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Signing Actuaries' Forum 2021

18 October 2021

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Key Dates

Submission	Deadline
Signing Actuary Details	30 November 2021
US Trust fund SAOs	14 February 2022
Worldwide SAOs	10 February 2022
SAO Template	15 February 2022
SAO Reports	31 March 2022

- US Trust fund SAOs to be sent to Market Finance as per their instructions
- Worldwide SAOs, the SAO template and SAO reports to be submitted via the MDC

Please note the following:

- Signing actuaries should have a valid Practising Certificate for the duration of a year-end reserving exercise. This would be expected to cover from November until the end of March.
- Please inform Lloyd's (SAOReports@lloyds.com) of the intended Signing Actuary.

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2021 YE SAOs

Valuation of Liabilities rules and other expectations

There are no planned changes to the Valuation of Liabilities rules this year.

There are no planned changes to the SAO template this year.

SAO templates and reports:

- The SAO template will be available via the Market Data Collection ("MDC") platform in January 2022.
- We recognise the issues last year with submitting data to the MDC. We have been working with the MDC team and we hope that many of these issues will be resolved.
- We have no further requests this year in addition to those highlighted last year relating to the SAO reports.

2021 YE SAOs

Requirements of signing actuaries (a reminder) : SAO Reports

The SAO report should contain:

- A comparison of the SAO estimate with the Syndicate **best estimate** by class of business and YOA
- Commentary on the key surplus and deficits
- Include a summary of the discussion with the Managing Agent regarding any material differences
- Include commentary on any emerging trends or any other material issues impacting specific classes and consider if this should be included in the executive summary

Where ‘method & assumptions review’ methodology has been used, highlight areas of disagreement and course of action e.g. offsetting, additional analysis

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2021 YE SAOs

Lookback on 2020 YE SAOs - Large loss wordings

Event	2020 Year-End		2019 Year-End	
	Wording 3	Wording 4	Wording 3	Wording 4
Typhoon Faxai	0	0	2	0
Hurricane Irma	0	0	1	0
HIM Combined	0	0	2	0
Hurricane Michael	0	0	1	0
California Wildfires	0	0	1	0
Hurricane Dorian	0	0	1	0
Typhoon Hagibis	0	0	3	0
2020 US Windstorms	2	0	0	0
Covid-19	23	4	0	0
Hurricane Derecho	1	0	0	0
Hurricane Laura	1	0	0	0
Hurricane Sally	2	0	0	0
Hurricane Zeta	0	0	0	0
Ogden	0	0	0	0
Other	7	1	6	1
Total	**36**	**5**	**17**	**1**

- ### 2020 YE Summary
  - There were a total number of 41 category 3 and 4 wordings at 2020 year end versus 18 at 2019 year end.
  - For context, the 2017 year end, which has had the most number of large loss wordings since 2012, had 47 category 3 and 4 wordings.
  - We have discussed all wording 4 uncertainty wordings with the relevant Managing Agents and Signing Actuaries to understand the rationale for potential deterioration. These conversations have not led to a view that there is an elevated level of risk compared to prior years with major catastrophes.
- ### 2021 YE Expectations
  - What are our expectations for COVID-19 uncertainty wordings at 2021 YE?

