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Lloyd’s Non-Executive Director Forum

2022

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Agenda

Opening Remarks

1. **Has your reserve strength changed given the increased uncertainty in the market?**

2. **Have you planned, priced, reserved and capitalised appropriately for Inflation?**

3. **How are you dealing with the ongoing Major Events?**

4. **What do you need to think about in terms of the wider economic developments?**

Final Remarks
Questions & Answers

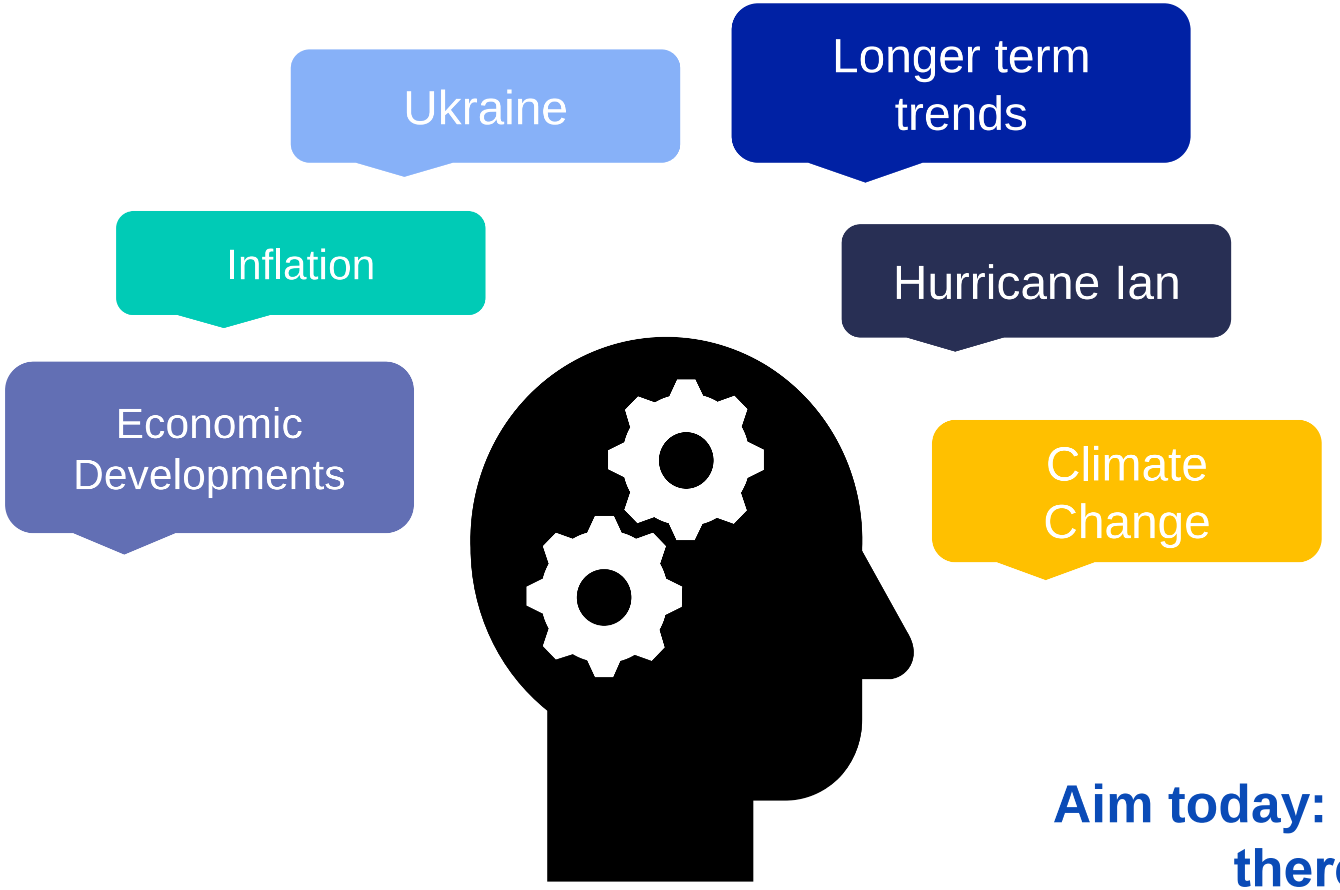
Opening Remarks

Mirjam Spies

Head of Actuarial Oversight

2022 has been a “challenge”

Macro-economic and event uncertainty a key feature of 2022



There are several complex areas to consider for 2022 – how to “get it right”?

It is difficult - but can't ignore them.

Have to make judgements and consider these areas.

Find the right balance – consideration without excessive prudence.

Aim today: Arm you with good questions – even if there isn’t always one clear answer.

Is your reserve strength changed given the increased uncertainty in the market?

Hazal Karakurt

Senior Actuary, Reserving Modelling

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Themes across classes

Evolving landscape in reserving

Assumption setting in recent years

Tail length

Economic Inflation

New types of risk

Social Inflation

Climate Change

Re-underwriting

Risk Adjusted Rate Change

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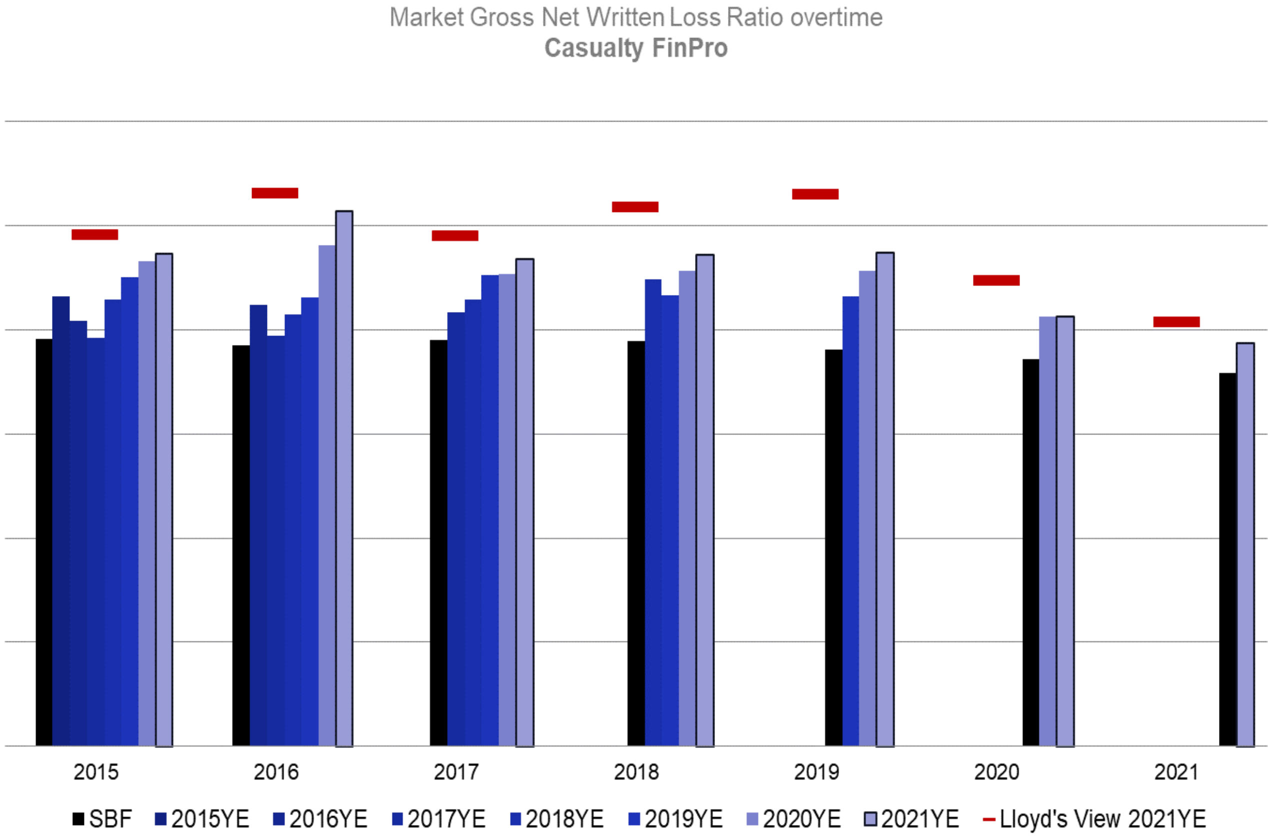
Concerns over Casualty FinPro continue

