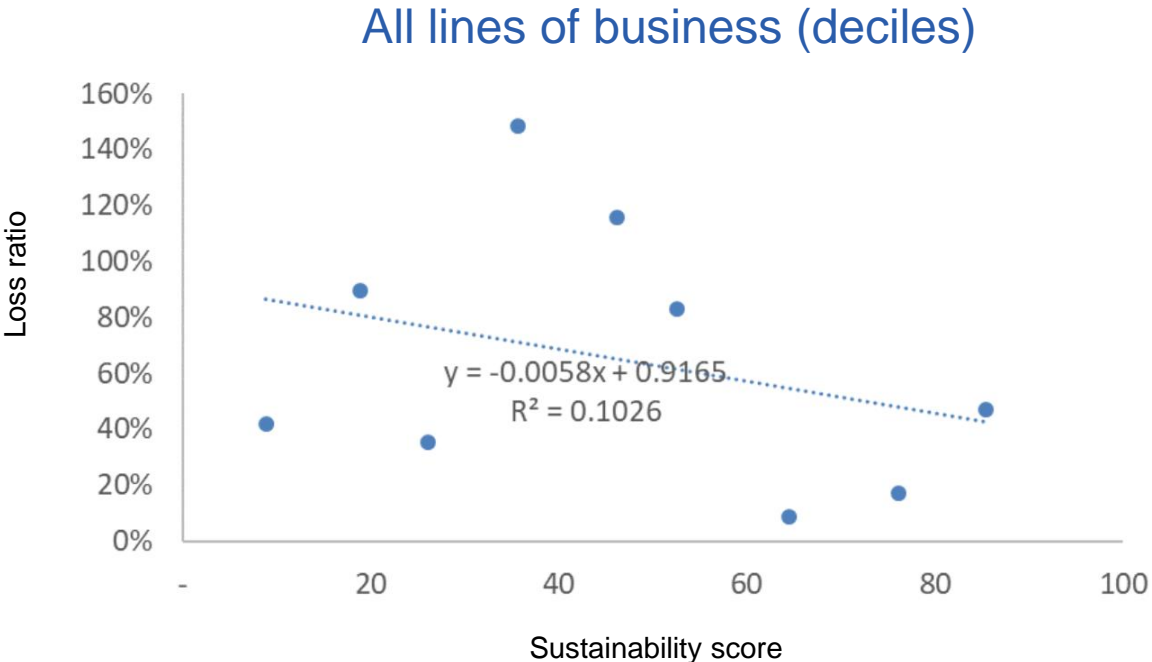


Source: Howden Analytics

Capital availability for energy risks → sustainable underwriting



Better sustainability scores → better underwriting experience



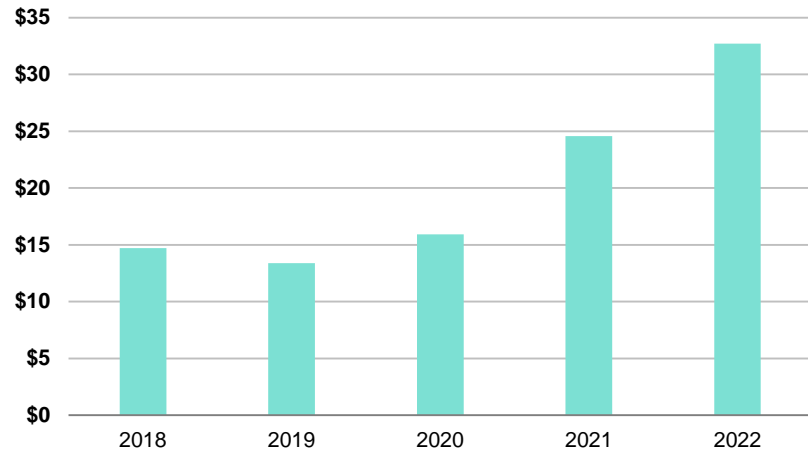
Source: Howden Analytics

Finding new avenues for capacity through 'asset light' structures



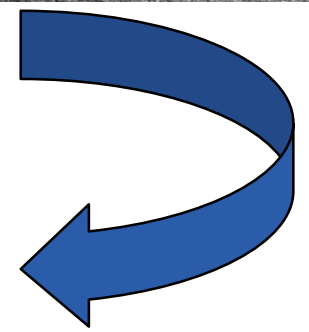
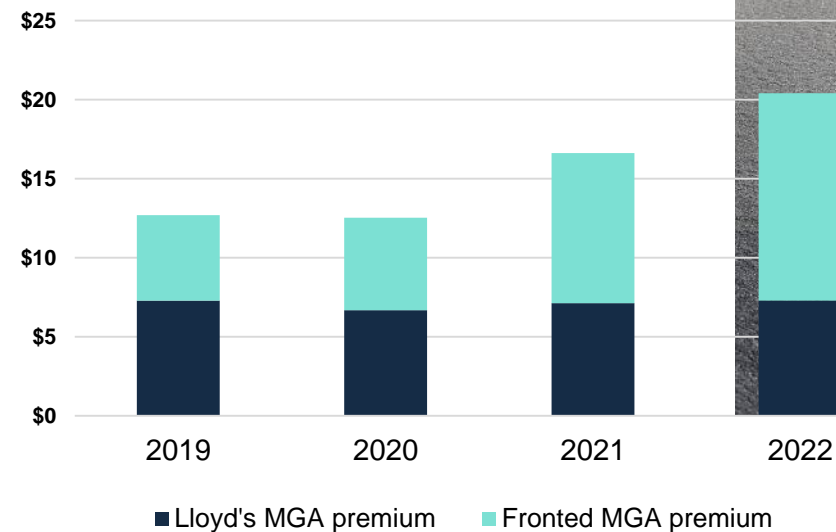
New capital structures such as MGAs, consortia and fronting have increased in prominence

Premium underwritten by US MGAs not affiliated with insurance companies



Source: Conning, S&P global market intelligence

Fronting capacity has outstripped Lloyd's capacity since 2020



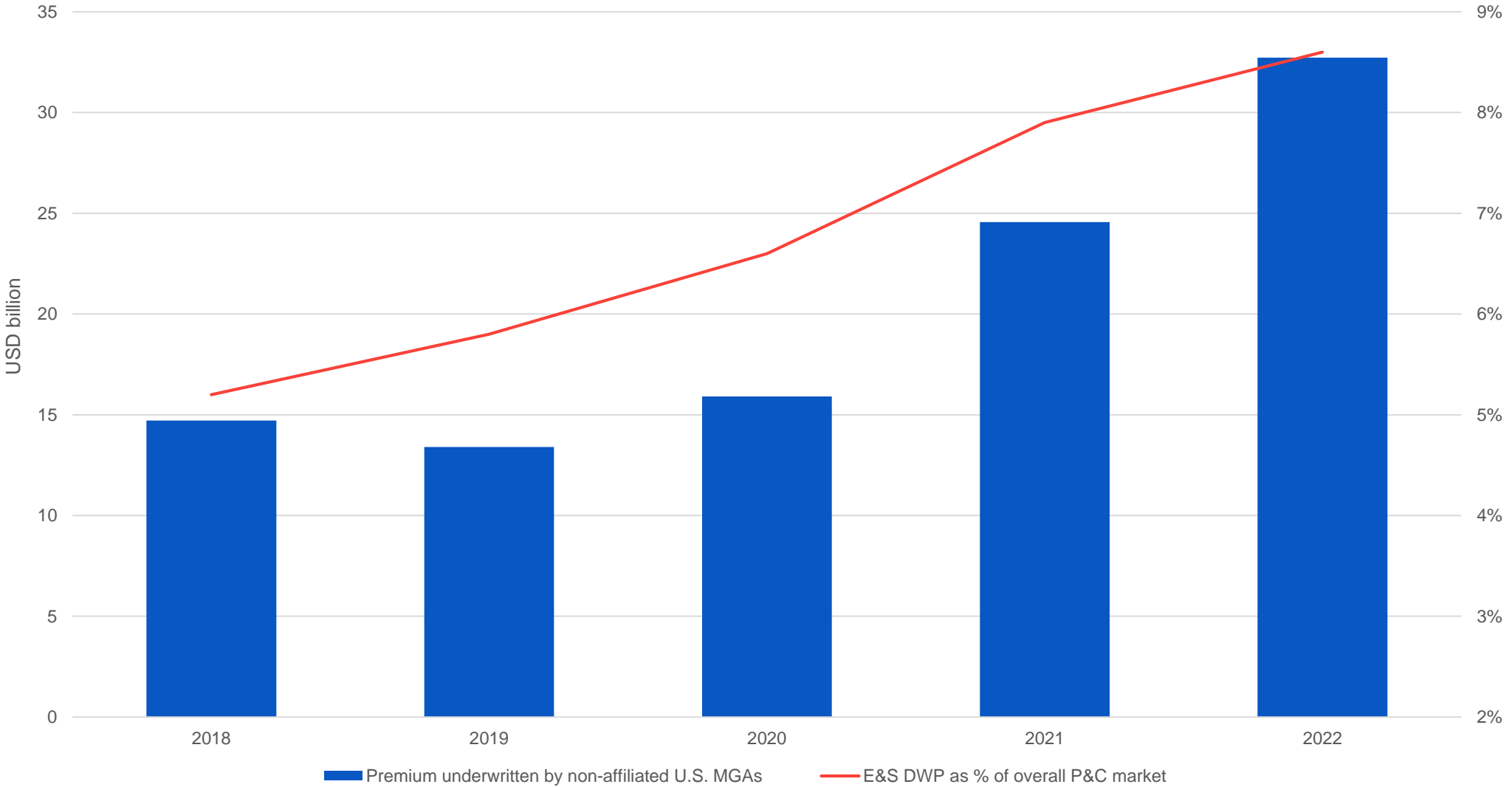
'In 2021, fronted premium sourced through MGAs outstripped Lloyd's premium sourced through coverholders, for the first time.'