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IELR setting

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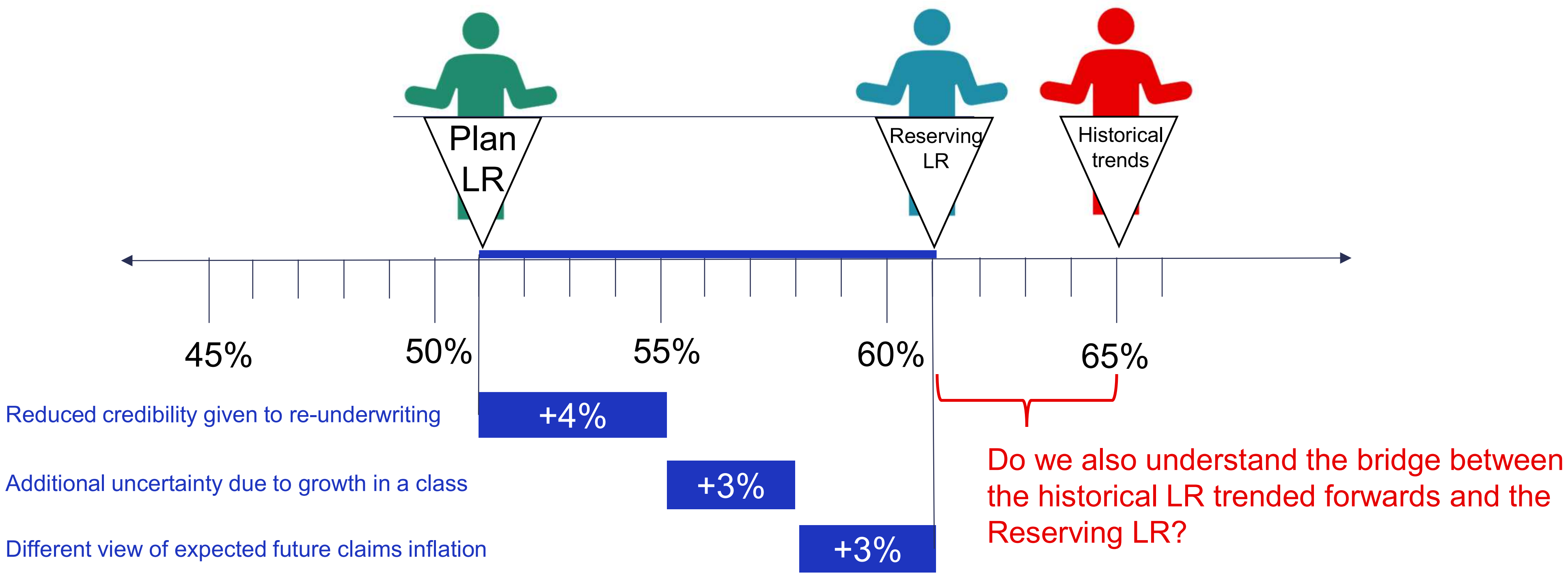
Appropriate IELR setting

Last year we discussed ‘bridging the gap’ between differing loss ratios…

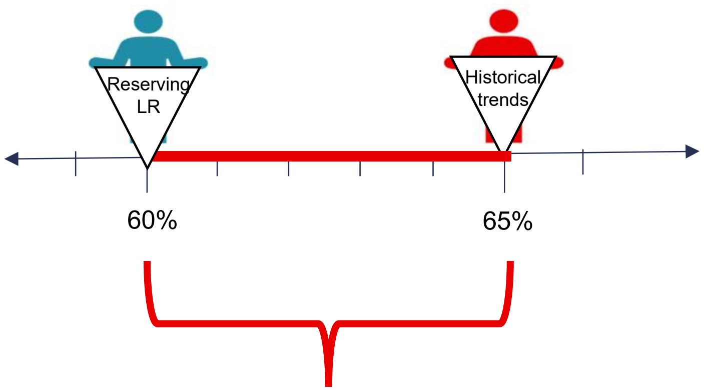
…with increasing uncertainty around each element of the bridge, how do we get comfortable with the our selections?



Appropriate IELR setting

Assessing the bridge in context with a changing landscape

- To continue the discussion from last year – how do we assess, validate and communicate each element of the 'bridge'?



Allowance for rate change and remediation?

Allowance for future trend?

Is there consistency across teams?

Assess, validate, communicate

Consideration given not just to IELR but assumptions embedded within case estimates?

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Reserving in a changing landscape

- Cyber
- Covid-19
- Themes emerging from our reserve review
- Allowing for ways in which the future differs from the past
- Other thematic issues
- Claims Inflation

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Cyber

How are syndicates reserving for a class within a constantly changing landscape?

- The question of how actuaries reserve for classes with minimal data and a constantly changing risk profile is epitomised by the Cyber class.
- This class has seen rapid growth at Lloyds of the last 10 years, and incurred heavy losses in recent years, particularly 2019.
- The class has been a focus of our oversight activities at Lloyd's
  - The Performance Management team have conducted a Cyber thematic review this year (see highlights on the following slide)
  - Within MRC, Cyber has been highlighted as one of our 'Areas of focus' this year with plans to conduct a review of reserving methodologies across the market over the coming months. The aim of this is to be able to provide support to Syndicates by sharing good examples of methodologies and processes that best address the issues raised.
- Any insights or thought leadership you have in this area that you are able to share with us will be much appreciated.

