Institute
and Faculty
of Actuaries

GIRO40 – Lloyd's Update

8 – 11 October, Edinburgh

Lloyd's Update

- Results & Reserves
- Syndicate Capital 2014 YoA
- Lloyd's and Solvency II

Half year update - Results & Reserves

Lloyd’s Update – Results & Reserves

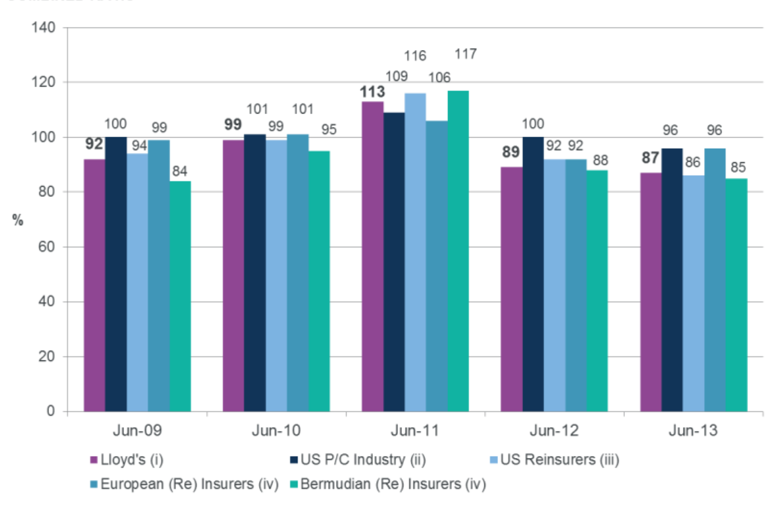
- Half year results
- Prior year reserve experience
- Reserve margins

Strong performance offset by reduced investment return…

£m	June 2011	June 2012	**June 2013**	% Change	Dec 2012
Gross written premium	13,534	14,768	**15,496**	5	25,500
Underwriting result	(1,138)	1,104	**1,261**	26	1,661
Combined ratio %	113.3	88.7	**86.9**	–	91.1
Investment return[1]	548	619	**247**	(60)	1,311
Profit/(loss) before tax	(697)	1,530	**1,379**	(10)	2,771

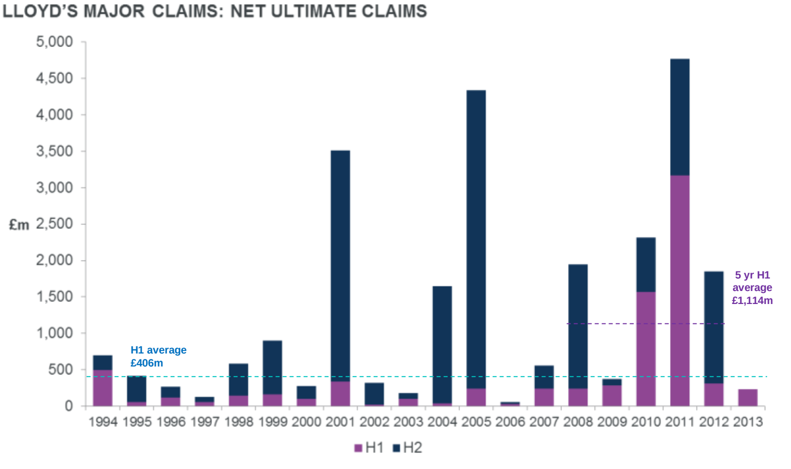
Source: Lloyd's pro forma basis, [1] Technical account, [2] Return on syndicates' assets, members' funds at Lloyd's and central assets, [3] Non-technical account