MGAs

1. Harness data / analytics for better risk selection and pricing
2. Efficiencies in submission turnaround
3. Embedded distribution channels

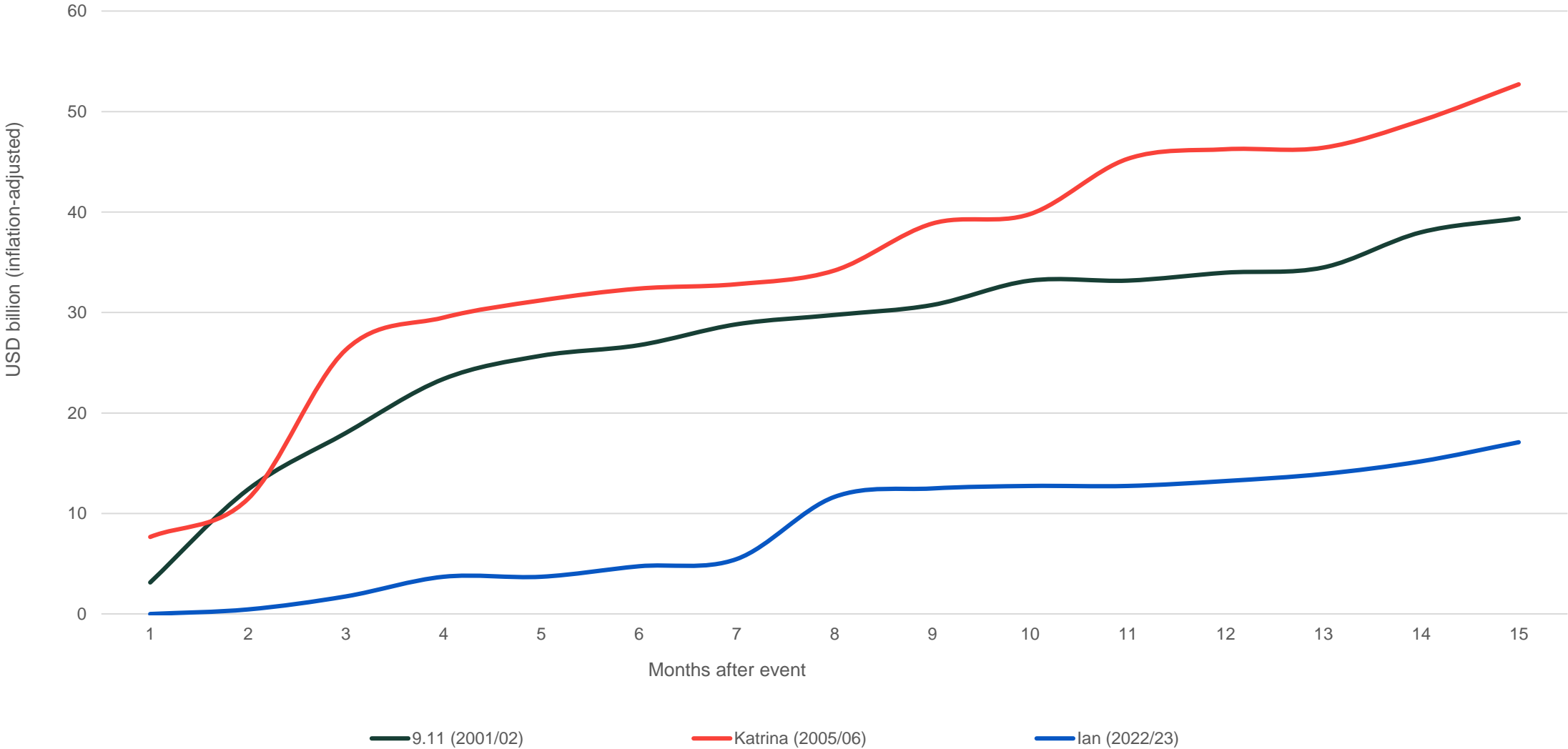
+ Consortia **+** Reciprocal exchanges **+** Captives