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Cyber

Lloyd's Performance Management thematic review

During August 2021 the Lloyd's Performance Management team carried out a thematic review of Cyber business to investigate the key drivers of performance and identify good practice across the market in terms of claims, remediation, portfolio management, risk selection, pricing approach and reinsurance.

At the time of writing, this review has not been published, but we provide some background metrics to put into context our concerns on Cyber and why we have a specific focus on this class this year.

- Cyber represents circa 3.8% of Lloyd's GWP – this is approx. 20% of global cyber premium in 2021
- GWP has more than doubled over the last 5 years
- Since 2019 there has been a significant uptick in the number of ransomware attacks
- There has been a 145% increase in incidents in the US in 2020 vs 2019
- Across the market, Syndicates have missed their plan every year since 2018
- Poor performance has been experienced globally – no longer limited to US/UK risks

Cyber

Reserving considerations, trends and issues

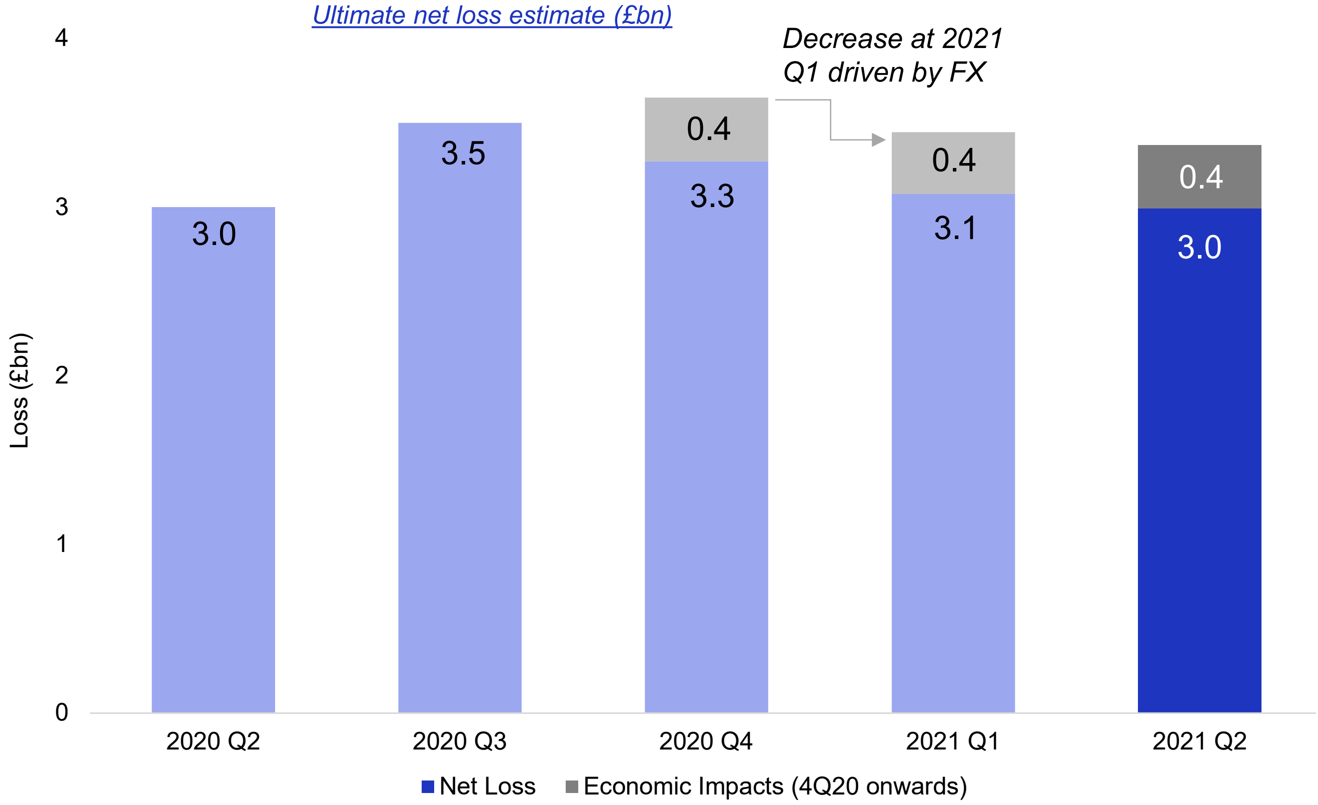
We highlight below a few of the market issues and features of the Cyber class that we need to consider within reserving exercises. This is not an exhaustive list but just guide to highlight some of the considerations for the reserving actuary.

