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GIRO Conference 2022

21–23 November, ACC Liverpool

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Lloyd’s Update

2022

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Agenda

1) **Opening Remarks**

2) **Update on pricing maturity matrix**

3) **Key Uncertainties**
- Inflation – Pricing Perspective
- Classes of business – Reserving Perspective
- COVID-19 – Update
- Ukraine – Reserving and Capital Perspective
- General economic environment – Capital Perspective

5) **Final Remarks**
- Questions & Answers

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Opening remarks

Louise Bennett
Head of Reserve Modelling

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Priorities for 2022 for Actuarial Oversight

Full Implementation of principle-based approach

Only actual performance drives your capital and plan

Reducing complexity and increasing transparency

Non-natural Catastrophes (incl. Cyber) Thematic Review Capital

Social Inflation Thematic Review Reserving

Integration of Actuarial Oversight Team

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Priorities for 2022 for Actuarial Oversight

Inflation Reviews (Thematic and Adhoc)

Ukraine Reviews

Full Implementation of principle-based approach

Only actual performance drives your capital and plan

Reducing complexity and increasing transparency

Integration of Actuarial Oversight Team

2022 has been dominated by uncertainties

Reserving, Capital and Pricing environments are changing quickly

Economic Environment	Climate Change	Geopolitical uncertainty
Social inflation	Major events	Rate changes
Business mix	Re-underwriting	New types of risk

Still need to make reasonable assumptions, even if it’s difficult!

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Principle-based approach to Oversight

Laurence Loughnane
Head of Pricing

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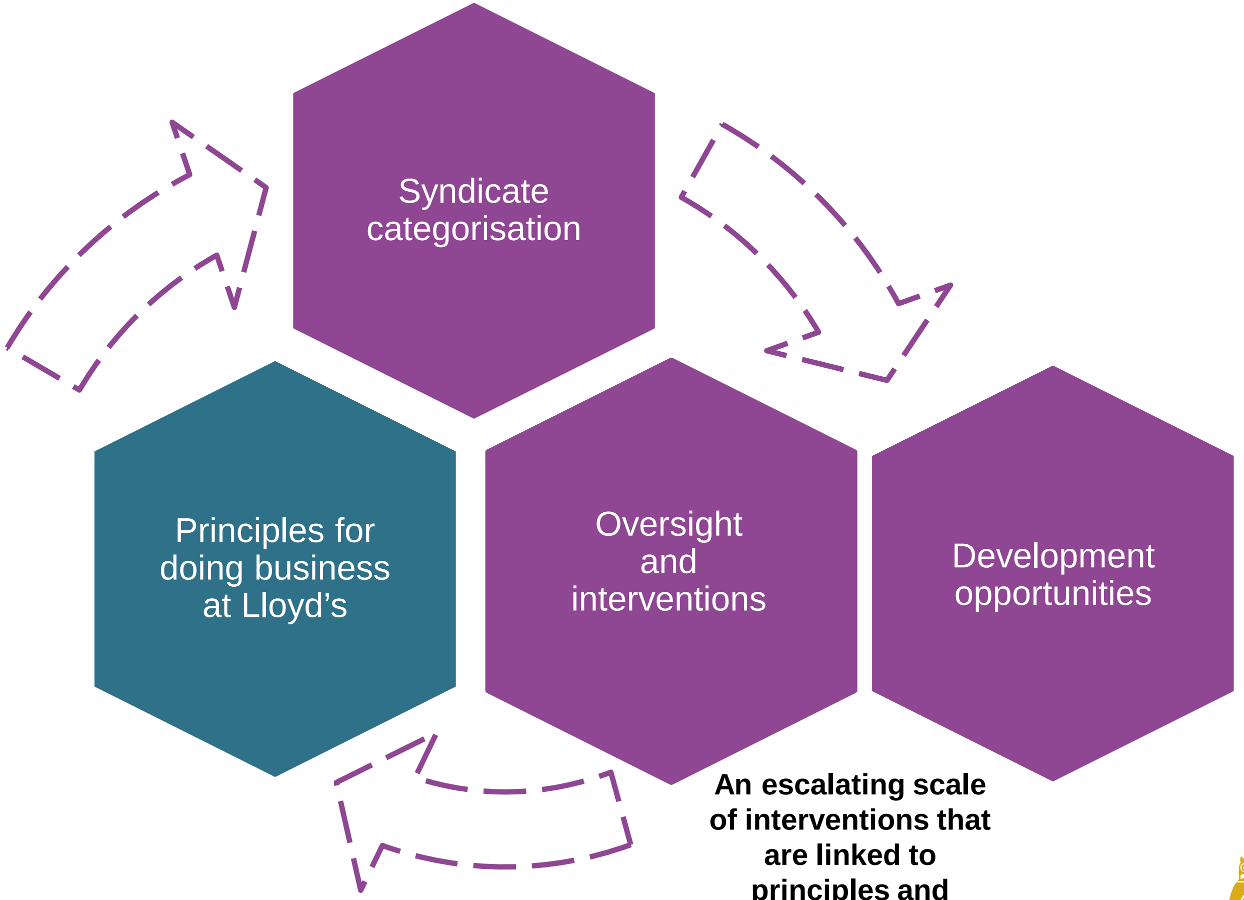
Oversight Framework

Lloyd’s has moved to a principle-based approach

Principles defined across all oversight areas

PERFORMANCE	1. Underwriting Profitability
	2. Catastrophe Exposure
	3. Outwards Reinsurance
	4. Claims Management
	5. Customer Outcomes
	6. Reserving
SOLVENCY	7. Capital
	8. Investment
	9. Liquidity
OPERATIONAL	10. Governance, Risk Management and Reporting
	11. Regulatory and Financial Crime
	12. Operational resilience
	13. Culture

One consistent approach to syndicate and agent categorisation based on assessment against Principles on a qualitative and quantitative basis