Non-affiliated US MGA premiums vs E&S market growth



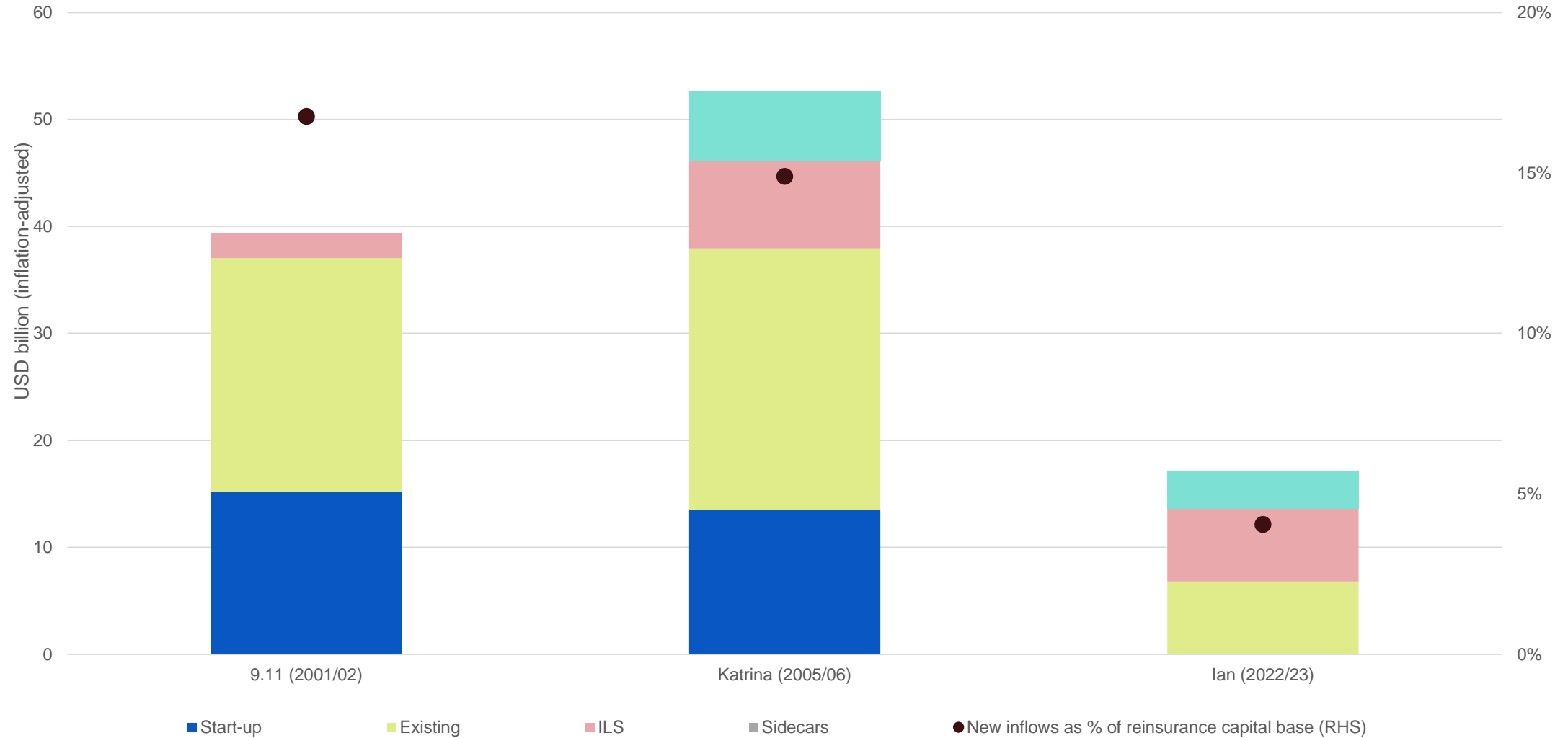
Source: Howden, Conning, Fitch

Quantum and timeline of cumulative capital raising post-event



Source: Howden, Standard & Poor's, Artemis

Announced capital inflows following major events

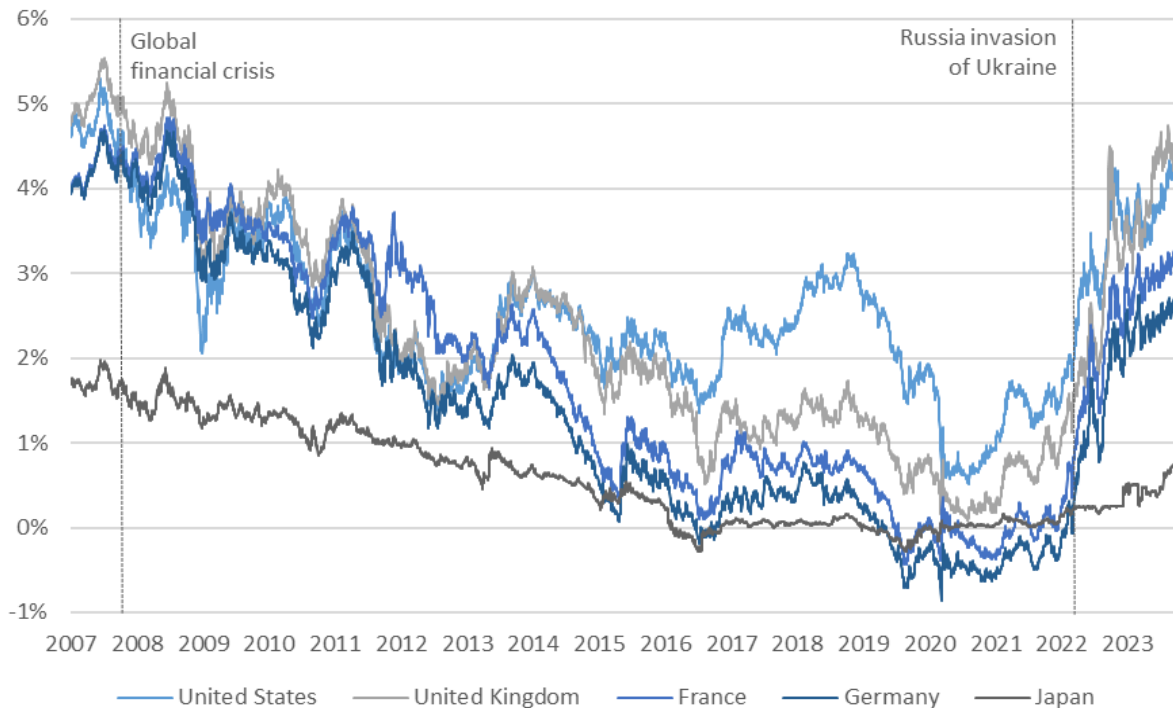


The sector is back in a world with two sources of carrier income

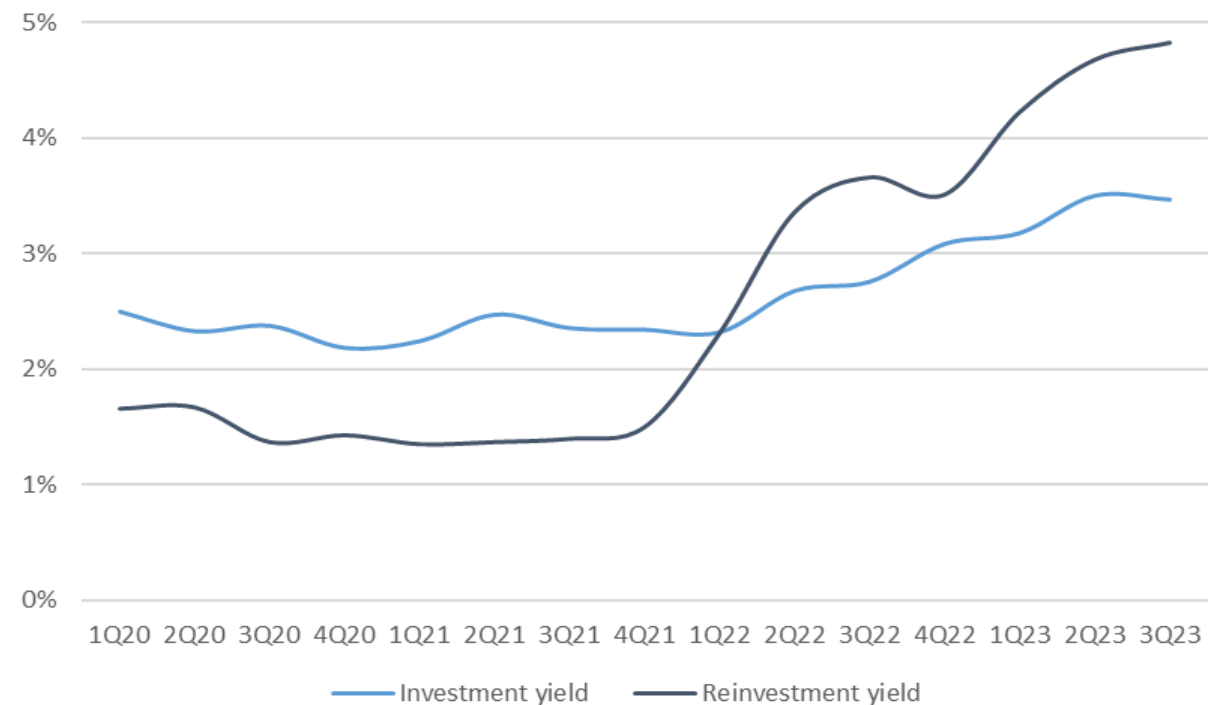


Higher interest rates mean carrier yields have increased; investment income is now a major source of earnings