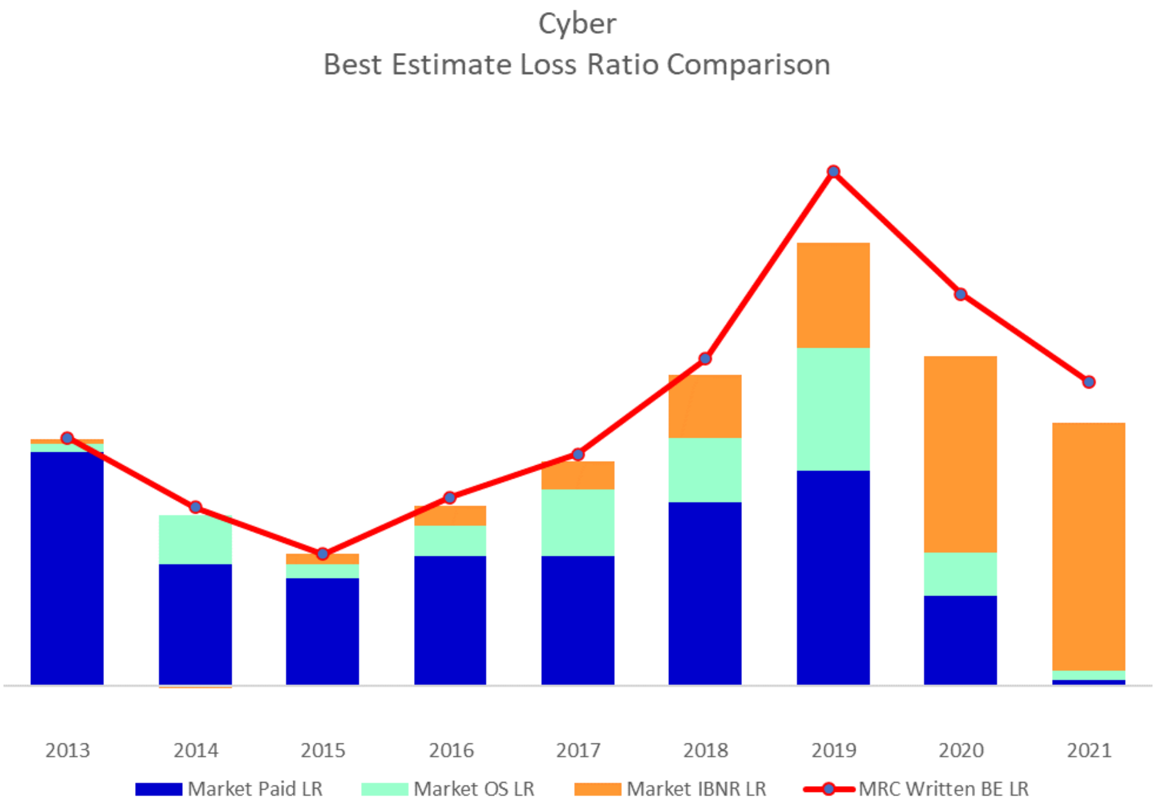
- Potential reserve deficiencies on almost all Casualty FinPro classes
- For all historical years of account, Market's view has increased from the initial estimates and SBF, bringing it closer to the Lloyd's independent view
- Market continues to have a very positive outlook
- Loss ratios are reducing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



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

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

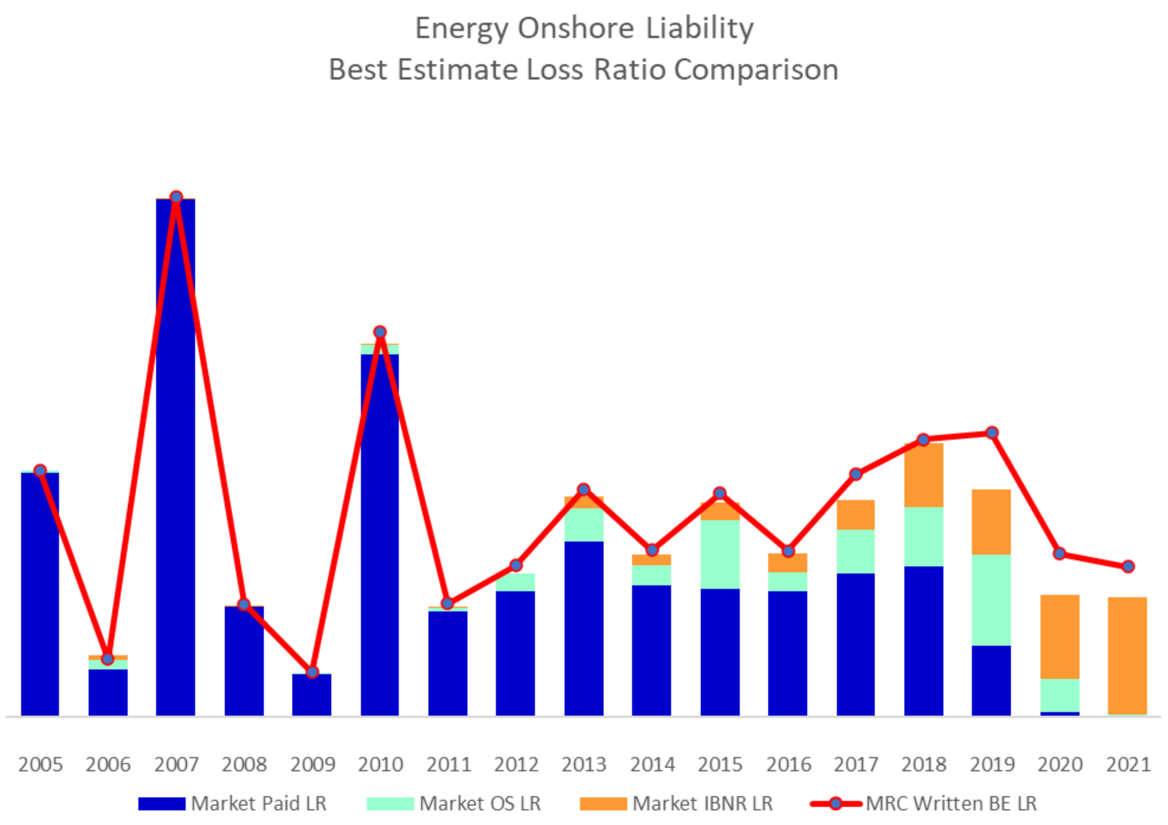
- This class has seen rapid growth at Lloyd's in the last 10 years and has become the largest class in 2022
- It has experienced heavy losses globally, particularly since 2019
- Significant uptick in the number of ransomware attacks
- High level of uncertainty around new types of risks
- The length of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



The range of reasonable loss ratios for the most recent year of accounts is wide. Loss ratios selected should be understood by the Board and well challenged.