- Changing risk profile
- Data credibility issues and general lack of data
- Strong rating environment in 2021
- Impact of claims inflation on loss adjustment costs
- Lack of expertise with increase in new entrants

- Increase in frequency of claims
- Increase in severity of claims – driven by more BI exposures
- Concentration risk
- Is historical development pattern appropriate? e.g. ransomware claims which are generally quicker to settle)

COVID-19

Loss Estimates remain stable since 2020 Q3



Figures use FX rates at time of reporting

Reinsurance Recovery Ratio (RIR %) = (gross loss – net loss) / gross loss

- Loss estimates and economic impacts have remained stable since 2020 Q3
  - Observations are in line with expectations given analysis of data received at 2020 Q4
  - Reinsurance recoveries stable at 42% of gross loss
- COVID-19 loss estimates still uncertain but more developed
  - 53% of ultimate gross loss estimate is IBNR (down from 61% at 2021 Q1)
  - 24% of anticipated recoveries have been received to date (up from 16% at 2021 Q1)

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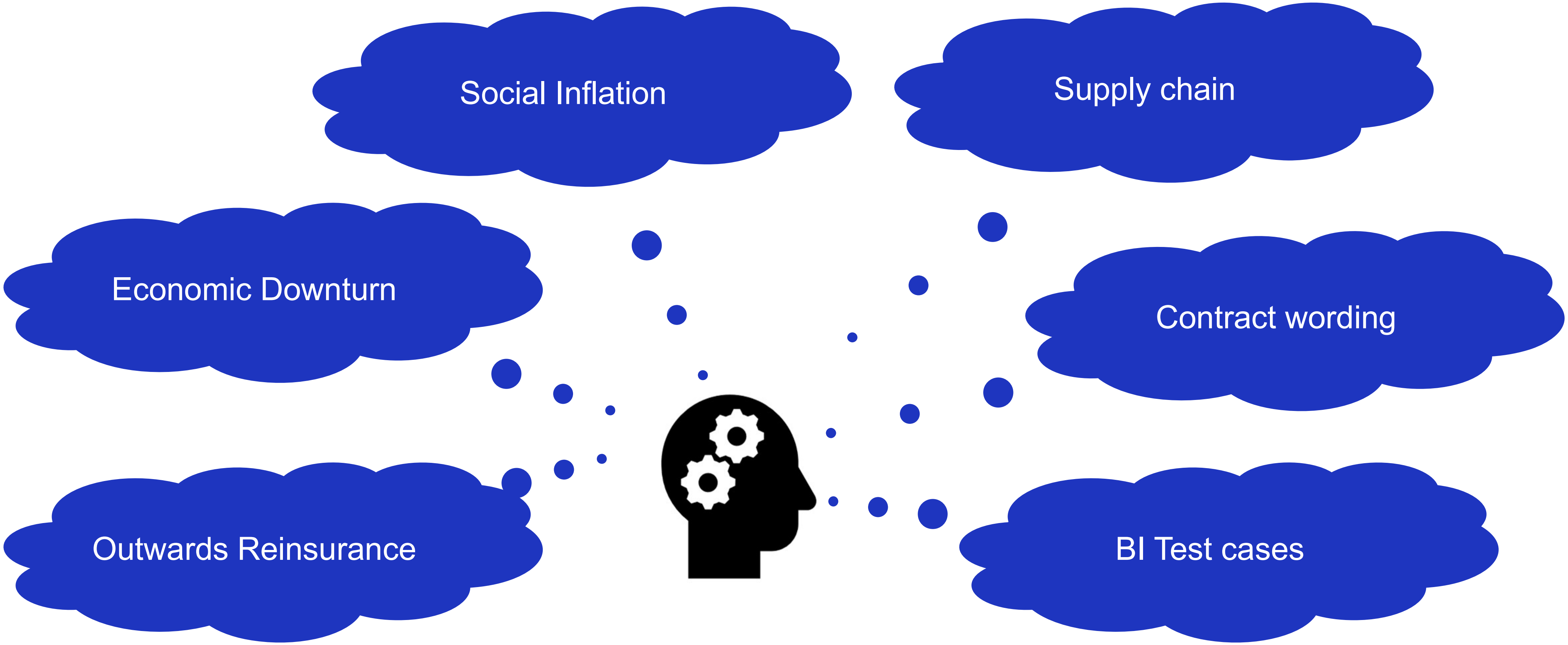
COVID-19