Growth and development opportunities for the best run businesses

An escalating scale of interventions that are linked to principles and overall syndicates categorisation

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Pricing Maturity Matrix

Lloyd’s has developed a Pricing Maturity Matrix to assess an individual syndicate’s pricing capability

- 3 key focus areas – Data & Infrastructure, Technical, Application
- 13 underlying components with guidance ranging from Foundational to Advanced
- Lloyd’s pricing resource/team
- 87 Assessments in H1 2022
- Cyber & Reinsurance themed reviews 2023
- Focus on: Risk Adjusted Rate Change, Benchmark Achievement Ratio, Inflation

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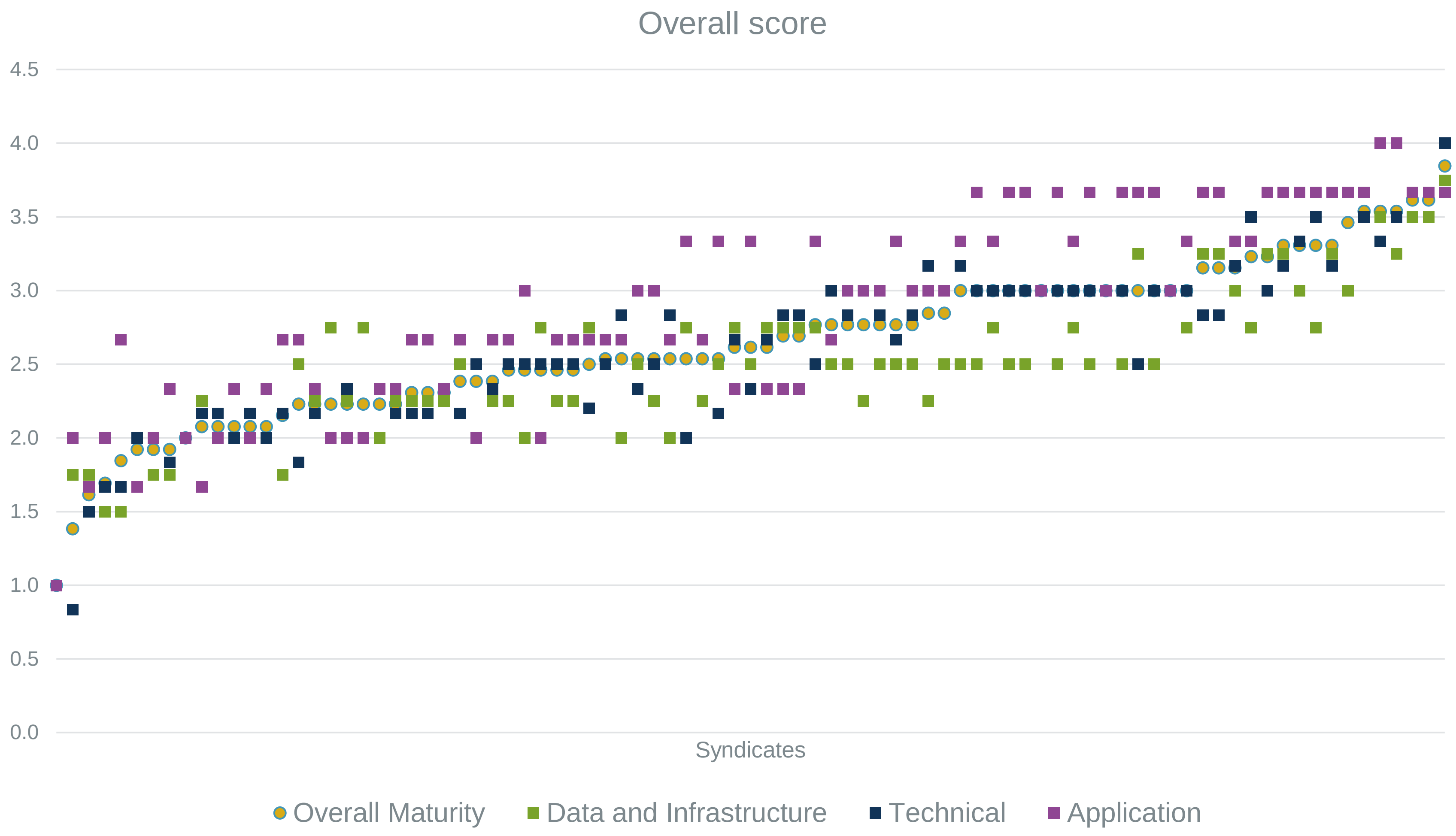
Syndicate Assessment Scores

Distribution of Scores



- 87 assessments conducted
- Anonymised distribution of scores (left) shows spread of maturity by syndicate
- Yellow circles show overall maturity
- Coloured squares show underlying components of the Matrix
- Range of capabilities in the market reflect the mix of business and expected maturity of syndicates
- Application tends to have a higher maturity than Data and Infrastructure