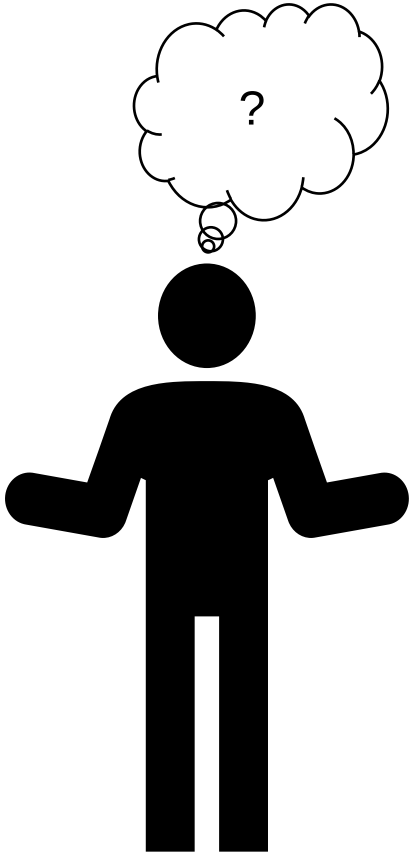
Energy Onshore Liability – poor historical performance with longer tail than expected

- Loss making class since 2011
- Continues to see unfavourable experience
- Our assumptions have been strengthened to reflect recent development
- However, market loss ratios in more recent years continue to be lower
- Can the improvements on the most recent years be justified by re-underwriting?



Re-underwriting has been significant. Do IELRs reflect the length of the tail?
Has climate change and social inflation been appropriately considered?

Assessing reserve appropriateness with the current changing landscape



Examples of questions the Board could consider asking:

1. What are the differences between the historical, plan and reserving loss ratios and are these differences justifiable?

2. Has the business considered how the claims environment might differ in the post major events such as Covid, Ukraine and Hurricane Ian?

3. How is the level of uncertainty associated with the Cyber class being accounted for in the reserving process?

4. How do reserves allow for the fact that the future will differ from the past?

5. How have you considered climate change in reserves?

6. How have emerging trends, claims inflation, rate changes, business mix changes and re-underwriting been accounted for and what are the justifications for the way these have been allowed for?

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Have you planned, priced, reserved and capitalised appropriately for Inflation?

Nikhil Shah

Senior Manager, Syndicate Reserving

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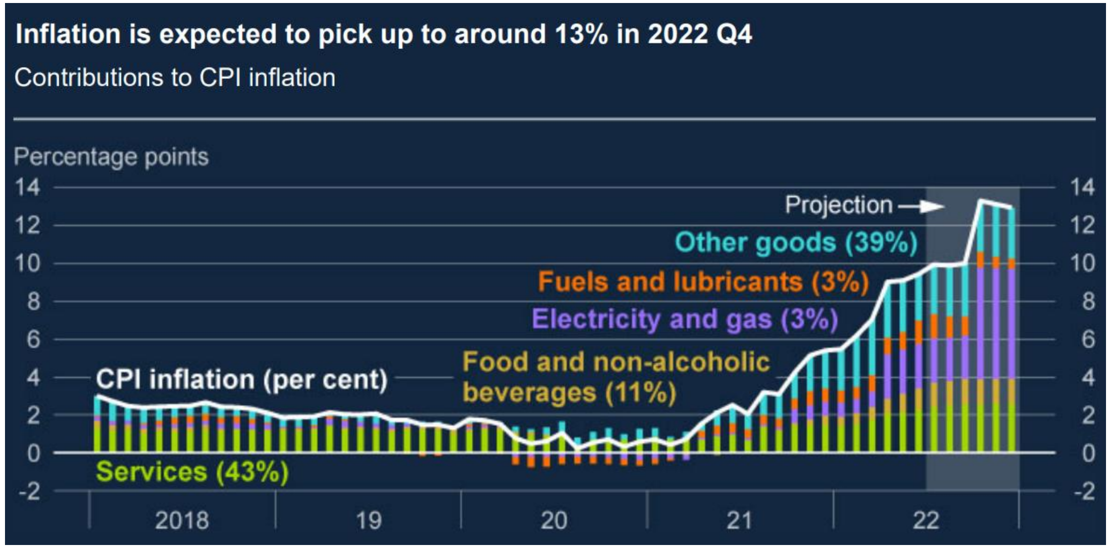
General background

Uncertainty around economic inflation persists

Bank of England Inflation Projection



Source: Bank of England Monetary Policy Report August 2022

Institutional Projections

Goldman Sachs

22%

- Forecast that UK inflation could hit 22% in the early months of 2023 if energy prices continue to climb.

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18%

- Forecast that UK inflation could hit 18% in the first quarter of 2023, while the retail prices index inflation rate could soar to 21%.

A range of views above highlight the continued uncertainty on future economic inflation assumptions

What does this actually mean for <u>claims inflation?</u>

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Inflation impacts MOST areas of the business

Is there a holistic approach to inflation across the business?

Offense

Planning & Pricing | Underwriting | Exposure Management | Investments | Budgets

Defense

Accounting | Reserving | Claims

Capital

Does the business have a joined up approach and view on Inflation?