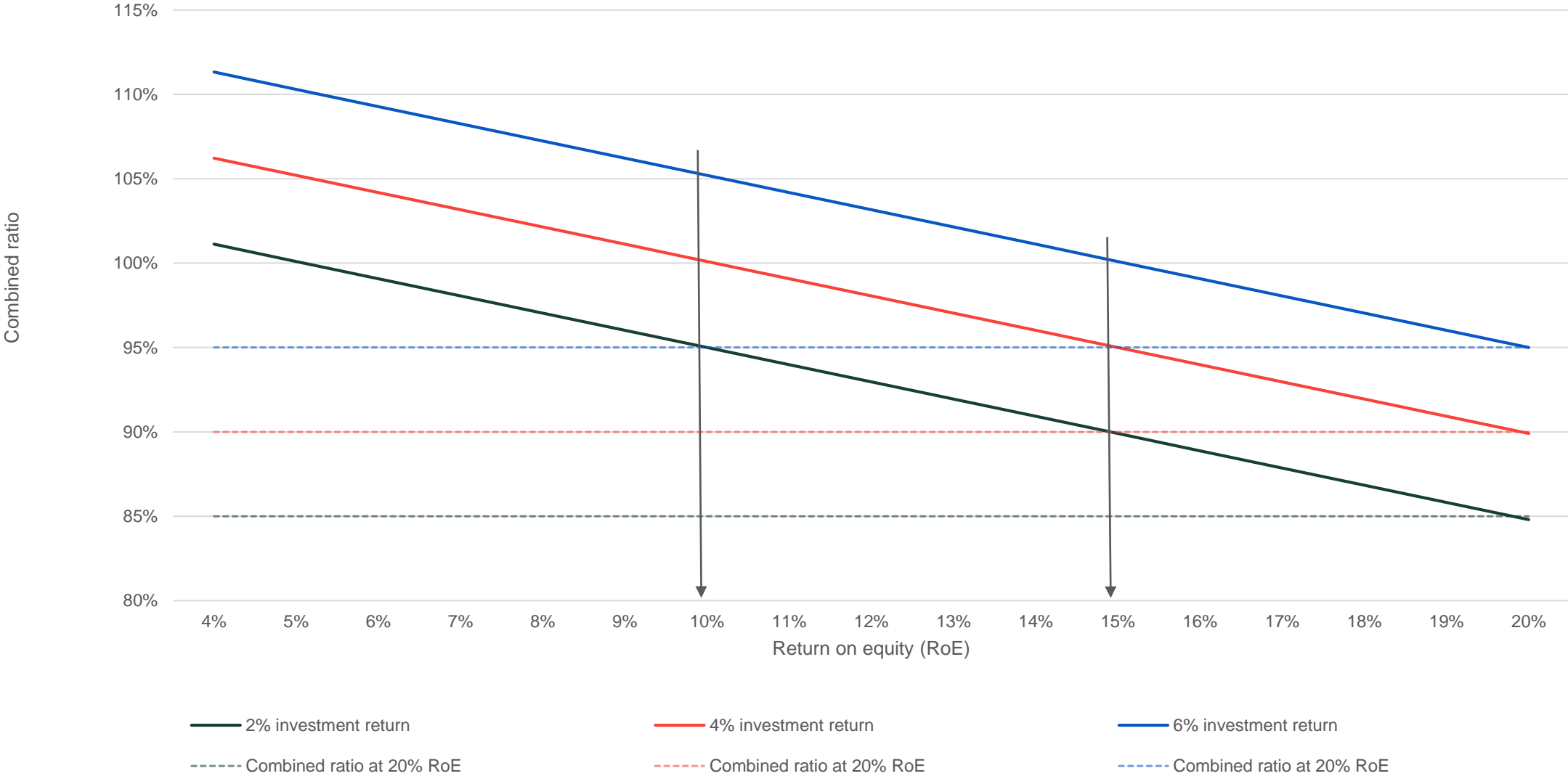
Sovereign yields



(Re)insurer running yields

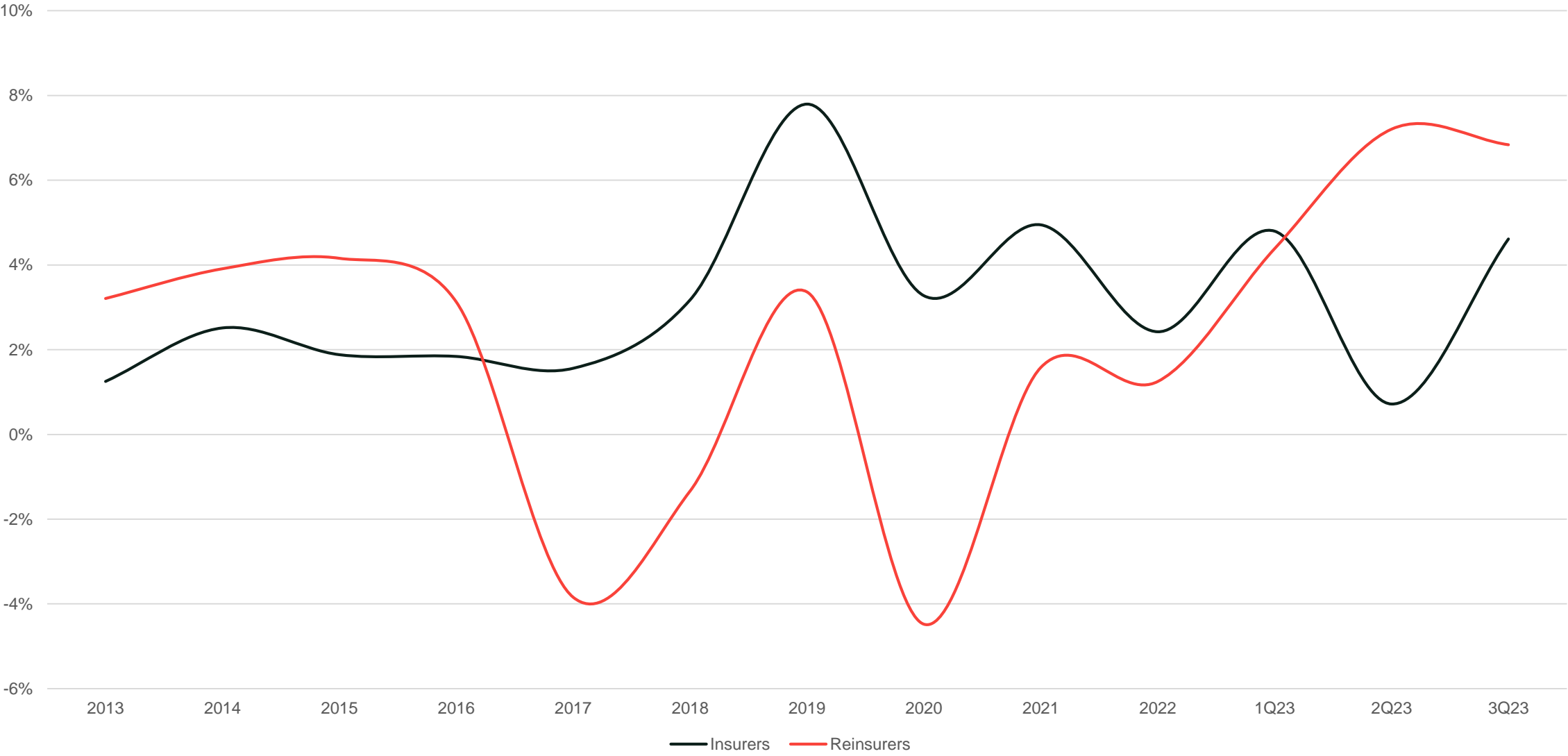


Impact of investment returns on carrier returns on equity



Source: NOVA

Economic value added for insurers and reinsurers



Source: NOVA

Howden Tiger

HOWDEN



A message from David Howden

CEO, Howden Group

We've travelled far since opening our first office in 1994. Back then we were local experts – based in London, with direct access to the world's biggest insurance market.

We're still locals, and we still deliver the right advice and the right insurance to our clients. But now, we're local all over the world.

Howden has grown by attracting and nurturing great people, regardless of borders or location. Sometimes, those great people have owned great businesses that they've brought into the fold. As a result, we've grown into one of the world's biggest insurance groups.

And though we've grown further than we ever imagined, our values haven't changed since day one, when we set out to create a company grounded in:

- An employee-ownership model
- The trust and integrity born of friendship
- Deep expertise
- Independence
- The backing of long-term minority investors

Our go-to-market strategy is simple; we are committed to acting as one business, without the silos that put limits on what we can do with our insurer partners and for our clients. That way, with transparency and trust, I can promise that our partners get the very best of us.

**“ There’s no such thing as individual success. We all need to play our part, contributing our skills and experience to make a true difference. ”
That’s Howden.**



David Howden
CEO, Howden Group

Howden aims to grow with you . . .

A journey to \$50bn+ GWP



“The energy over the past two years has been incredibly exciting. We have grown to a **USD30bn GWP** business, with organic growth of 19%. We are growing our positions in all our markets around the world and with the acquisition of TigerRisk the main pillars of our business are now complete. We are:

- A major force in retail and specialty insurance broking
- The leading international MGA
- The leading risk, capital and strategic advisor

David Howden
CEO, Howden Group Holdings

\$35bn

Howden Group GWP*
**pro-form GWP, October 2023*

100

Network territories

50

Countries

15,000

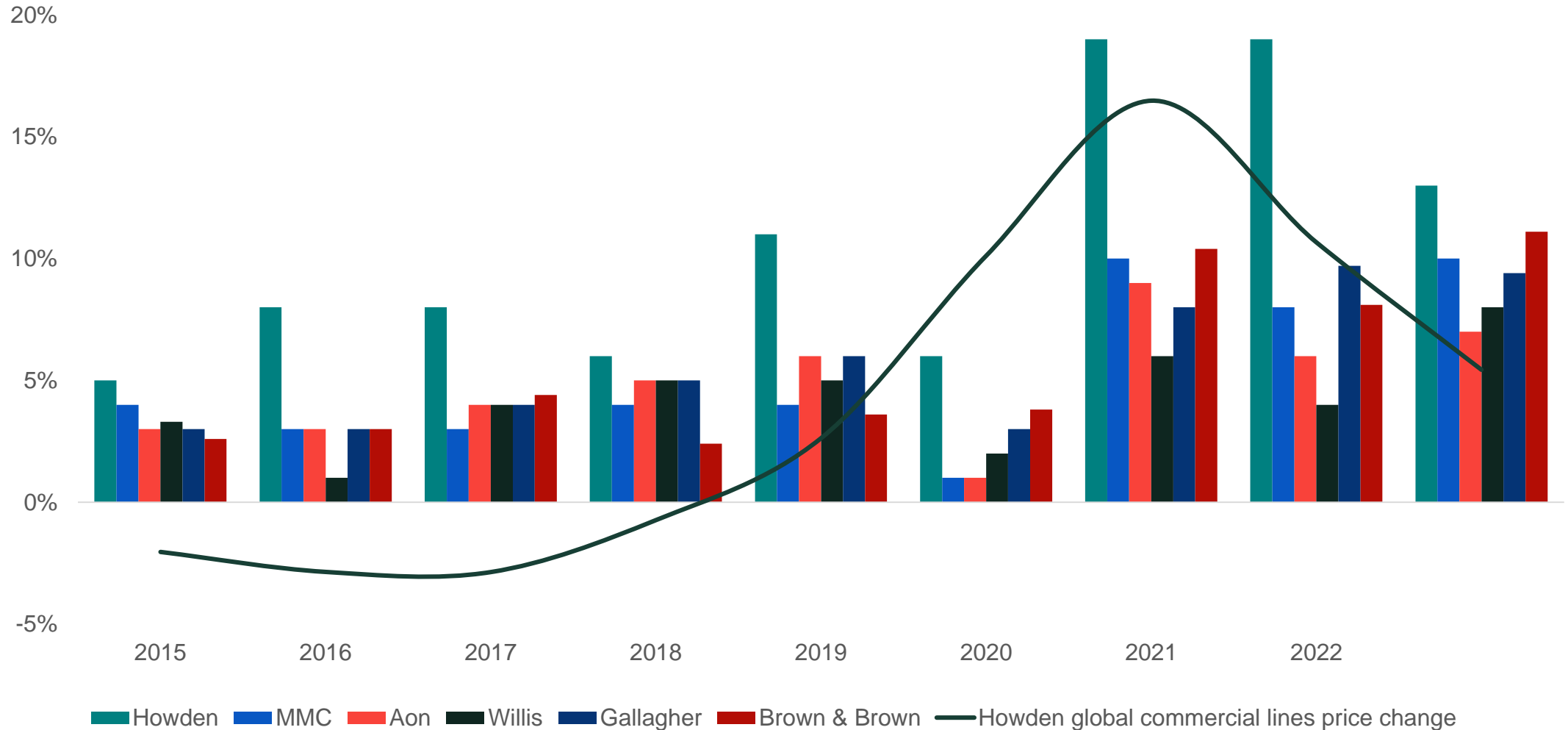
Employees

19%

Organic growth

. . . through hard markets and soft

Group organic growth of intermediaries vs year-on-year changes in global commercial insurance pricing



**“ Right company,
right industry,
right time.”**

David Howden
CEO, Howden Group

Reinsurance

Howden Tiger

Rob Bredahl
CEO

Rod Fox
Executive Chair

Massimo Reina
CEO International

Elliot Richardson
Vice Chair & Chair of
International

Bradley Maltese
CEO UK & Global
Specialties

Tim Ronda
President

GWP
\$14.5bn

Countries

30

Employees

600+

Howden Tiger is uniquely positioned to be the leading risk, capital and strategic advisor for the modern day client.