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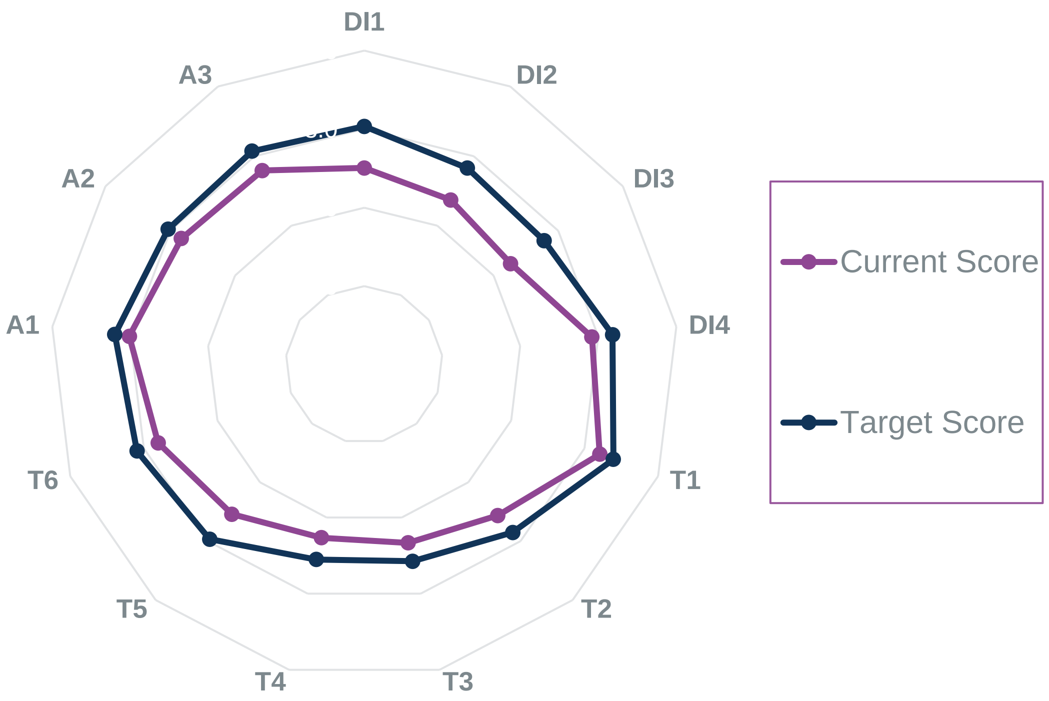
Syndicate Assessment Scores – capability improvement

Target Vs Actual Maturity



- Chart indicates where capability improvement gaps were agreed
- Spokes indicate the underlying components of the PMM – DI (Data and Infrastructure), T (Technical) and A (Application)
- Capability improvement plans in place across all syndicates and dimensions

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Insights/Trends

Data

- Data centralisation, bringing together disparate data sources
- External data increasingly utilised
- Data mining of unstructured data

Pricing Models

- Increasing robustness of models
  - Re-platforming pricing tariffs
  - Stronger governance around Excel spreadsheets

Portfolio Management

- Embedding pricing metrics into portfolio management
- Stronger feedback loops
  - Pricing, Reserving and Capital
  - Planning, Claims and Exposure Management

Technical Price

- Most syndicates have views of cross-cycle required return
- Increased granularity of risk modelling and components of technical price

Statistical Techniques

- Statistical analysis embedded in most syndicates
- Small number of syndicates are using Machine Learning

Pricing governance

- Structured process for model validation and development
- Assessment of model usage
- Training on pricing methodologies and metrics

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Classes of business – Reserving Perspective

Mairead Skelly
Actuary, Reserve Modelling

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Annual Central Reserving Exercise

Purpose and uses

Provides an internal view of market level reserves

Validates that market's BE reserves are sufficient

Independent of syndicates reserve estimates

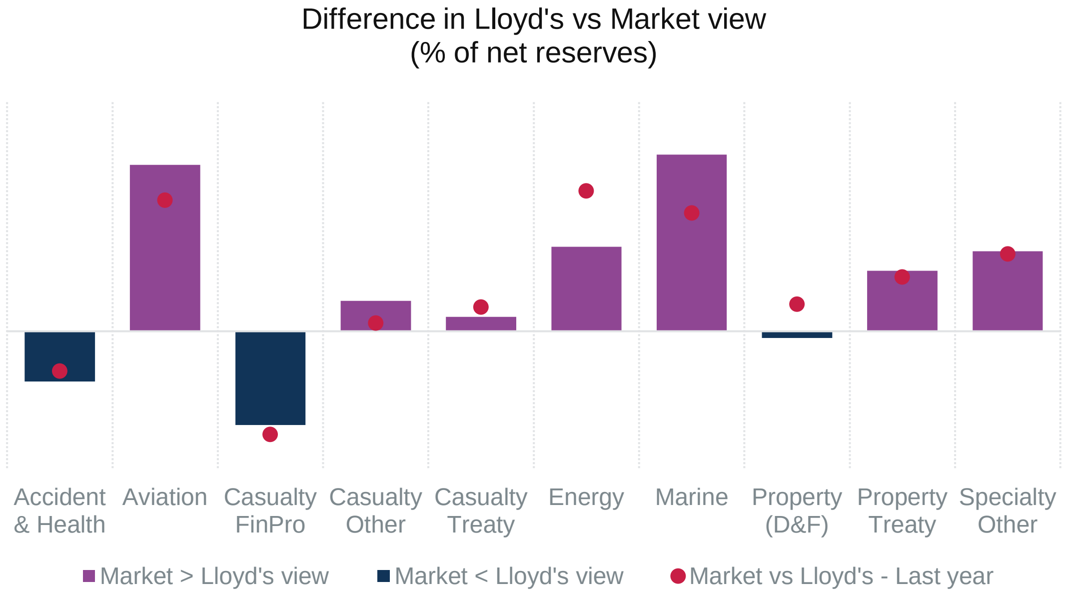
Identifies areas of concern for oversight purposes

Outputs used for business planning, benchmarks etc.

Summary of Results for Central Reserving Exercise

Best estimate reserves are sufficient at total level but class specific concerns are ongoing

- The market's best estimate reserves in aggregate continue to be in excess of our independent view. Our conclusions are very similar to last year
- Our best estimate for Accident & Health continues to be in excess of the market
- Concerns over Casualty FinPro remain, despite strengthening over the past year, due to a constantly evolving landscape. This will continue to be a key area of focus.



Reserving in an evolving landscape is challenging. Consideration of history and how the future may differ is required to set robust assumptions.

Note: This is the view based on our best estimate, but a wide range of reasonable alternative views could give rise to different conclusions.

No allowance has been made in these figures for the heightened inflationary environment in 2022, as the Exercise is based on 2021 YE information. For more information on the work done to quantify the impact, please see Workshop E2: Claims inflation, what are Lloyd's doing?