Quick refresh: Lloyd's inflation review and communications

Presentations, report and guidance issued across Reserving, Capital & Planning

Reserving

- Thematic review on claims inflation report (Q2 2022)
- Lloyd's Market Presentations
  - LMA Finance Committee NED session (June 2022)
  - London Market Actuaries Group (July 2022)
  - General Insurance Actuarial Conference (November 2022)
- Reserving Technical Guidance Issued (June 2022)

Capital

- Thematic review on claims inflation report (Q2 2021)
- Lloyd's Market Presentations
  - General Insurance Actuarial Conference (October 2021)
  - General Insurance Actuarial Conference (November 2022)
- Capital Technical Guidance Issued (July 2022)

Planning

- SBF Guidance updates for 2023 (August 2022)

Plus the **PRA Dear Chief Actuary Letter** (October 2022) - with reference to Lloyd's Reserving Technical Guidance

Link to Lloyd's referenced items above here

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Lloyd's expectations of syndicates

Lloyd's has issued guidance on Reserving, Capital and Planning for inflation allowances

Reserving

Syndicates are expected to:

- Consider inflation explicitly as part of the best estimate reserving by class of business and geography
- Be able to clearly explain how inflation has been allowed for to allow challenge from various stakeholders
- Take a considered and balanced approach to allow for inflation which reflects the specificities of your risk profile

Capital

Syndicates are expected to:

- Reflect the current economic conditions in their capital models
- If used, ensure that the economic scenario generator (ESG) is appropriate and validate the outputs
- Perform sensitivity testing on inflation volatility
- Conduct Stress and Scenario tests related to the heightened economic inflation and potential for recession

Planning

Syndicates are expected to:

- Consider claims inflation explicitly as part of business planning by class of business
- Report on how inflation assumptions have been made
- Understand inflation captured within exposure changes versus other inflationary pressures that may be need to be priced for

How to determine claims inflation allowances (for past and future claims)?

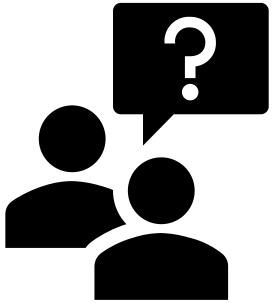
Joining the dots across the business

There needs to be a joined up approach across the business as the outputs are interlinked

Lloyd's guidance:

Syndicates need to determine explicit allowances on claims for the change in inflationary environment.

Q: How?



Assessment to determine explicit allowances

What are the key drivers in different classes for claims inflation?

Current Year / Prospective Year

Prior Years of Account

Outputs

Plan LRs

Cat LRs

Reserving IELRs

Capital Model LRs

Case Reserves

IBNR

Business Owner

Underwriting

Exposure Management

Reserving Actuaries

Capital Actuaries

Claims

Reserving Actuaries

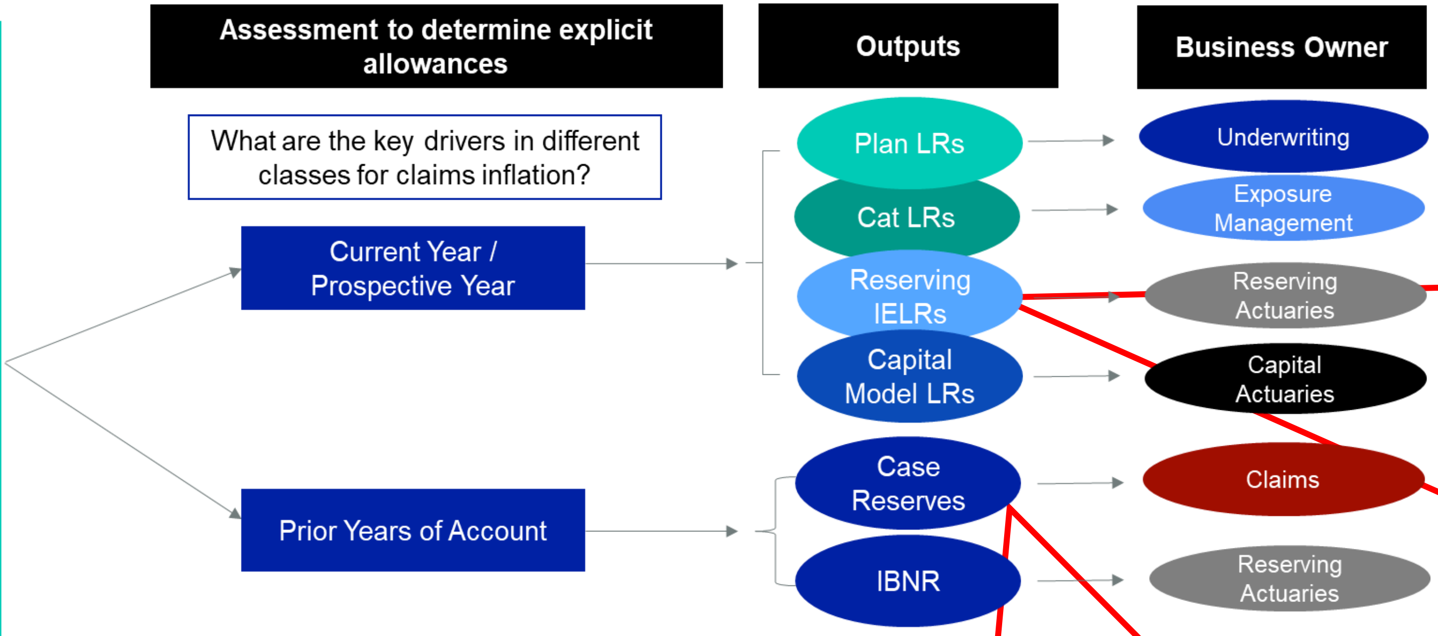
Why joining the dots is important

Ensures that inflation allowances are robust and any differences in view are known to the business

Lloyd's guidance:

Syndicates need to determine explicit allowances on claims for the change in inflationary environment.

Q: How?

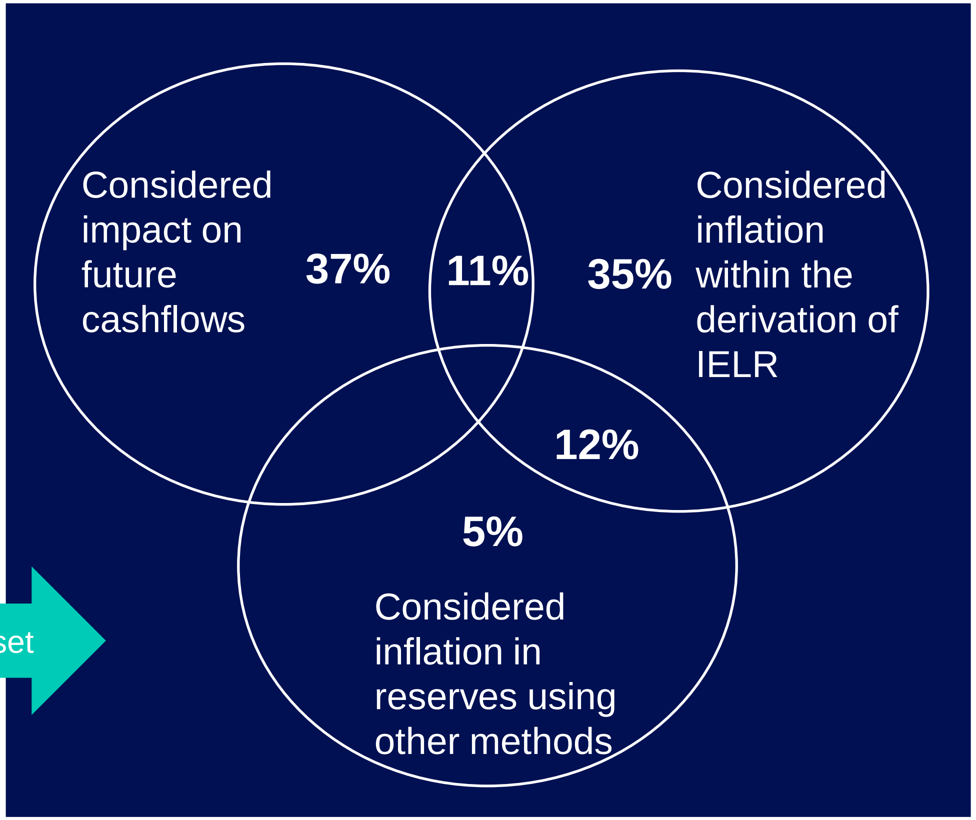


- How have historical implicit inflation allowances been determined?
- What's the view of future inflation?
- Have the limits/exposures changed that will impact use of historical loss ratios to derive future loss ratios?
- How does the capital model loss ratio compare to the reserving IELR?
- Is there a consistent allowance for inflation across each loss ratio?