Current Uncertainties



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Concerns on Casualty continue

At high class of business level evidence of potential market-level deficiencies

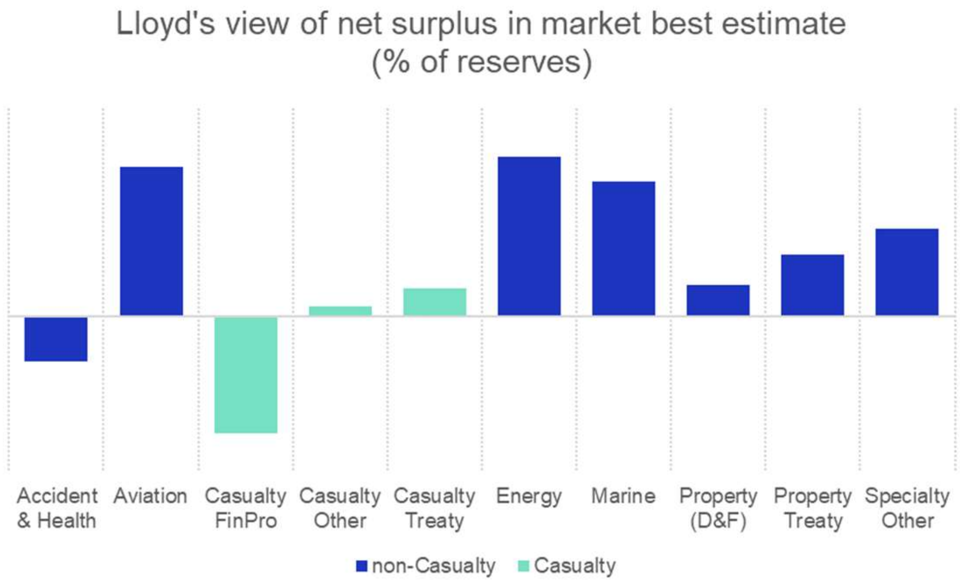
Lloyd's central reserve review exercise identifies potential areas of deficit in net written best estimate reserves.

- Accident & Health
- Casualty FinPro

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

Lower level classes of business Lloyd's have reserving concerns about include:

- Cyber
- Casualty FinPro: PI (US and non-US) and FI (non-US) and D&O (US and non-US)



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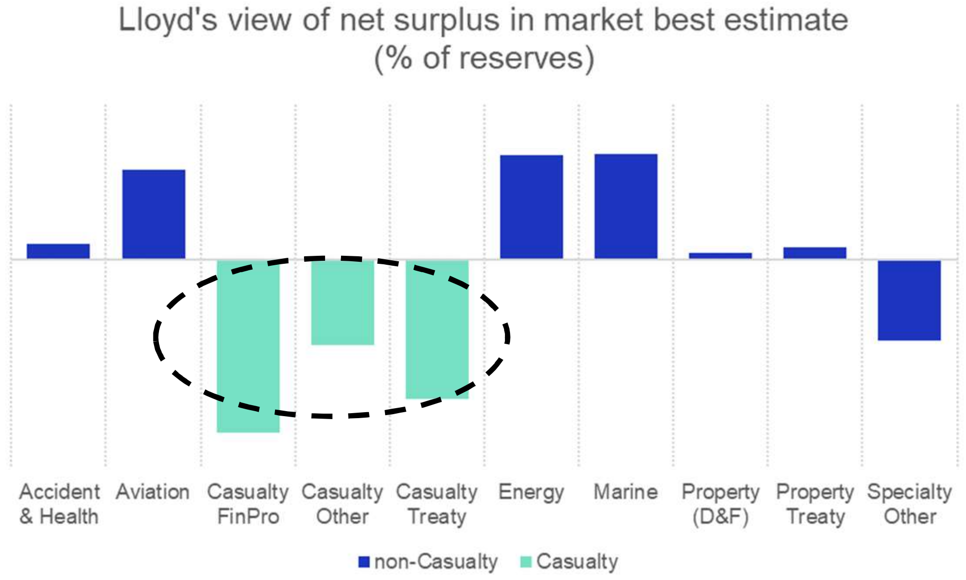
Themes across classes