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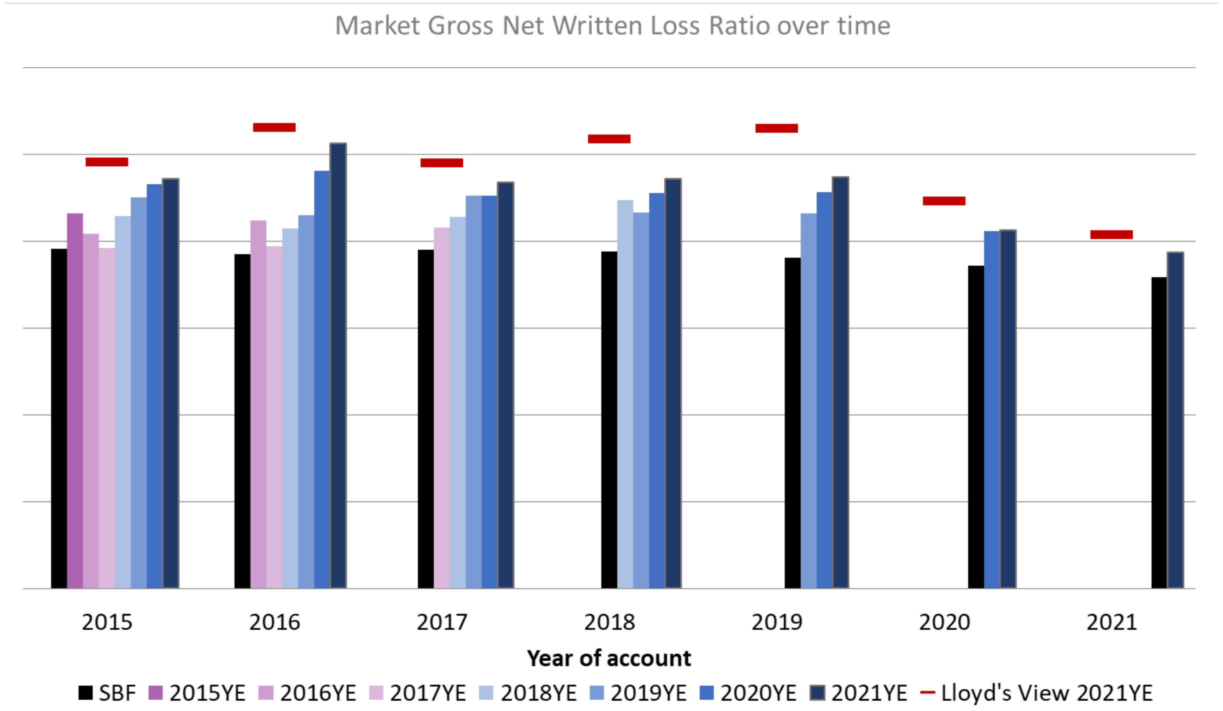
Concerns over Casualty FinPro continue

- Potential reserve deficiencies on almost all Casualty FinPro classes
- For all historical years of account, Market's view has increased from the initial estimates and business plans, bringing it closer to the Lloyd's independent view
- Market continues to have a very positive outlook
- Loss ratios are reducing significantly on recent years of account but still deteriorating
- Concerns over how the market is accounting for the future being different from past.



Appropriate justification should be provided for assumptions used including:
- Remediation allowed for in recent years
- Inflation expectations
- Rate change

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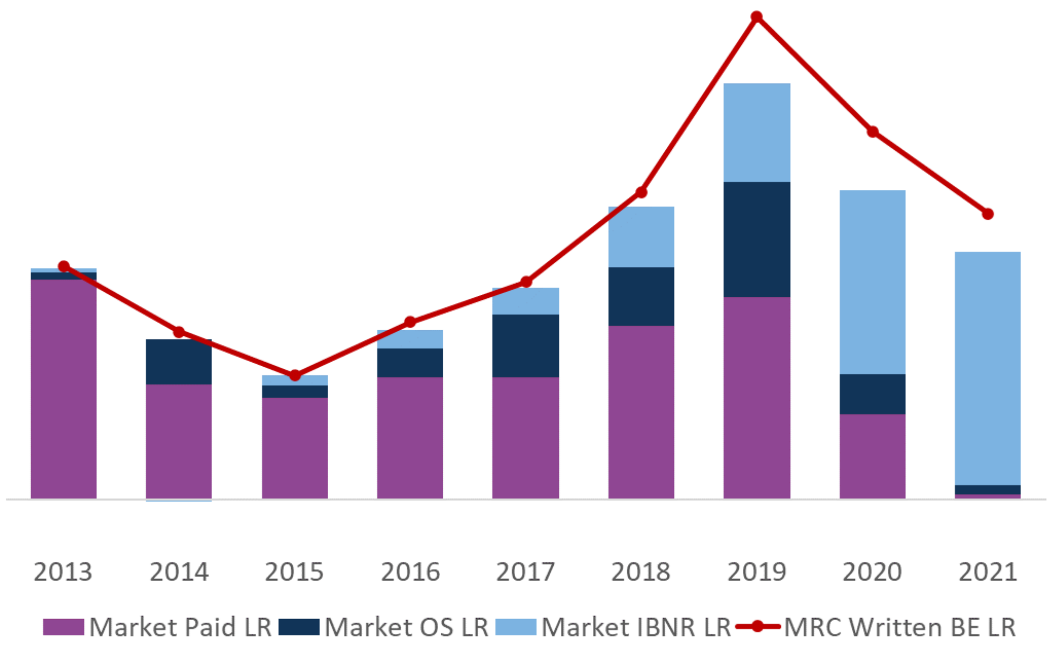
New types of risk

Rapid growth in Cyber has increased uncertainty on an already highly volatile class

- This class has seen rapid growth at Lloyd's in the last 10 years and has become the largest class in 2022
- It has experienced heavy losses globally, particularly since 2019
- Significant uptick in the number of ransomware attacks
- High level of uncertainty around new types of risks
- The length of tail for this class is still uncertain due to its relative immaturity and potential exposure to new risks.