With our 'no silos' approach, we bring together our banking, strategic advisory, analytics, and rating agency capabilities to service clients beyond the placement.

Experience, expertise and execution

✔ **Strategic Advisory/ Consulting**

Bespoke strategies to grow premium and profitability

✔ **Treaty Reinsurance**

Our fastest growing global business

✔ **Capital Markets**

Seamless team integrating M&A, debt and equity capital with reinsurance capital

✔ **Facultative**

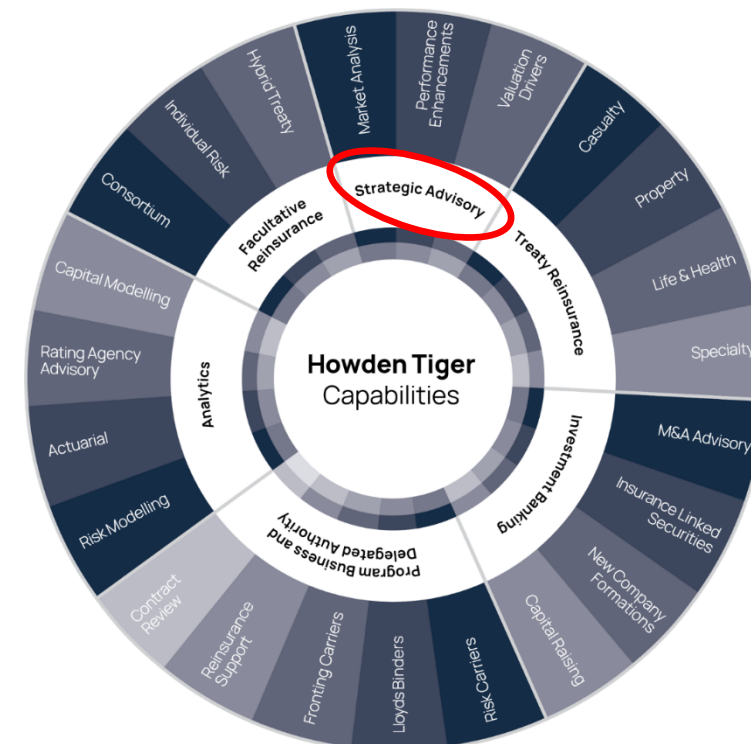
The largest facultative broker in London

✔ **HowdenTigerSabRE**

Program business as a global specialty

✔ **Analytics**

Tools that enable deeper understanding of risk for enhanced decision making



Howden Tiger Industry Analysis and Strategic Advisory

Strategic Advisory



Bill O'Keefe
Head of Growth and SA



David Flandro
Head of Industry Analysis and SA



Alice Andrews
Strategic Advisory, NA



Charlie Beeching
Strategic Advisory, Int



Brendan Connolly
SA Associate



Nena Atkinson
Research Associate

Business Intelligence



Michelle To
Head of Business Intelligence



Lauren D'Costa
SA Associate



Georgia Sullivan
SA Associate



Jessie Mitchell
SA Associate



Edison Liu
SA Analyst



Anju Prahbu
NOVA Product Owner and Lead Developer, leading NOVA's development team of 9-10



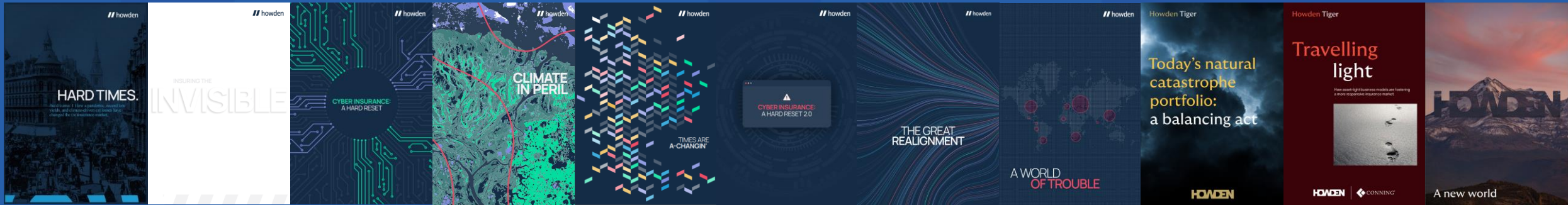
Ahmed Al Mubarak
Lead Data Scientist



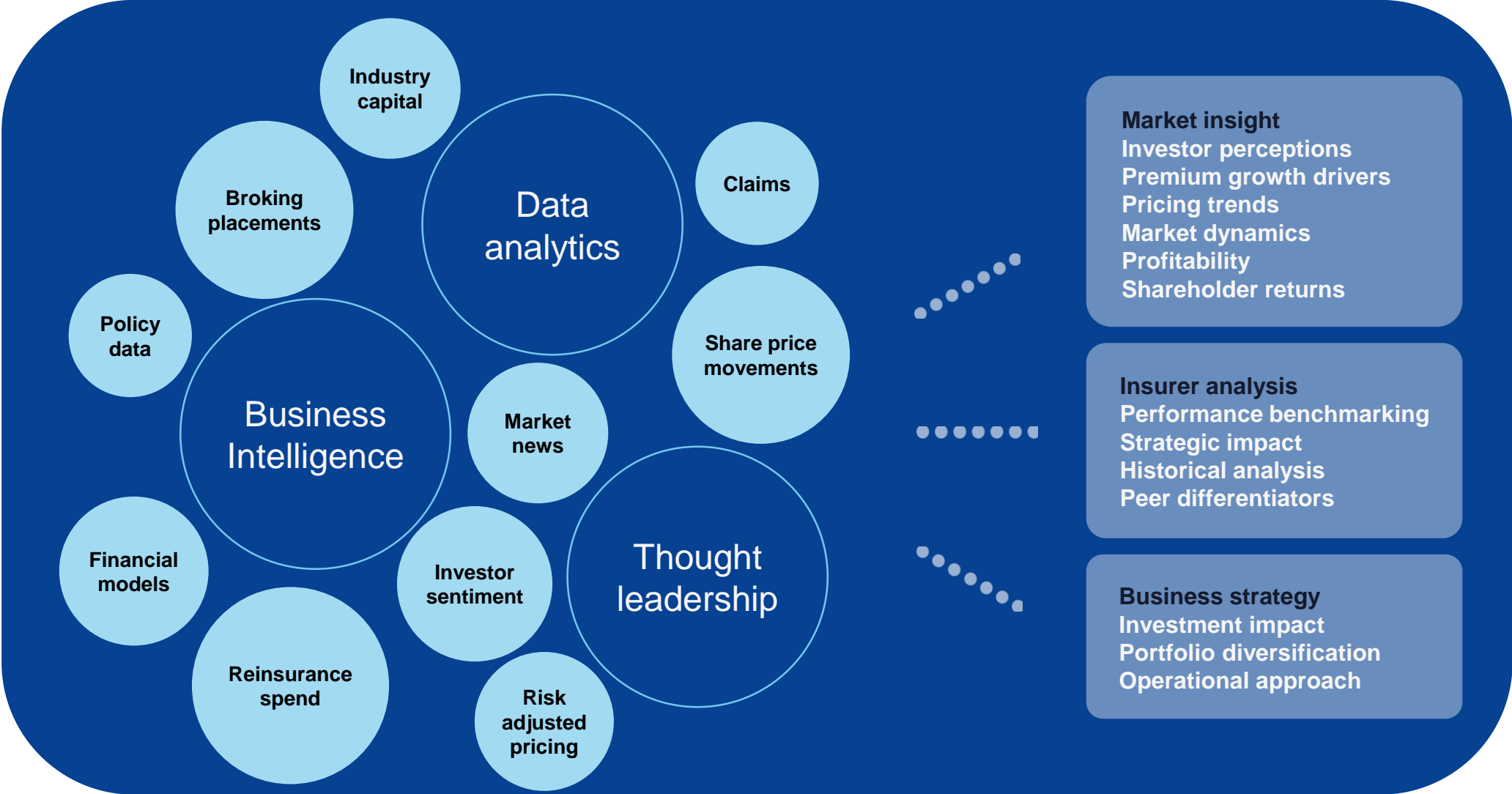
Honufah Hashim
Data Analyst

Industry-leading reinsurance sector research

High-quality, non-periodical content which is unique, client focused, topical and independent



Business Intelligence: utilising technology to transform information into action with the combination of unique datasets with strategic insights



Strategic Advisory, International

Support, insights and analysis offered by Howden Tiger, tailored to specific client needs



Stakeholder

- ✓ Board / investor
- ✓ Client
- ✓ Market
- ✓ Rating implications (in conjunction with RAA)