- Has the Claims team already made an adjustment to the case estimates for inflation?
- Are their inflation assumptions consistent with those being used by the actuaries for the IBNR estimates?

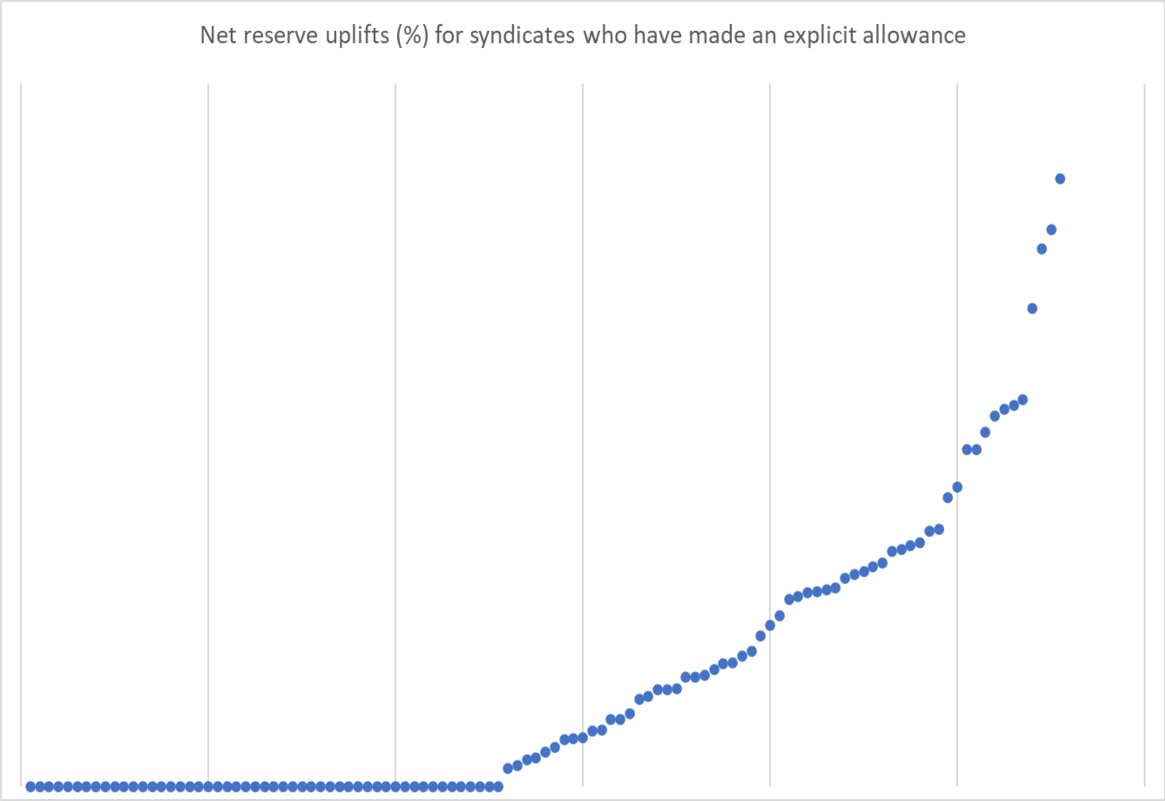
Market has taken steps in the right direction as at 2022HY

Based on our review of the QMA return as at Q2 2022, broadly the market has explicitly allowed for the change in inflation within the reserving.



Explicit reserving inflation allowances as at Q2 2022

There was an uplift to net reserves as at Q2 2022 based on our review of QMA templates



- The was an overall uplift to net reserves as at Q2 2022 of 2.3%.
- ***The appropriateness of the allowance depends on the risk profile of the syndicates***
- In cases where explicit allowances were not made (i.e. not considered) at Q2 2022 Lloyd's provided feedback to each Syndicate.
- ***Has this feedback been taken into account for the year end reserving?***

Work still to be done ahead of the 2022 year end reserving

Lloyd's expectations for Q4 2022 reserving

10% Are yet to explicitly consider impact of inflation

64% Reported they have plans to enhance consideration by 2022 Q4

25% Received feedback from Lloyd's highlighting our concerns

1) Where IELR's have been uplifted how has comfort been gained the older YOA are appropriately reserved?

2) Where no / little / top-down, pragmatic approaches taken, are there plans to revisit based on individual class-specificities?

3) The landscape is evolving quickly. Are inflation allowances set at Q2 still appropriate at Q4?

Our expectation by year end 2022 reserving is:

- **100% of Syndicates explicitly consider inflation and**
- **Syndicates with no explicit adjustment to the reserves should have adequate justification**
- **Syndicates should consider how inflation is present in the claims and how this may change over time**

How to allow for appropriate claims inflation volatility?

There is not a one size fits all approach

The main point is for the model to include the systemic impacts of inflation on all classes simultaneously

Lloyd's guidance:

Syndicates need to reflect the current economic environment appropriately in their internal model.

Q: How?

Types of Inflation

Economic Inflation – mostly cashflow approach from economic scenario generator

How is dependency between different types of inflation ensured?