Ensure new risks are appropriately considered. Understand the drivers of growth in the account and challenge assumptions on the most recent years of account

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Accounting for Rate Changes

Risk Adjusted Rate Change a source of uncertainty

- Significant rate changes planned for recent YoA in a number of classes
- Rate changes have fallen in last YoA after high increases in 2019 and 2020
- May not be justified to give full credit until evidence seen in data
- Consider input from underwriting/pricing
- Haircuts can be consistent with BE approach.

Consider how much RARC can be allowed for before it is fully reflected in data?

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Key lessons

Reserving in an uncertain world

Seek input from other areas of business

Consider appropriateness of loss ratios

Make explicit allowance for all areas of uncertainty

Quantify and communicate impact

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Major Losses

Kishan Patel
Senior Actuary, Reserve Modelling

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Ukraine Crisis: High level messages

Expected to be a major but manageable event

- We expect this to be a major but financially manageable event for the market in 2022
- Not a solvency or capital event for corporation or individual syndicates
- Aviation, Marine, Political Risk, Political Violence and Trade Credit classes are impacted
- Consequences for insurance market fluid and complex
- Operational challenges and economic uncertainty will persist

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Ukraine Crisis: Considerations for Reserving

We have set out some key areas we think should be considered for Ukraine reserving

Appropriateness of reserving assumptions

- Consideration of both earned and unearned losses
- Allowance for Direct and Indirect losses
- Outwards RI assumptions

Explicit, robust and sophisticated consideration of the uncertainty

- Compliance with UK GAAP and Solvency II require uncertainty to be factored in
- Probability-weighted approach should be used
- Stress & scenario analysis useful

Governance and Board challenge

- Clearly documented and justified approach
- Quantification of uncertainty surrounding estimates

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Ukraine Crisis: Considerations for Capital

We have set out some key areas we think should be considered for Ukraine in capital setting

Appropriateness of reserve risk

- Consideration of a wide range of scenarios, including very severe scenarios at appropriate return periods, including the potential for RI disputes
- Allowance for deteriorations on all affected classes concurrently
- Consideration of dependency with other reserve losses – relatively independent?

Appropriateness of premium risk

- Likelihood of similar events in the future – do any class underwriting parameterisations need to change?
- How are war losses modelled – appropriate non-natural catastrophe modelling?
- Review of between class dependencies

Governance and Board challenge

- Clearly documented and justified approach – alternatives should be quantified

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Key areas of uncertainty closely monitored over time

Uncertainty of loss estimates continues to reduce, highest uncertainty on reinsurance recoveries

Risk	Status	Explanation
1. Risk that initial loss estimates are understated resulting in required reserve strengthening due to:		
a) Uncertainty around the ongoing nature of the event and assumptions regarding timeframes	Low	• Following the lifting of all legal restrictions in the UK, the application of exclusions and reduction in exposure there are no material concerns around the risk of loss deterioration.
b) Legal challenge around application of wording	Low	• A number of ongoing court cases could, depending upon the judgement, result in material changes to estimated reserves (worse outcome)
c) Insufficient consideration of wider recessionary impacts	Low	• Do not believe the recent increases in inflation will significantly impact COVID losses • Increasingly, explicit Covid-19 recessionary impact allowances are no longer being held, instead these indirect impacts are held as part of general reserves.
2. Risk that uncertainty around reinsurance contract interpretation / application leads to delays in payment and/or reduction in expected recoveries	Moderate	• Whilst the recovery ratio remains relatively stable at 44% of the gross loss at 2022 Q2, recovery risk continues to be considered as moderate, but will become clearer as more loss settlement invoices are issued and payments received. • 42% of total expected recoveries received to date • Managing agents reporting the highest levels of Aged Debt advise that positive progress has been made with many reinsurers settling previously aged debt.

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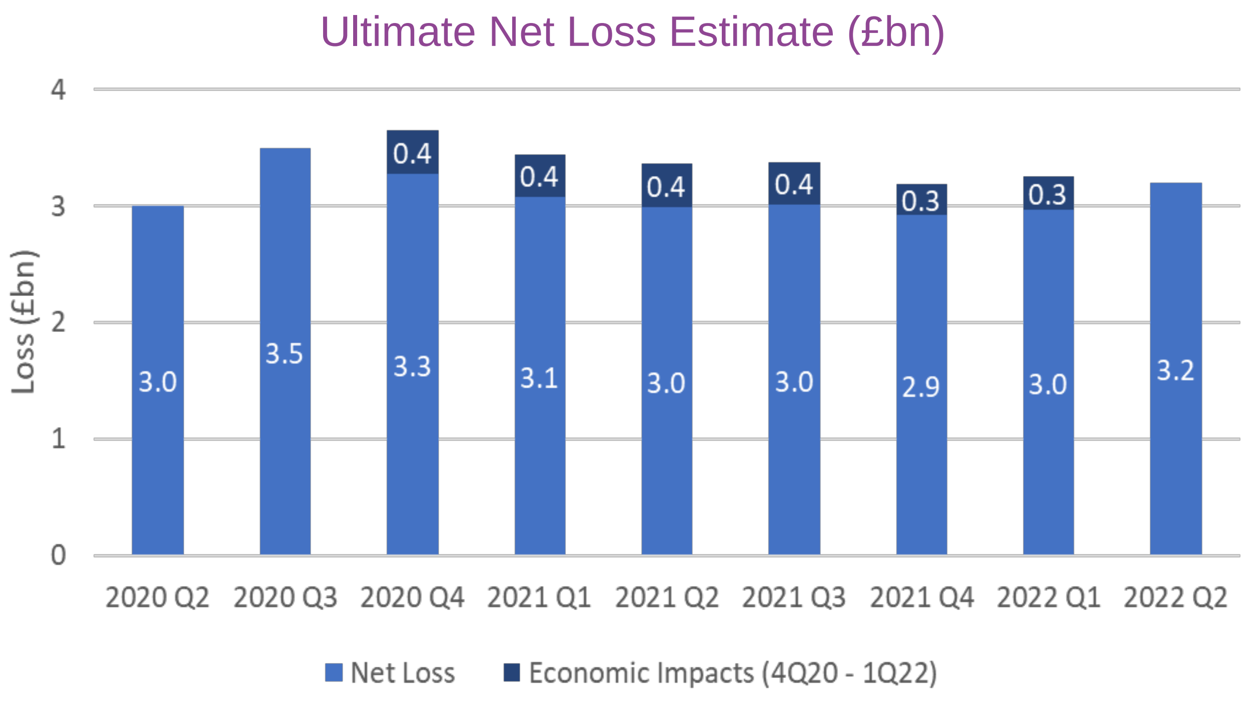
CORO Ultimate Loss Estimate