Question over adequacy of loss ratios for recent years of account

2020 year of account



For the Casualty FinPro in particular there are differences in views on the most recent year of account

The differences in view on the most recent year is largely driven by IELR assumptions.

Lloyd's IELR projections are based on historical loss ratios trended forwards with rate and inflation assumptions. In this year's review we have included an additional allowance for social inflation

Lloyd's view has the advantages of:
+ large volume of data
+ sight of market-level trends

Actual experience for the more recent years may diverge from these projected trends but it is important to understand and quantify the drivers of this.

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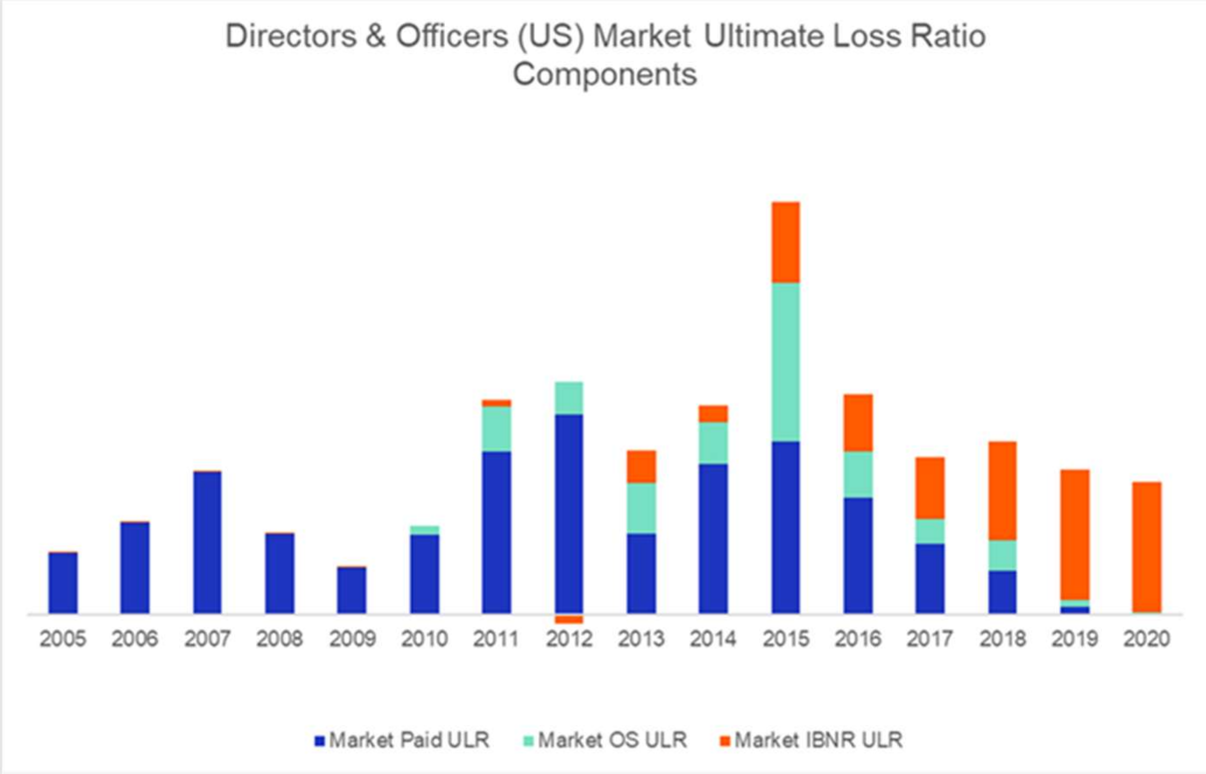
Allowing for ways in which the future differs from the past

Loss ratios in more recent years have been lower on many classes.