Regulatory

- ✓ Solvency II (EIOPA)
- ✓ IFRS-17 (IASB)
- ✓ Regional (e.g. BMA, CIRC, OSFI, APRA, FINMA, PRA, etc)



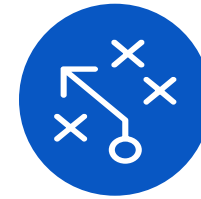
Asset-side

- ✓ Counter-party
- ✓ Reinsurer selection
- ✓ Asset-liability matching
- ✓ Yield enhancement
- ✓ Investment return analysis



Underwriting

- ✓ Market landscape
- ✓ Peer comparisons (e.g., geography, segment)
- ✓ Cost of capital
- ✓ Reinsurance programme efficacy
 - Traditional
 - Securitised



Strategic

- ✓ Corporate structure (e.g. platform, domicile selection)
- ✓ Capital comparison (debt, equity, hybrids, reinsurance)
Captive strategy
- ✓ Start-up planning
- ✓ Enterprise risk management
- ✓ Sustainability advisory
- ✓ Execution (e.g. organic, inorganic)

Appendix

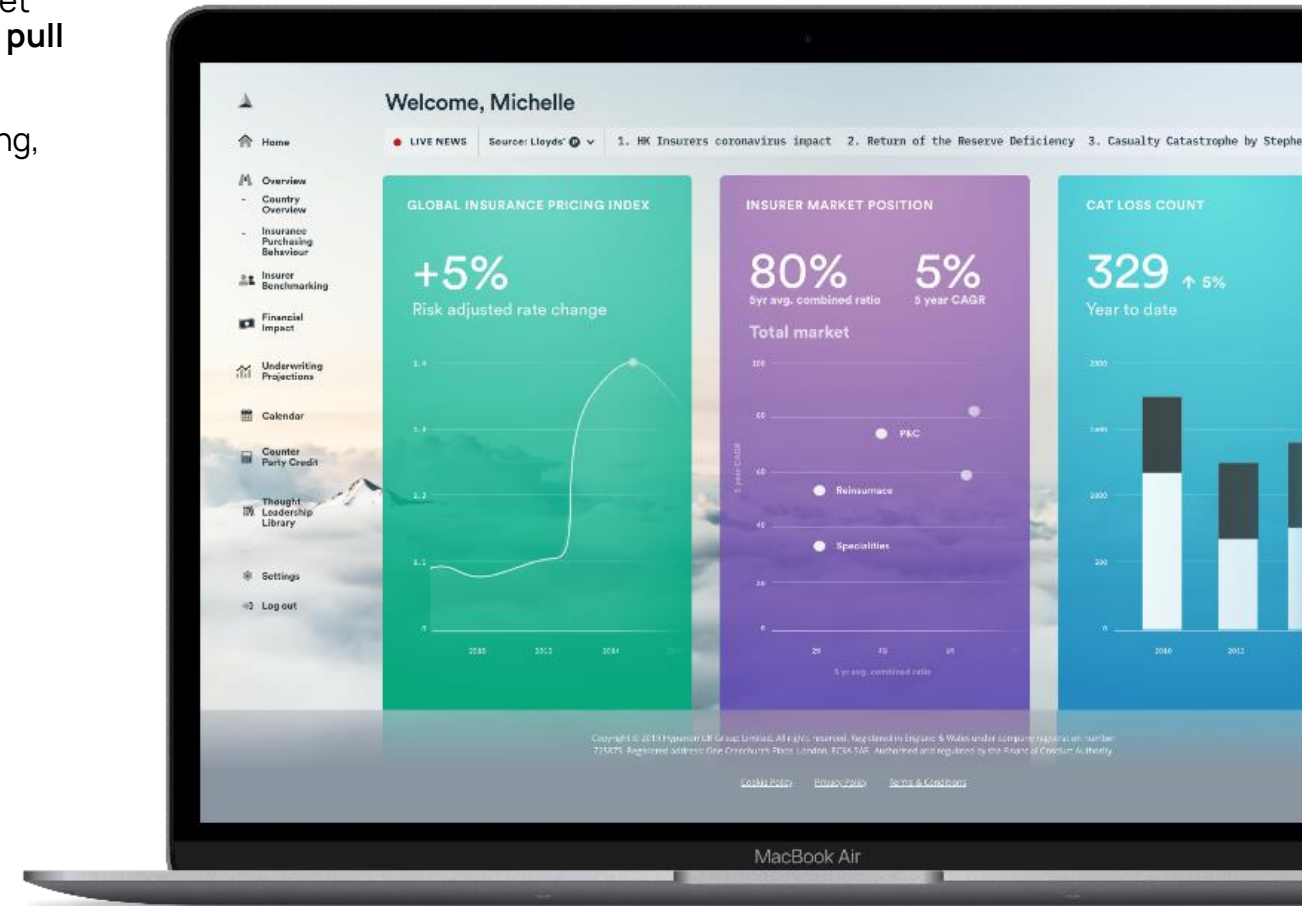
- Business Intelligence / NOVA
- International Analytics team structure
- TigerEye
- Catastrophe modelling capabilities
- Actuarial capabilities
- Global Analytics team structure
- Howden Tiger Capital Markets & Advisory

Wield data like never before

NOVA utilises a blend of Howden placement data combined with wider market financials. This, together with **our analytical capabilities enable clients to pull on the risk selection lever with greater force, driving economic value.**

Make data-backed decisions and inform more robust strategies, with pricing, profit and claims insights.

Our clients derive tangible value from **cut** data-driven insights.



Tailored for multiple stakeholders within an insurer

The NOVA platform, and our Business Intelligence engagements are suited for a variety of users spanning from underwriting to reinsurance – all with the same goal of making strategic decisions underpinned by industry data insight

- **Portfolio optimisation**

Benchmark on line of business composition and performance for peers and geographies
- **Finance**

Tailor your market portfolio and examine counterparty credit exposure based performance variables
- **Underwriting**

Understanding frequent, continuous risk adjusted rate change and claims development by line of business
- **Distribution**

Explore market opportunities across the global (re)insurance spectrum, by company and line of business
- **Strategy**

Forecast overall company performance and model against the peers / industry average based on key financial metrics
- **Reinsurance**

Drill into client purchasing behaviour patterns and how this changes over time



International Analytics

Key people



MAN CHEUNG
Actuarial



IAIN DAVIE
Catastrophe Modelling



TIM EDWARDS
Catastrophe Analytics

CENTRAL TEAM: LONDON

REGIONAL TEAMS: ZURICH, MILAN, STOCKHOLM, SYDNEY

ACTUARIAL & DATA SCIENCE

CATASTROPHE MODELLING

EMBEDDED TEAMS

PROPERTY

CASUALTY

FINANCIAL
RISKS

AVIATION

CONSTRUCTION

MARINE, ENERGY &
TERROR

CYBER

CAPITAL SOLUTIONS

NON-TRAD. R/I

LEGACY

BINDERS

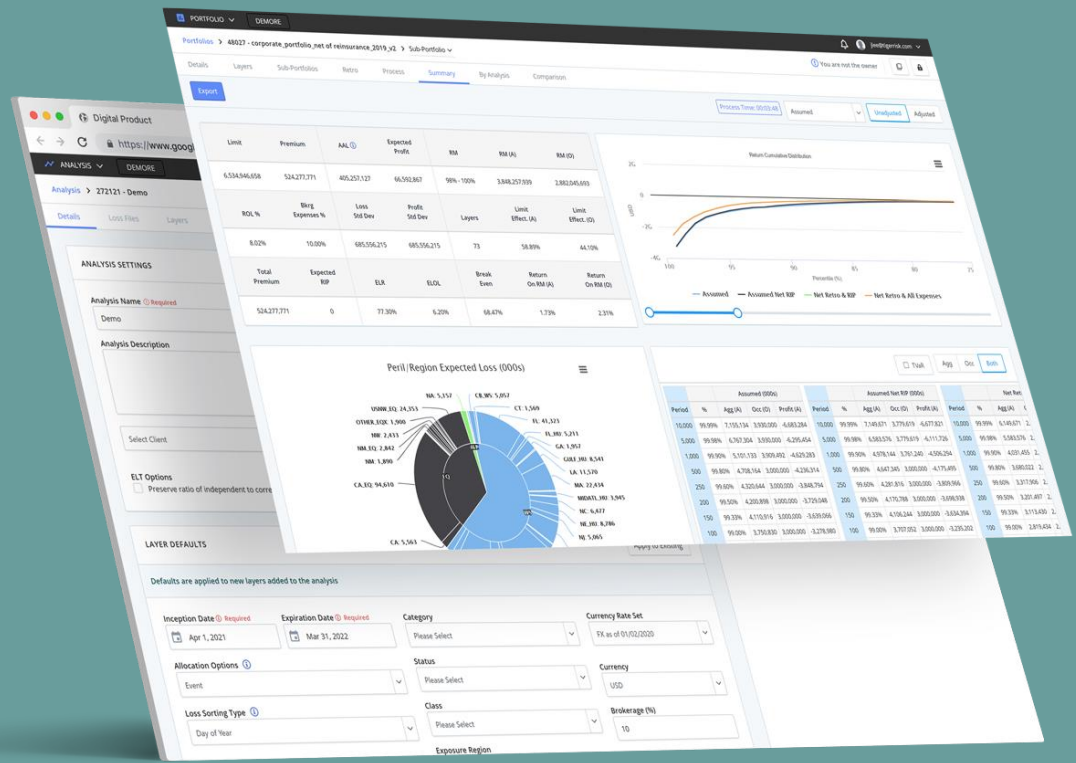
HTCMA

Supported seamlessly by central and regional teams

The team:

- An embedded offering within Howden Tiger with specialised, embedded teams.
- Designs and builds models for insurance risks for pricing, reserving, and capital optimisation.
- Assists clients determine formal risk appetite and tolerance statements to support the total cost of risk analysis.
- Delivers actuarial reviews to optimise client insurance programmes.
- Analytics, International is part of the global Analytics team supported by a wider offering in North America.
- Catastrophe Analytics includes 30+ experts in catastrophe modelling and R&D.