Loss estimates and economic impacts have remained broadly stable over time



Figures use FX rates at time of reporting

Economic Impacts no longer requested split out from 2022 Q2

- Ultimate loss estimates and economic impacts have remained stable over the period shown.
  - Net ultimate loss of £3.2bn and gross ultimate loss of £5.8bn as at 2022 Q2.
- Gross paid claims of £3.3bn now represent 58% of the gross ultimate loss.
- IBNR decreasing in line with expectations over time - 35% of the gross ultimate loss and 27% of the net ultimate loss at 2022 Q2.

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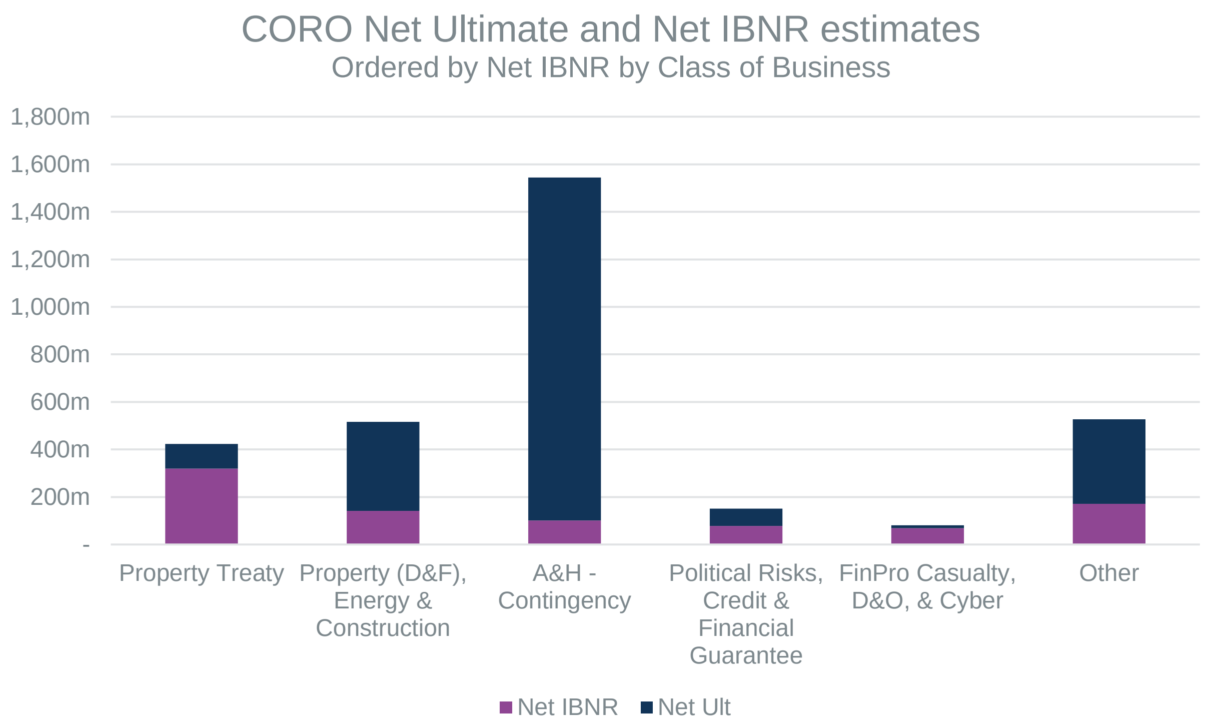
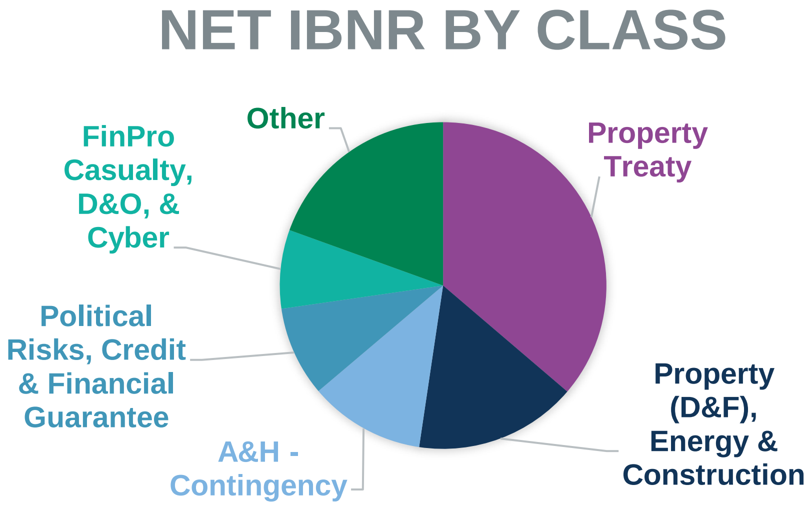
CORO Net IBNR by Class