Appropriate justification for assumptions used and how they have appropriately reflected past and future expectations including

- Remediation allowed for in recent years
- Inflation expectations
- Rate change

Along with the appropriateness of methodology adopted should be clearly documented in the SAO report



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Other thematic issues

Identifying emerging trends and issues

- We are looking to understand the impact of other market factors that are driving claims trends and impacting standard reserving assumptions. Examples of these include:
  - Impact of climate change?
  - How does the post-COVID recession differ from previous recessions?
  - Issues arising from the current global supply chain?
  - Contract certainty? (Highlighted most recently by COVID-19)
- How do we set appropriate assumptions without relevant historical data?
  - These issues should be considered and accounted for
  - Reserves should factor in all reasonably foreseeable outcomes
  - Significant judgement requires significant justification
- We would like to understand your approach to tackling these issues and will be looking to engage over the current year.

Claims inflation

Lloyd’s claims inflation oversight activity

- Impact of Inflation on insurance claims in focus due to trends like social inflation causing higher uncertainty around forecasting
- Price inflation indices are only one piece of the puzzle – claims inflation is driven by other factors such as court awards and changes in technology, healthcare and the social and legal environment causing divergence and “excess” inflation.
- Lloyd's Market Oversight Plan for 2021 included a thematic review of inflation. The capital workstream has completed its work and published a report on Lloyds.com, while work underpinning the reserving and underwriting workstreams has begun and is planned to be shared with the market in 2022.
- In the following slides we highlight some of our findings from the capital workstream.

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Claims inflation

Definition

Change in expected claims cost level of a like for like policy over time, where like for like means having consistent policy terms, coverage and exposure. This includes impacts from both severity and frequency effects.

Claims inflation

Change in cost of claims resulting from increasing litigation, broader definitions of liability (excluding those caused by changes in policy terms and conditions), more plaintiff-friendly legal decisions and larger compensatory jury awards

Social inflation

Change in average price of goods and services related to a basket of representative claims, due to changes in price level and / or utilisation. This includes, for example, labour, energy, construction and care costs. Pure inflation in claim costs is equivalent to general economic inflation.

Pure inflation

Ways in which claim costs rise above general economic inflation. It captures, for example, growth in costs associated with emerging risk from new materials, medicines and technologies, changes in the legal environment and social attitudes. The spread between pure inflation and the full extent of claims inflation from the additional cost drivers is excess inflation

Excess inflation

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Claims inflation

Main Findings

- **Implicit allowances leading to problems quantifying (and validating) allowances**
- **More review and challenge of excess inflation assumptions should be evidenced**
- **Not proactive enough to incorporate emerging trends**
- **Consistency between teams requires improvement:**
  - Sharing of information and discussion around judgements will help to bridge any differences between assumptions within teams.
  - Feedback loops between pricing, reserving, claims and underwriting teams to share information and align the assumptions adds value to the process because it encourages discussion to bridge differences in opinion. It also creates consistency within the organisation – consistency does not mean assumptions being equal, but that differences can be explained

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Claims inflation

Findings related to best estimate reserve projections

Inflation allowances tend to be implicit

- Based on our market survey, only 1 out 38 managing agents that responded have the capacity to quantify inflation in the expected claim inputs feeding into the internal model – how can you project something forward if you don't have a view what it is?
- On IELRs: Lloyd's updated the minimum standard for reserving following the 2020 Casualty Market Study to require syndicates to explicitly consider inflation in the IELR assumptions.
- On RESERVES: Many syndicates rely on implicit allowances from reserve projection methods such as the chain ladder. This is not appropriate where classes of business are exposed to new or emerging trends that are not reflected in past data.

On-levelling process could be improved

- Capital modellers 'on-level' claims data used in the parameterisation process to put it into real terms for the new underwriting year.
- Inflation trend adjustments are not always explicit and can be wrapped up in general uplifts for future trend.
- Inflation assumptions do not always make reference to the views of inflation from planning, reserving and claims teams, leading to inconsistency across the agency with respect to how inflation is treated.