TigerEye



RDS Events

Avoids the maintenance and complexity of an in-house system

Seamless integration with API

Best-in class functionality

Outstanding user support

Robust simulation capabilities

Apply outwards structure to net down portfolios

Integrates seamlessly into existing workflows

Constant development

Easy-to-use, hosted system

Customised View of Risk

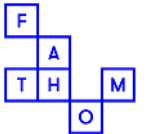
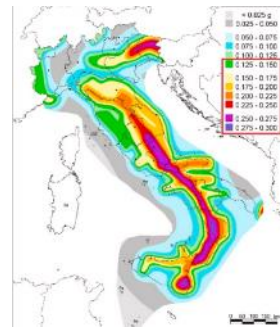
An industry leading risk management platform



TIGEREYE

Fast, flexible, robust analytics enabling reinsurance pricing, portfolio roll-ups and treaty evaluation

OUR CAT
MODELLING
CAPABILITY IS
EXTENSIVE



Catastrophe analytics, international

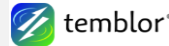
Our approach to supporting clients articulate a view of risk

- **We provide a comprehensive approach:** core vendors, left, and boutique vendors, right, have credible views of risk for all significant cat perils.

Core vendors



Boutique vendors



- In our experience **reinsurers typically prefer these independent vendor capabilities**, over that of broker models, in order to be able to roll-up with the rest of their portfolios and achieve technical price consistency.
- When needing to articulate a view to reinsurers or for internal purposes **we can help you to adjust the catastrophe models, ensuring:**
 - i.) they reflect recent experience,
 - ii.) unique portfolio characteristics are well captured,
 - iii.) scientific updates are incorporated giving the latest view of the hazard.

HOWDEN TIGER INTERNATIONAL ANALYTICS LEADERS - London



Man Cheung
Chief Actuary,
International



Iain Davie
Head of Cat
Modelling,
International



Tim Edwards
Head of Cat
Advisory and
EMEA Analytics

Actuarial

*Rating
agency*

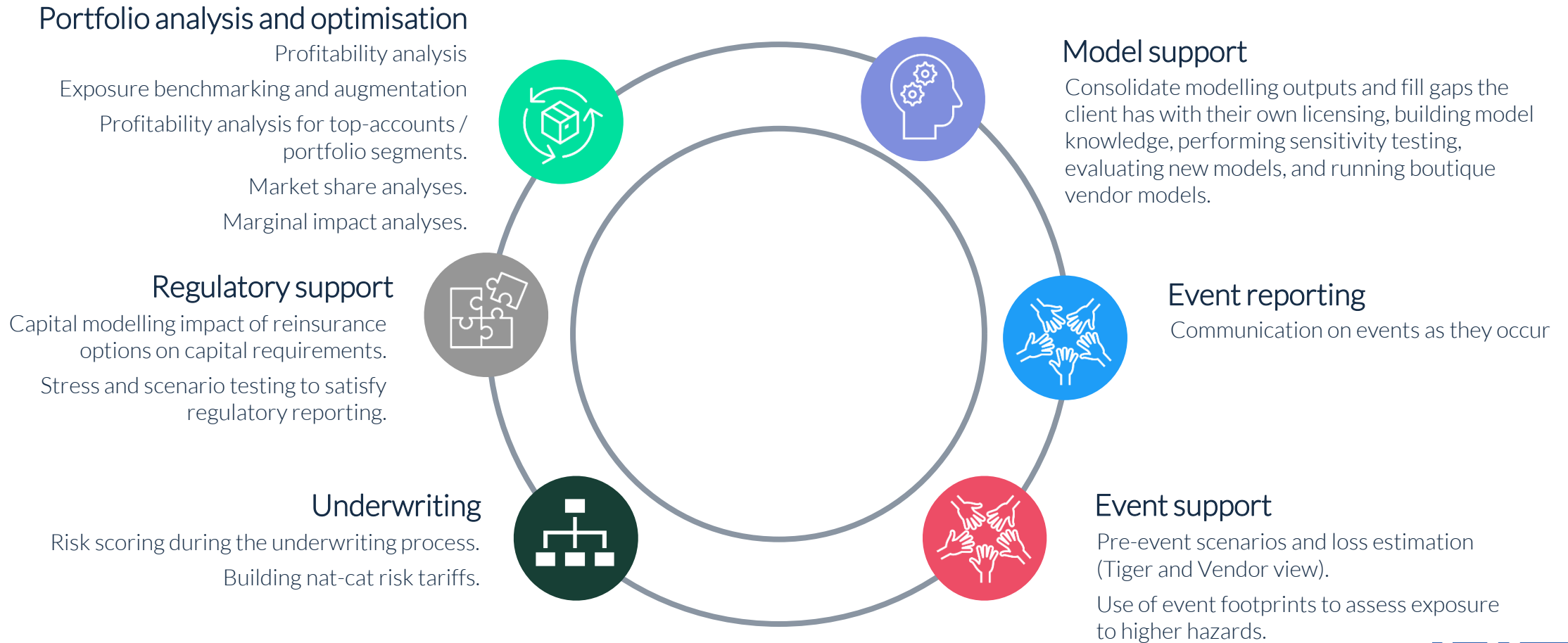
*Cat experts:
R&D &
modellers*

TigerEye

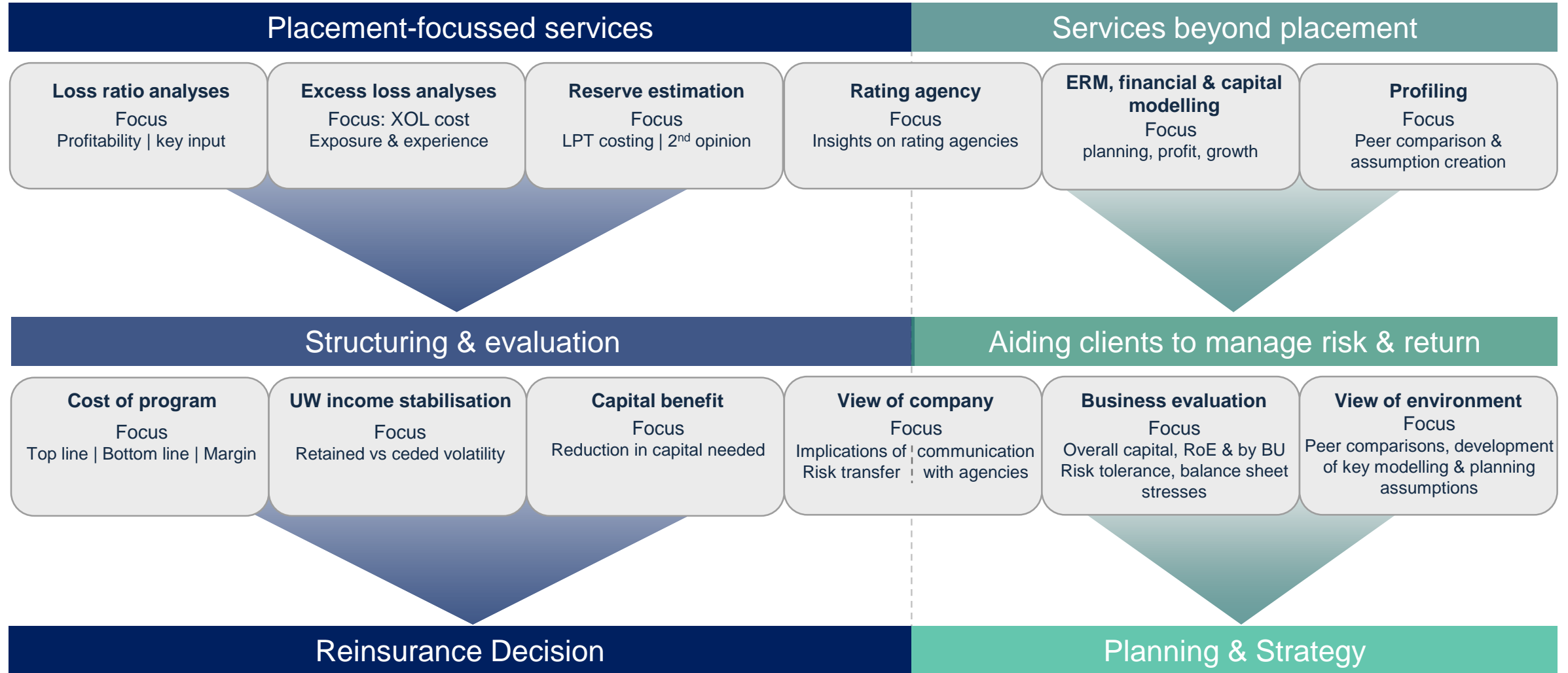
We offer a market-leading, experienced team head-quartered in London and with regional expertise in local offices