IBNR percentage held varies significantly by class



- Property Treaty has the highest proportion of IBNR remaining
- Contingency is the most impacted class but also the most developed



Syndicates holding significant IBNR for the following reasons:

- Court Rulings / Test Cases
- Long Tail on Reporting
- Slow Inwards RI Development
- Other - such as specific future events without exclusions clauses (e.g. Olympics), indirect impacts, uncertainty around RI recoveries, and some prudence

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General Economic Environment

Mirjam Spies
Head of Actuarial Oversight

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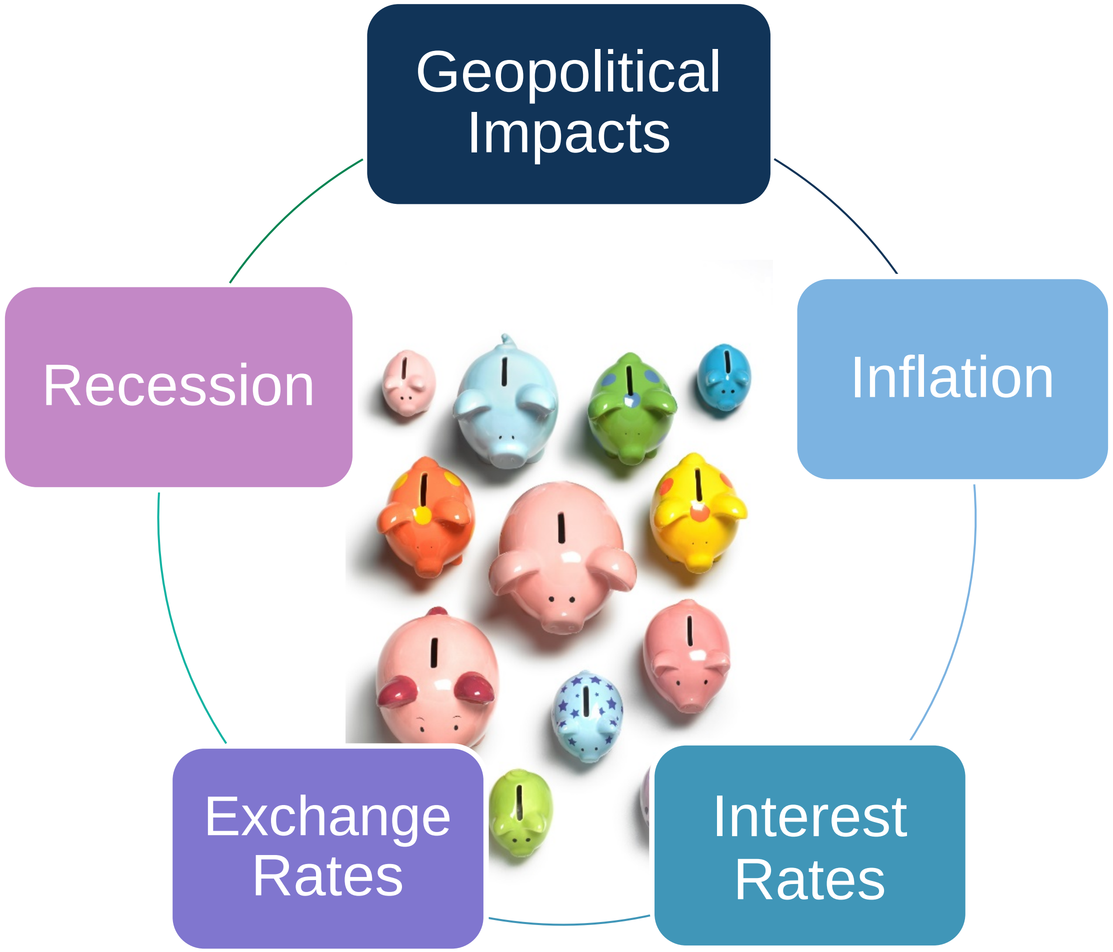
Economic environment

Increasing uncertainty adds complexity



Interest Rate increases

What does it mean?

- Higher investment returns – higher profit for insurers
- Mark to market losses on balance sheet in short-term – more stability on SII balance sheet due to discounting
- Lower capital requirement due to increased profit on mean market risk (all else equal)
- Capital considerations for long-tailed lines will look more favourable again – how does that change view of return on investment by class?
- How does this change investment strategies?

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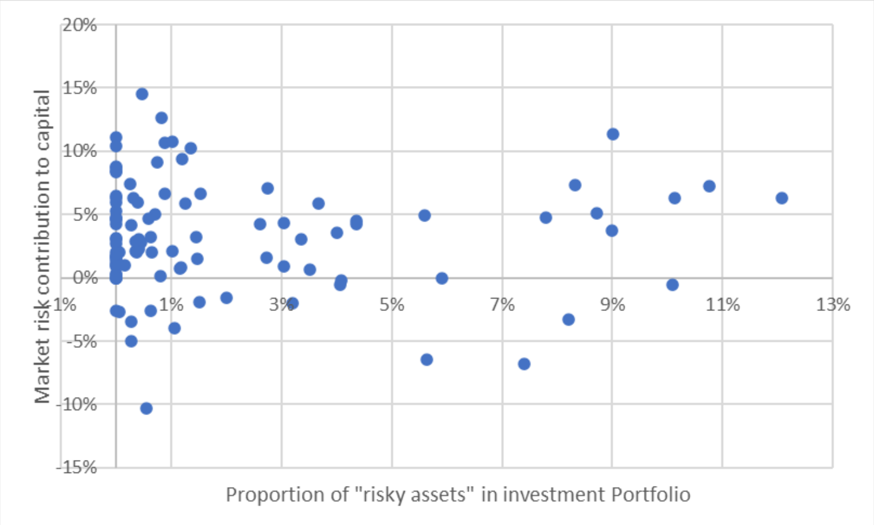
Capital – additional risk should add additional capital

Market Risk generally not a material contributor to capital

- Market average contribution around 2-3% over the years and remained stable

Can market risk reduce capital?