Excess Inflation

Methods

- Indices applied (CPI, wage, medical etc.)
- Currencies and mix

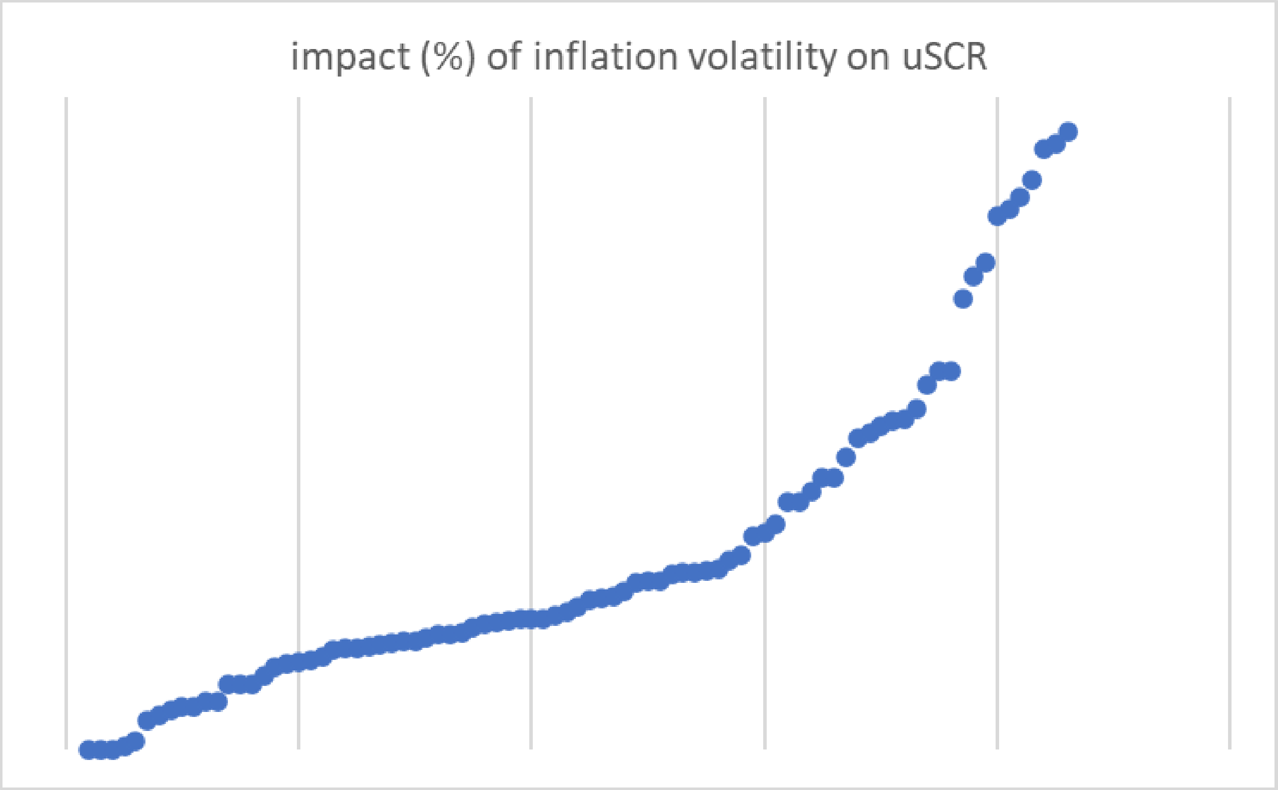
- Extra allowance in CoVs for future claims
- Extra allowance in CoVs for reserves
- Strengthening of insurance risk dependencies (between classes or accident years)
- Extra tail risk drivers (inflation shock/threat)
- Superimposed inflation to ESG inflation (e.g. construction index)

Validation

Scenario Tests, RST, Sensitivity Testing, Backtesting

Inflation allowances for 2023 YoA capital setting

Varied impacts with wide variety of approaches to run this test



- The impact of economic and excess inflation allowances in models varies significantly.
- ***The appropriateness of the allowance depends on the risk profile of the syndicates.***
- This test was designed to test the impact of volatility allowances related to inflation. For economic inflation the most common approach was to remove the impact of the ESG inflation. For excess inflation the approaches were varied as a lot of syndicates make implicit allowances.
- **In general syndicates DID NOT remove mean allowances in the reserves or plan loss ratios for this test or allowances in the cat models**.

Wide variety of approaches seen in capital reviews

Appropriateness depending on risk profile of the syndicate.

86% Use an ESG

66% Of these use the latest version (q2 2022)

34% Using older ESGs

1) The majority of these syndicates made adjustments to increase inflation volatility in the ESG

2) Syndicates NOT using the latest ESG/overwriting older ESGs could show that the impact was immaterial or they didn't use an ESG and made other allowances.

3) Some businesses did not deem ESG indices volatile enough (either first line or validation) and overwrote them.

79% Either expanded validation tested or carried out deep dive into inflation modelling

Where the models were not reflecting the current economic conditions and/or no adjustments were made to achieve this and/or validation could not show that the allowance is appropriate capital loadings were proposed.

Assessing Inflation Allowances

Examples of questions the Board could consider asking

- Has there been sufficient justification for the level of inflation allowances made in the reserves and capital?
- Has this justification included reference to the risk profile and geography of the Syndicate business?
- Top down – how impactful do you think inflation should be? Does the reserve impact/allowance in the internal model fit your thinking? If not, do you understand why?
- Inflation forecasts are changing rapidly right now – has the most up-to-date view been considered?
- Has the uncertainty been quantified using ranges and have do you understand the likelihood of different outcomes?
- Is it clear what is allowed for in the Best Estimate vs the Margin?

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How are you dealing with the ongoing Major Events?

Nikhil Shah

Senior Manager, Syndicate Reserving

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

Ukraine Crisis: Uncertainties

Significant and prolonged uncertainties remain

Class level uncertainty		
	Ongoing nature of crisis:	The duration, severity and geographical impact of the crisis is unknown and highly uncertain. In particular, it is very difficult to estimate potential losses in respect of the conflict extending into new territories and the extent of losses which could emerge the longer the crisis runs.
	Evolving sanctions:	New sanctions continue to be introduced and whilst not expected soon, the timing of any future removal of sanctions difficult to predict. Uncertainty around impact of disruption to provision of services from Russia and Ukraine.
	Lack of notifications:	Reserves are largely IBNR at this point with few loss notifications
	Coverage:	Coverage for Aviation and potential for lengthy litigation
	Asset values:	Exact value of planes in the impacted regions is challenging to estimate. Ships written off after 12 months.

Other uncertainties		
	Reinsurance:	Risk of dispute over coverage terms. Risk of erosion due to impacts from classes on same treaty. Heightened default risk due to exposure to several counterparties.
	Data:	Lots of information outstanding at this stage, will take time to receive and develop clear picture, e.g. loss notifications, loss adjustment reports, up to date satellite and drone imagery, on-the ground reports, information about exposure.
	Economic uncertainties:	Indirect losses from macroeconomic pressures and disruption to global trade and financial markets