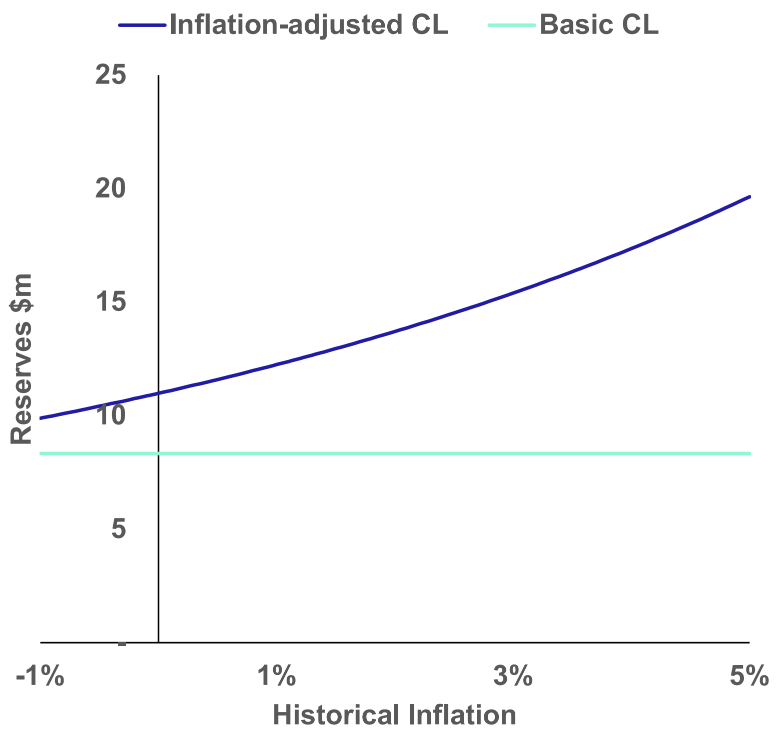
Validation of assumptions

- Agents could demonstrate more testing and validation of inflation assumptions, such as producing reserve ranges around alternative assumptions and applying alternative inflation projection methodologies to material classes of business.

Claims inflation

Good practice for inflation modelling

- **Generalised linear models**:
  - Fit regression models to claim triangles using inflation as an independent variable.
  - Allow to superimpose alternative views of inflation
  - Sufficient volume of data to produce stable results
- **Inflation-adjusted chain ladder**:
  - Even modest increase in claims inflation can lead to material reserve increases
  - Exponential increase in difference between chain ladder and inflation-adjusted chain ladder
  - Use to asses sensitivity to reserves against inflation



Non-marine General Liability Projected Reserves

Claims inflation

Good practice for inflation modelling

- **Incorporating claim specific information**:
  - External and internal data sources (e.g. watchlists) on developing litigation outcomes
- **Enhancing use of internal and external data**:
  - Work closely with to improve the quality and granularity of data (e.g. constructing claim number and claim notification triangles)
  - Use external data sources to derive assumptions, e.g.:
    - The Insurance Services Office: A source for actuarial, underwriting and claims information
    - CPI and wage indices: Some agents extract underlying data from the US Labour Bureau of Statistics / UK Office of National Statistics and construct a more relevant 'basket of goods' for their own products
    - Council of Insurance Agents & Brokers: An organisation that has published various studies on emerging trends, such as social inflation
    - Consultancies and brokers: Third party organisations can provide ranges of assumptions based on industrywide analysis.

Start small and pick material classes – it might not be necessary to embark on a large data collection exercise, but rather identify important areas and talk to the claims team

Closing and Q&A

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2021 Engagement & Looking Ahead

- Last year
  - Appropriateness of assumptions
  - Emerging trends
  - Insight into areas of focus and areas of concern
- This year
  - How reserving actuaries are dealing with the changing reserving landscape
    - Impact of changing landscape on setting assumptions
    - Recognising and allowing for emerging trends
    - Justifying, validating and communicating selections
- Similar themes – but expecting actuaries to be further developed in their thinking and consideration of these issues deeply embedded into reserving processes

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Questions?

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