- Market risk contribution to capital can become negative in models when expected income outweighs the risk (credit risk/FX risk/default risk).
- Negative contributions were generally NOT accepted by Lloyd's – but change in approach for 2023 YoA.



Is your contribution appropriate?

- Dependency between market and insurance risk important.
- Approach across the market not standardised
- Inflation and interest rates often negatively correlated - however:
  - Insurance event (Ukraine) driving market volatility (widening credit spreads)
  - Market risk losses driving FinPro losses
  - Market volatility driving recession and hence insurance losses.

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Change in Exchange Rates

Are there any impacts?

- Lloyd's as a market well matched with a large quantity of overseas denominated assets
- Capital requirements are adjusted for FX rates quarterly
- Recent changes represent a data point that might not be captured in current models
- Expenses in GBP lower compared to income – reduction of expense ratio

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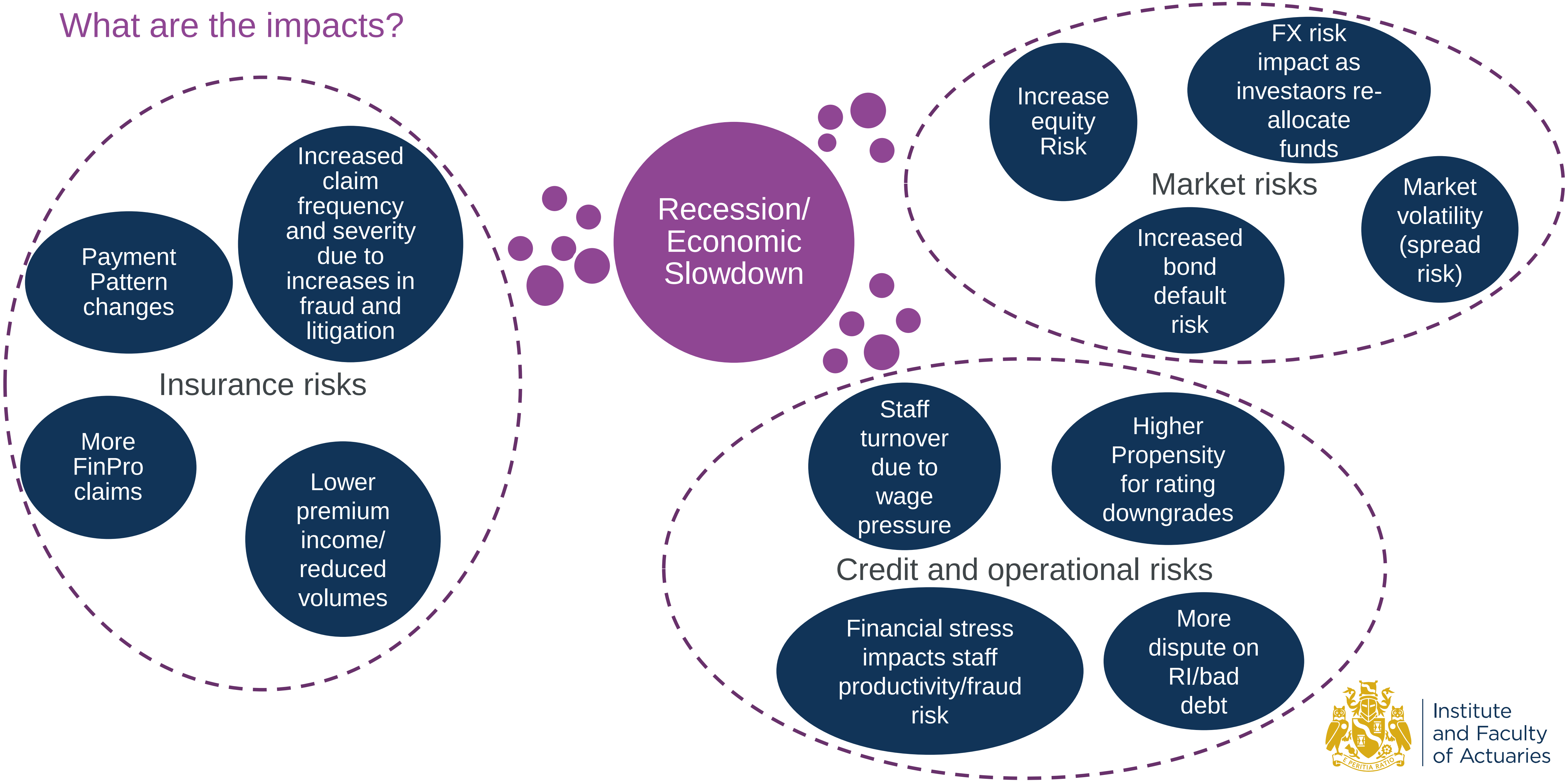
Recession/Economic Slowdown

What are the impacts?



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Final Remarks

Louise Bennett
Head of Reserve Modelling

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Summary

Principles-based oversight has been implemented

- Still focussed on reducing complexity and increasing transparency
- Has enabled us to respond to the changing environment

2022 has been a very challenging (but also interesting) year!

- Major losses and economic uncertainties have dominated our focus
- Evolvement of actuarial skills... focussed on the future as well as the past!
- Key judgements need to be justified and communicated
- Even though some challenges are difficult to quantify, we still need to try

Priorities for 2023 for Actuarial Oversight

- Inflation Reviews
- Ukraine Reviews
- Re-focus Oversight
- BAU – catch up
- Climate Change

Integration of Actuarial Oversight Team

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Questions

Comments

Expressions of individual views by members of the Institute and Faculty of Actuaries and its staff are encouraged.

The views expressed in this presentation are those of the presenter.

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Thank you

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