Lloyd's performance is in line with peers



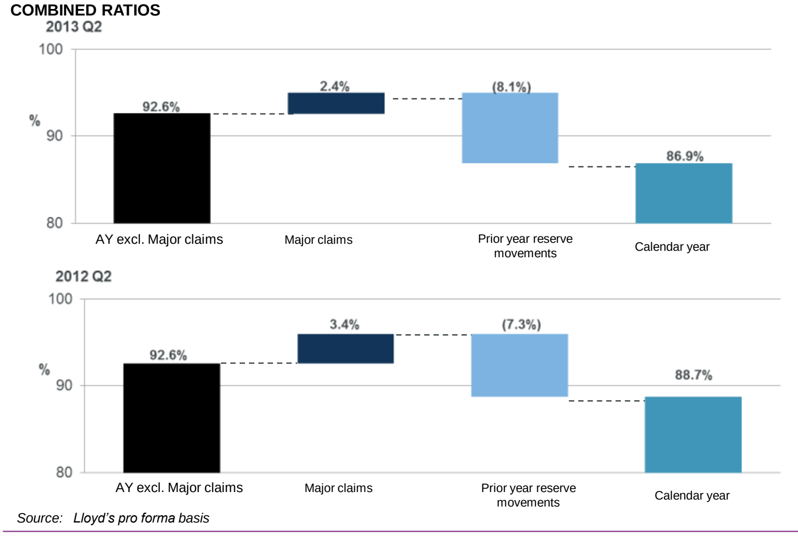
Sources: i) Lloyd's pro-forma financial statements, ii) Insurance Information Institute, iii) Reinsurance Association of America (iv) Company data (8 European companies: 17 Bermudian companies)

2013 major claims well below average…



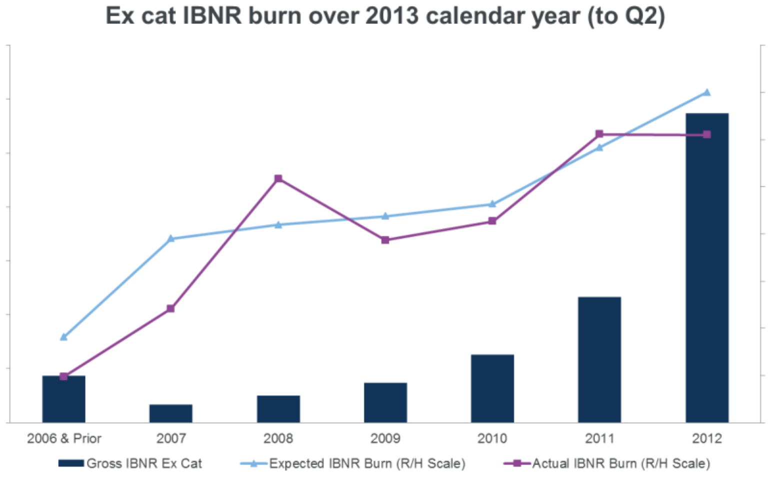
Source: Lloyd's pro forma basis. Indexed to June 2013
Claims in foreign currency translated at the exchange rate prevailing at the date of loss

…and prior years continue to benefit from good experience and initial reserve practice



Source: Lloyd's pro forma basis

Favourable experience across most years…



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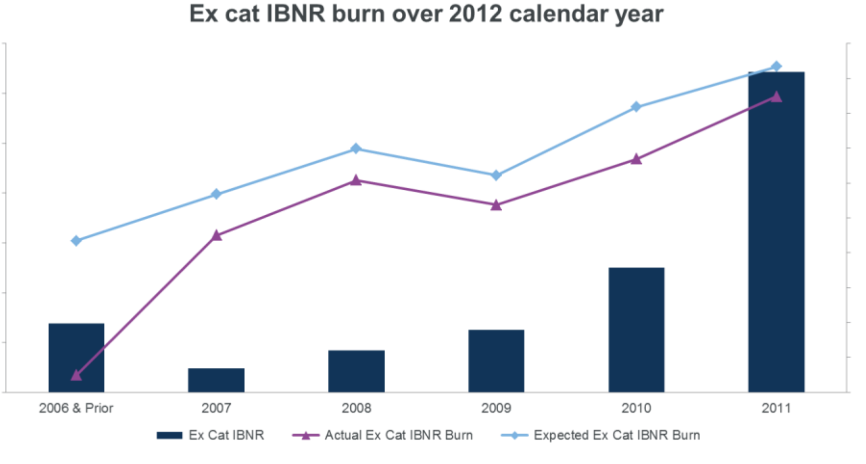
…but less so than at year end…