Property analytics

Howden Tiger's leading property analytics offerings provide clients with insight and support

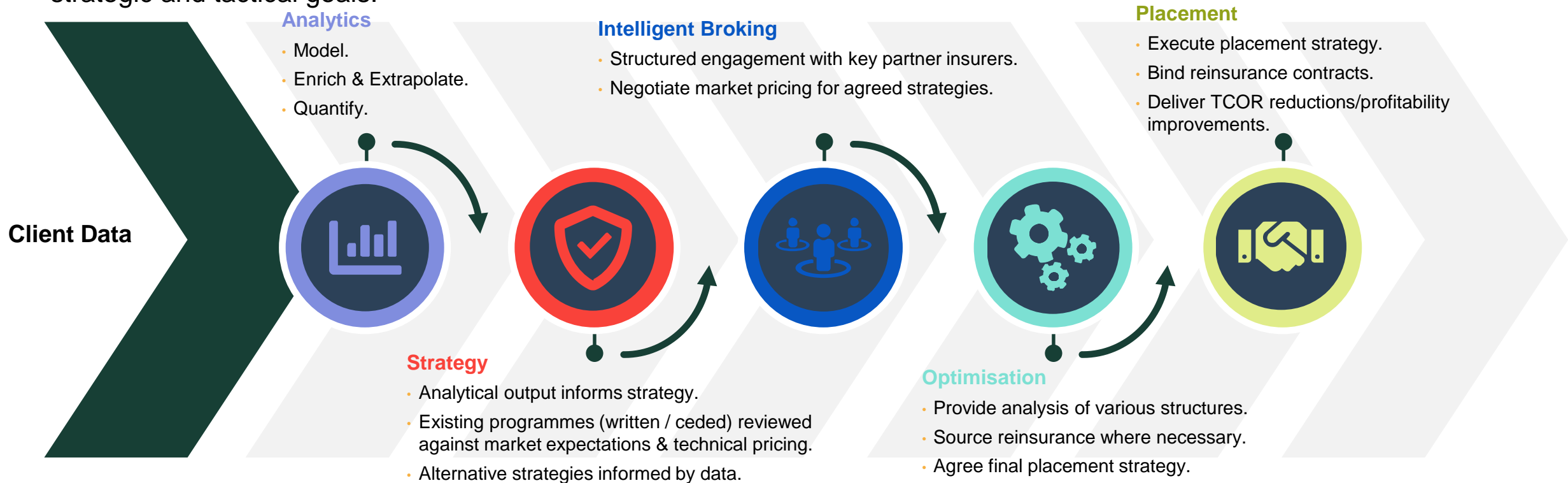


Actuarial capabilities in detail



Partnership

Consistent with our informed broking approach we work with our clients to jointly design an optimum insurance programme and market strategy which is fit for purpose, aligned with corporate appetite that best achieves its strategic and tactical goals.



Different techniques used for different risks.

Howden Tiger's global analytics team

ANALYTICS: a front-line client & broker service

NORTH AMERICA TEAM

Nathan Schwartz – Global Head of Analytics

>30 cat experts: R&D & modellers

>10 actuaries

>3 rating agency

INTERNATIONAL CENTRAL TEAM

Analytics, International

Man Cheung
Chief Actuary,
International

Iain Davie
Head of Cat
Modelling,
International

Tim Edwards
Head of Cat
Advisory and EMEA
Analytics

4 Actuaries

30 Cat Modellers

External-facing, outstanding people tasked with understanding and responding to our clients' demands

EMBEDDED ANALYTICAL EXPERTISE

10 actuaries & cat experts delivering targeted analytics within broking teams

NON-TRAD. R/I

RETRO

CASUALTY

LEGACY

BINDERS

TREATY

FINANCIAL RISKS

CYBER

MARINE





PLUS... an expanding in-country WW capability with actuaries and cat modellers sat in our regional hubs

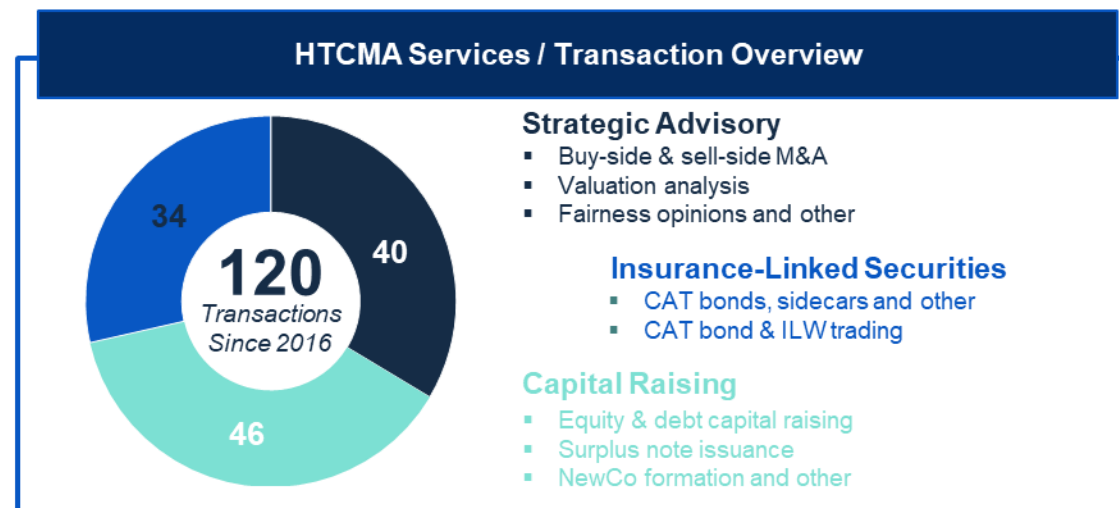
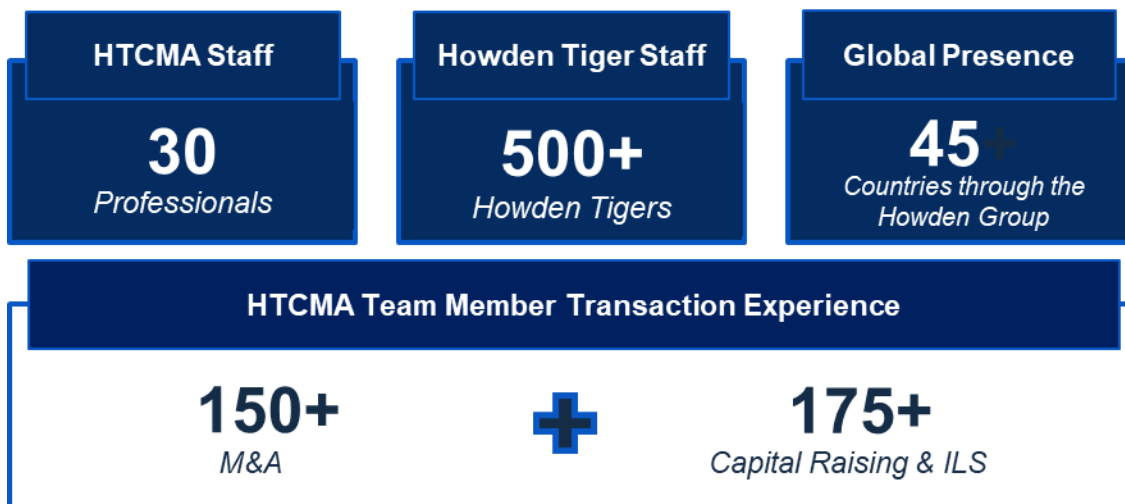
TIGER EYE TEAM

Dedicated cat modelling experts within Tiger Eye team

Howden Tiger Capital Markets & Advisory (HTCMA)

HTCMA is a market leading insurance-focused investment banking boutique

-  **A team of investment banking professionals exclusively focused on the insurance sector**
 - We cover a broad range of insurance companies – public and private carriers, mutuals, InsurTechs, and insurance services
-  **With unparalleled experience and expertise**
 - Our team has advised on many of the most prominent transactions globally in the industry
-  **Leveraging the expertise and resources of the Howden Tiger organization, 4th largest global reinsurance brokerage firm**
 - Cutting-edge industry analytics, including actuarial, pricing, reinsurance, CAT modeling, rating agency experience
-  **Long-term relationships with many of the world's largest insurers and reinsurers**
 - Roster of high profile, marquee references



HTCMA: recent capital raising transactions

HTCMA is a frequent advisor of capital raises, with success across the spectrum of insurance investors



\$3B+ Capital Raised Since December 2020

- Private Equity / Family Office / Pension Plan
- Bank / Private Credit
- Asset Manager
- ILS Fund
- Insurer
- Various

Capital Raising

ILS



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