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

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

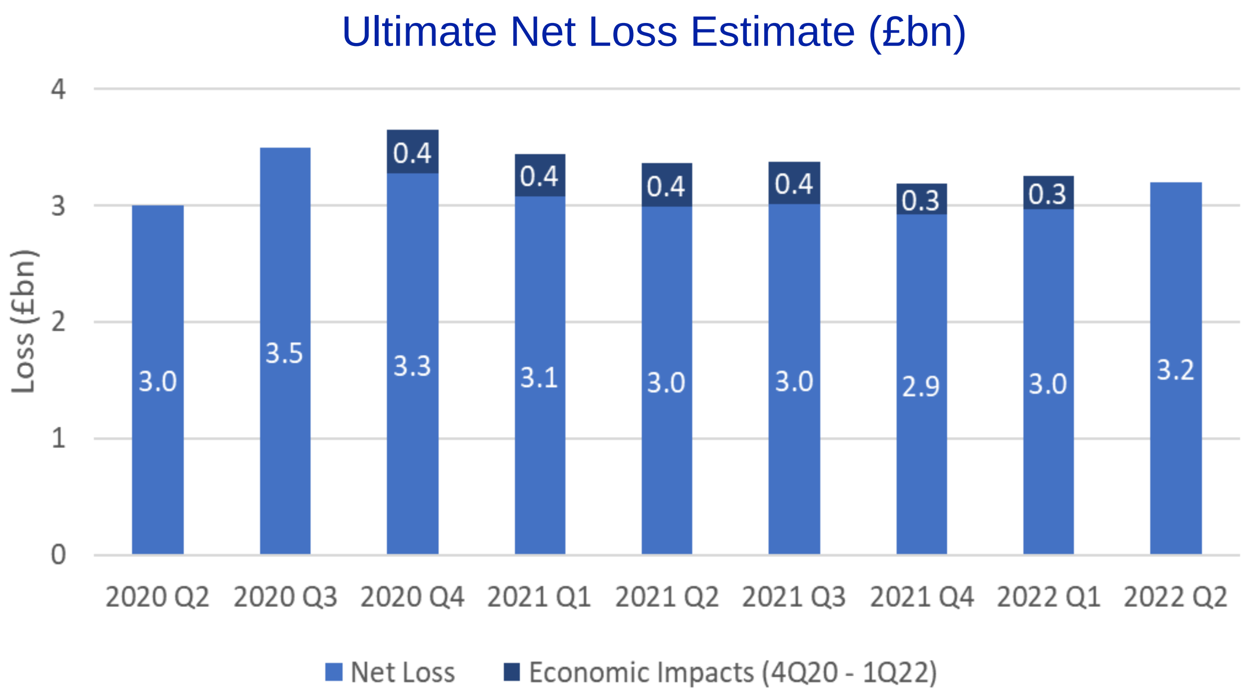
- Likelihood of similar events in the future – do any class underwriting parameterisations need to change?
- How are war losses modelled – appropriate non-natural catastrophe modelling?
- Review of between class dependencies

Governance and Board challenge

- Clearly documented and justified approach – alternatives should be quantified

Covid-19 Ultimate Loss Estimate

Loss estimates and economic impacts have remained broadly stable over time



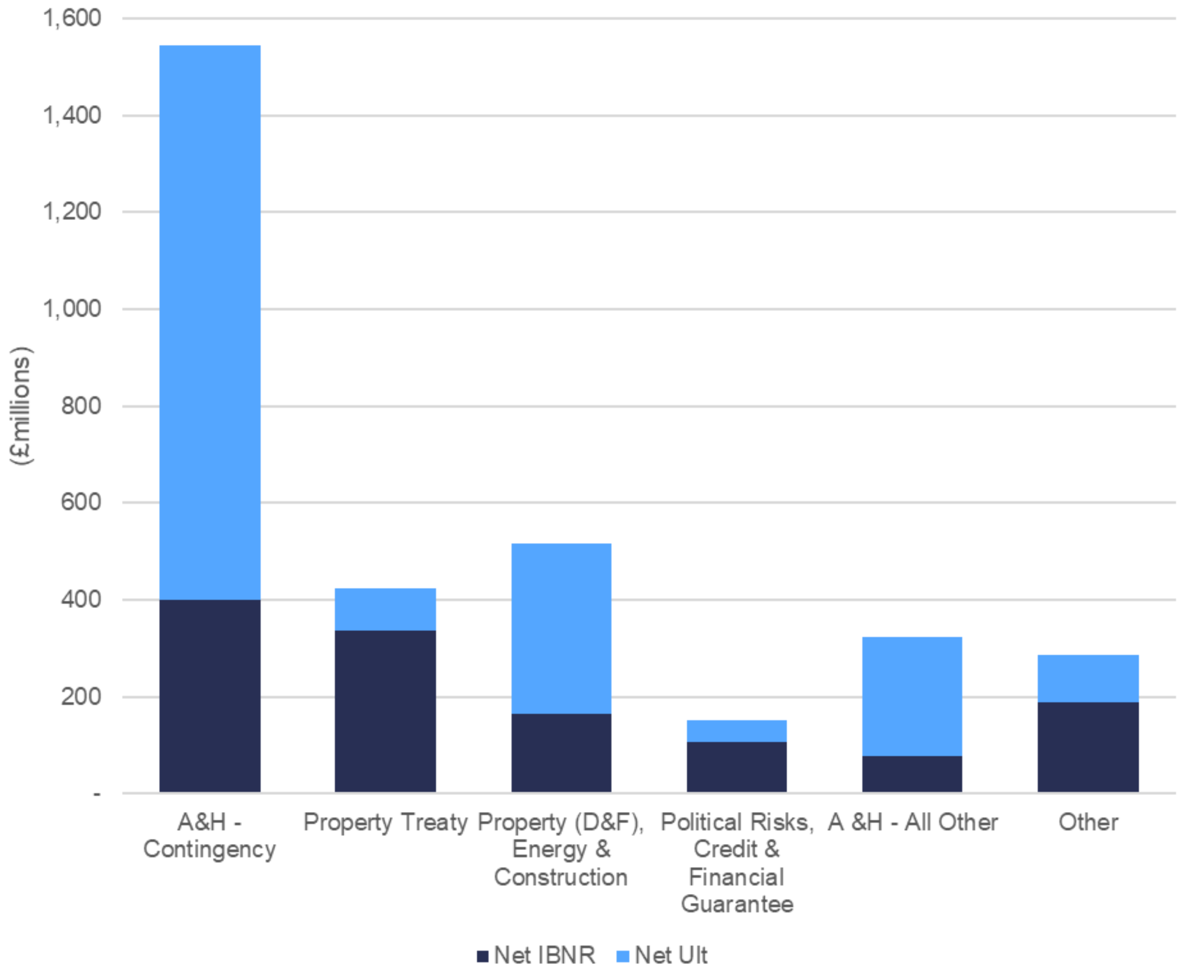
Figures use FX rates at time of reporting

Economic Impacts no longer requested split out from 2022 Q2

- Ultimate loss estimates are stable
- IBNR is decreasing in line with expectations
- Explicit Covid-19 recessionary impact allowances are no longer being held
- Reducing uncertainty of loss estimates
- With some uncertainty remaining around
  - ➢ The legal challenge around application of wording
  - ➢ Reinsurance recoveries.

Covid-19 Net IBNR by Class

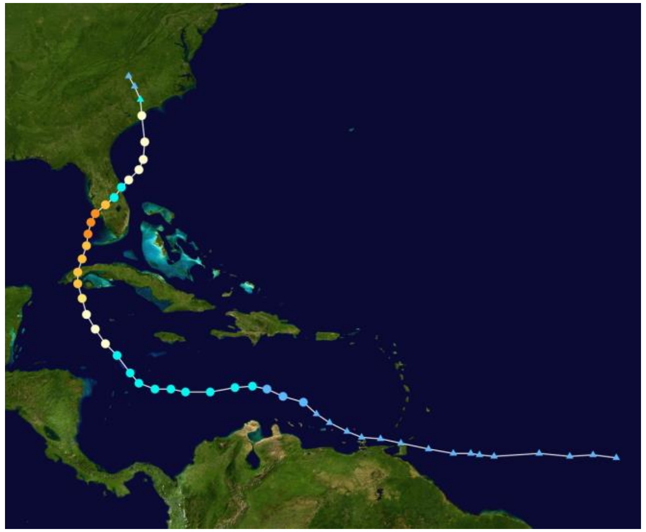
IBNR percentage held varies significantly by class



- Whilst the majority of COVID-19 IBNR is held in Contingency, as a class this is relatively developed.
- Property Treaty and Political Risks, Credit & Financial Guarantee classes are both material and offer a large proportion of IBNR as a class.
- Syndicates are 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.