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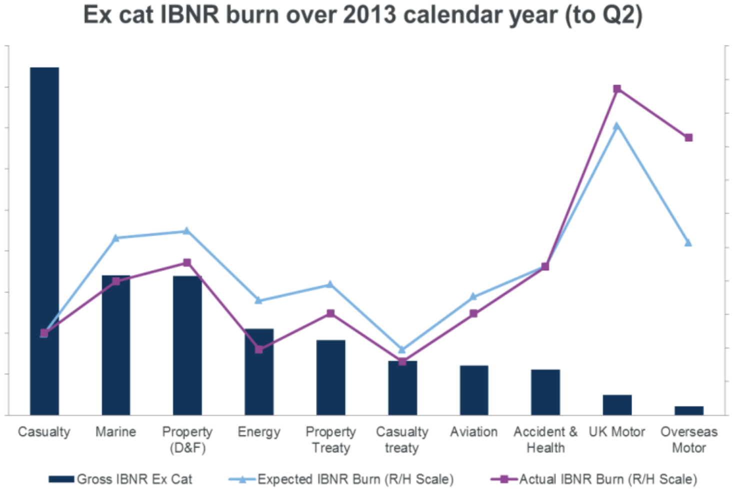
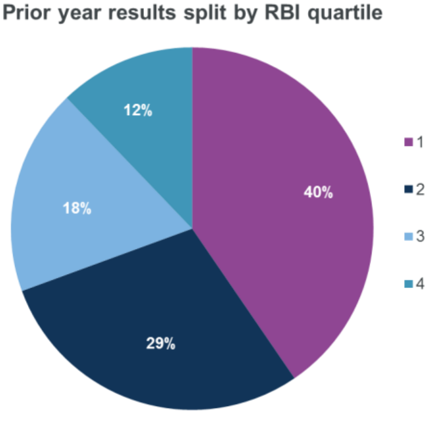
…and across all classes of business

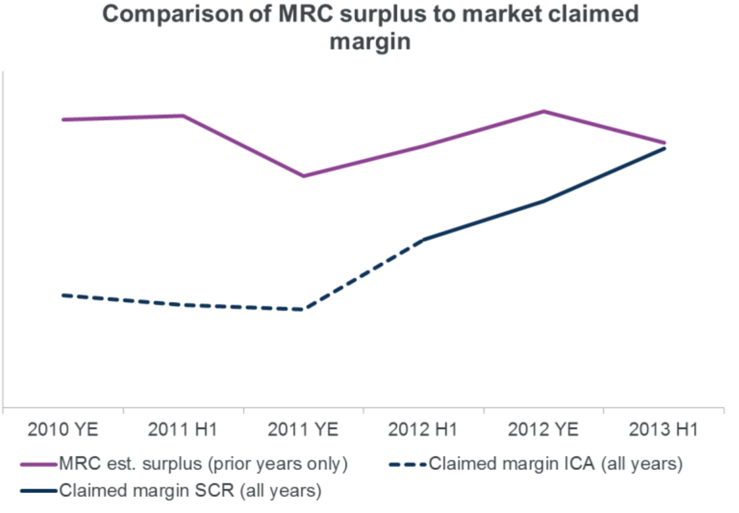


Observed reserve releases in line with benchmarking results

- Prior year result: £0.8bn
- Over 2/3rd from syndicates with a reserve benchmark index of 1 or 2



Reserve margins in capital setting have increased significantly



Source: Provisional TPD excluding life syndicates. Excludes ULAE

Summary

- Half year profit of £1.4bn, characterised by an absence of major cats but offset by low investment returns
- Continued prior year reserve releases, supported by favourable experience across most classes and years
- Largest proportion of reserve releases coming from the strongest ranking syndicates
- Surplus remains stable but the market is tending towards claiming the maximum for capital setting
- Claimed margins will face increased scrutiny and challenge

Syndicate Capital 2014 YOA

2014 YOA Syndicate capital

- Results still pending
  - No big movements at the market level
  - Non-aligned syndicates finalised 18th October
- Today: an update on changes to our review tools

Lloyd's SCR review: changes for 2014 YOA

- Agents were asked to provide more data this year
  - Form 313: split of LCM vs. non-LCM cat claims
  - Form 314 (entirely new)
  - Supplementary Questionnaire (entirely new)
- Why was this asked for? How is it being used?
- Let's look at an example: the diversification credit

What is the diversification credit ?