Hurricane Ian: What we know so far

Expected to be a major natural catastrophe loss



- Broad range of estimates on size of industry loss
- Extreme flood damage from storm surge
- Multiple locations and multiple classes impacted
- Exposure to the current inflationary environment will push up losses and uncertainty
- Litigation forms a significant component of some vendor loss estimates

Allowing for Major Events

Examples of questions the Board could consider asking

- What scenarios have been considered to determine the reserves and capital allowances for the events in question and at what return periods?
- What is the balance between allowances in reserves and capital – what do we hold in best estimate reserves, what is allowed for in capital? What about in reserve margin?
- Does the major event change anything in our views – i.e. has your view of the future likelihood and magnitude of a similar event changed? Do you need to change your capital and planning assumptions?
- If the business needs to rely on scenarios, what is the impact of alternative scenarios/assumptions surrounding them? Are plausible alternative assumptions covered?

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What do you need to think about in terms of the wider economic developments?

Mirjam Spies

Head of Actuarial Oversight

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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?

Capital – additional risk should add additional capital

Market Risk generally not a material contributor to capital

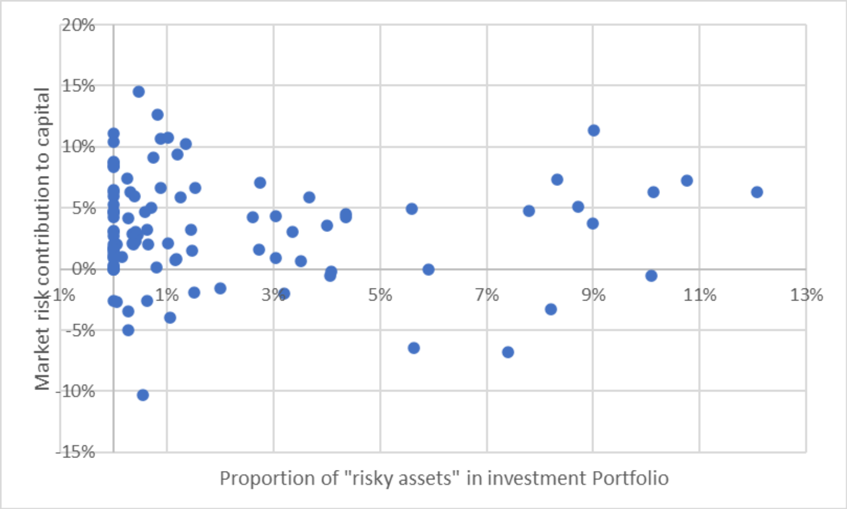
- Market average contribution around 2-3% over the years and remained stable

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.



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

Economic Slowdown/Recession

Have the (direct and indirect) consequences been thought through?

Increased credit spreads and default risk for corporate bonds

Lower than expected premium income

Increase in claims for certain lines (FinPro)

Changes to operational risk (staff morale, claims fraud)

Increased claim frequency/ severity due to greater propensity for claiming/ moral hazard

Payment pattern changes

Increased equity risk

Higher propensity for reinsurer rating downgrades

Increased dispute risk/ bad debt

Have a wide range of recession scenarios been considered when formulating business plans and capital? Are you prepared?

Has this been considered holistically?

Allowing for wider economic developments

Examples of questions the Board could consider asking

- Has the syndicate understood the impacts (including secondary impacts) of the current developments?
- Have up-to-date views of the likelihood of a recession been considered in your business plans, your reserves (and/or the reserve margin) as well as your capital assumptions? Has the judgement on likelihood been discussed at board level?
- Are there any wider strategic decisions which need to be reviewed? E.g. investment strategy, mix of business?
- If the business needs to rely on scenarios, what is the impact of alternative scenarios/assumptions surrounding them? Are plausible alternative assumptions covered?

Final Remarks

Mirjam Spies

Head of Actuarial Oversight

Summary

Main Messages on dealing with uncertain events

- It's difficult, so structured, joined-up approach is important trying to get views from various experts.
- You can't ignore it – and refer to the "general fat" – all syndicates to make explicit allowances for inflation in reserve by Q4
- You need to make judgements – even if we can't know if they are "right" as unprecedented. Principles are:
  - Determine how material the judgement is (does it matter?).
  - Justify - generally in terms of "what if" scenarios → Helpful tool for expert judgements
  - Test alternatives – what happens if we got it wrong?
  - Alternatives for important judgements should be communicated all the way to the board – so that you can assess the strategic consequences.

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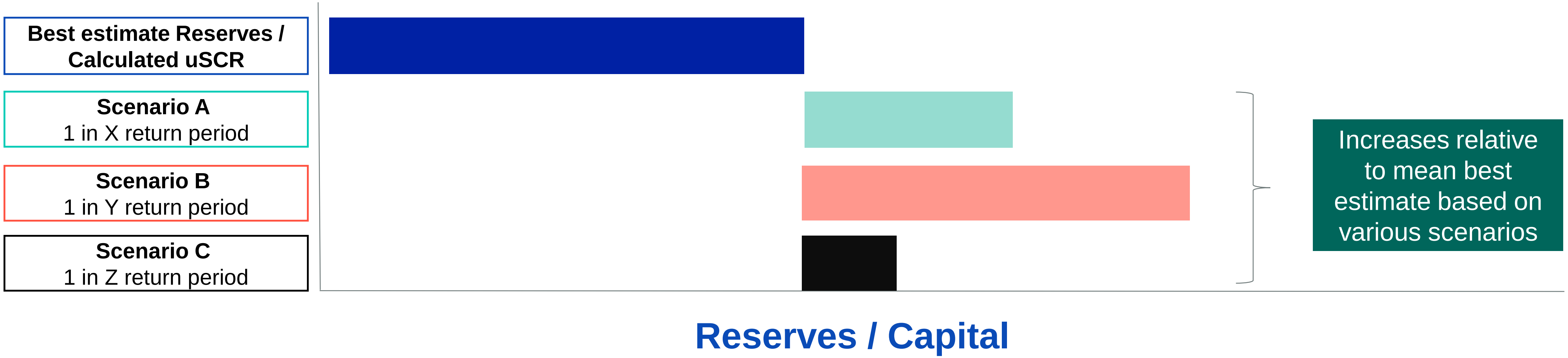
Illustrative example of testing alternative assumptions

Scenarios are an important way of testing your selected assumptions for the mean and 1 in 200

Selected Mean Best Estimate and Validation Example



- Do you understand the assumptions underpinning the Best Estimate (Reserves & Capital)?
- Do the scenarios provide sufficient comfort to validate the best estimate selections?
- Are you comfortable with the level of reserve margin?
- Do the return periods in your capital model seem reasonable for the scenarios?

Questions

Key Contacts

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