- Diversification credit (£) at a given percentile

  = (aggregate result with full dependence) LESS
  (aggregate result with selected dependence)
- Diversification credit (%) is a % of full dependence result
- It is a very material (and contentious) driver of the SCR
  - Occurs whenever risks are aggregated
  - Often exceeds e.g. 25% at the 99.5^{th} for insurance risk
  - Expert judgment is key consideration

What's the objective?

- The goal is an appropriate credit – and equity between syndicates
- This isn't straightforward – there are many moving parts
  - The shape/skewness of the marginal distributions
  - The degree of dependency
  - The relative size of the distributions
  - The number of distributions
- All of the above can/should vary between syndicates

Existing tests have uses and limitations

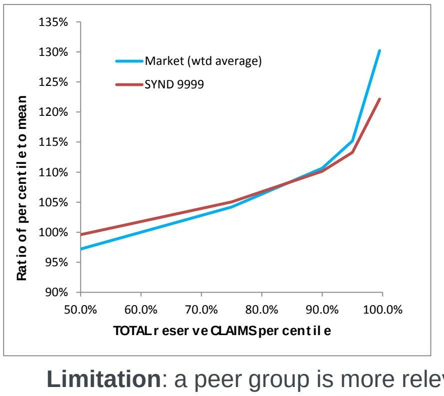
- Some tests/rules in use at Lloyd's:
  - "Conservation of risk": the SCR is larger than any component
  - "Sum of Squares Test": actual vs. aggregate with nil correlation
  - Input/output correlations: are they sufficient?
  - Compare stress at 99.5th , e.g. premium risk must exceed cat
- Each of the above has its limitations
- This year: we have additional information and more tools
- Let's look at an example using Syndicate 9999

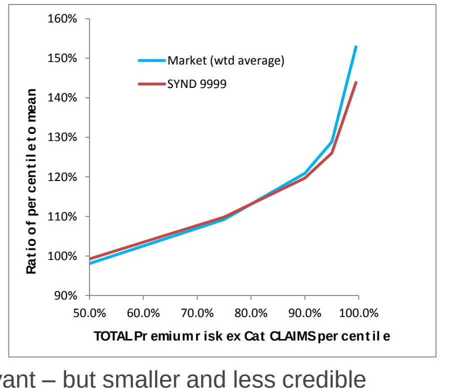
Case study: Looking at the drivers

- The goal is to better understand the source
  - E.g. low dependencies and/or highly skewed distributions?
  - Implications are obviously different
- Today: premium risk and reserve risk as an example
- The same techniques can be used elsewhere – e.g. between COB within reserve risk

Skewness of distributions (1st driver)

- Ratio of key percentiles to the mean
- Synd 9999 is a bit below average at 99.5th

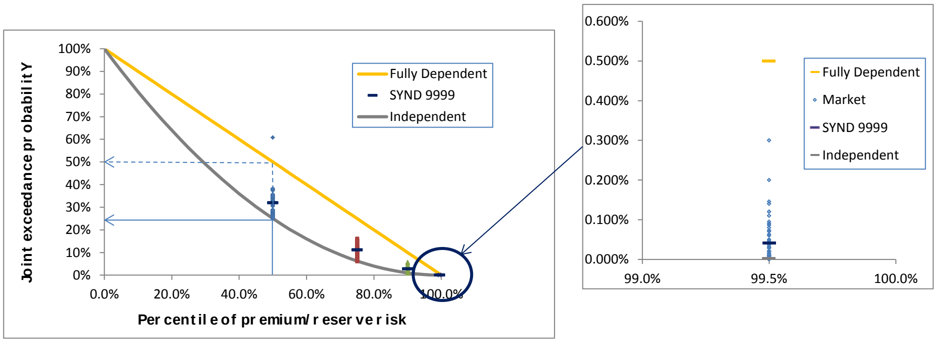




Limitation: a peer group is more relevant – but smaller and less credible

Dependencies (2nd driver)

- Probability of <u>both</u> risks going pear-shaped
- Synd 9999 is near average at the 99.5th



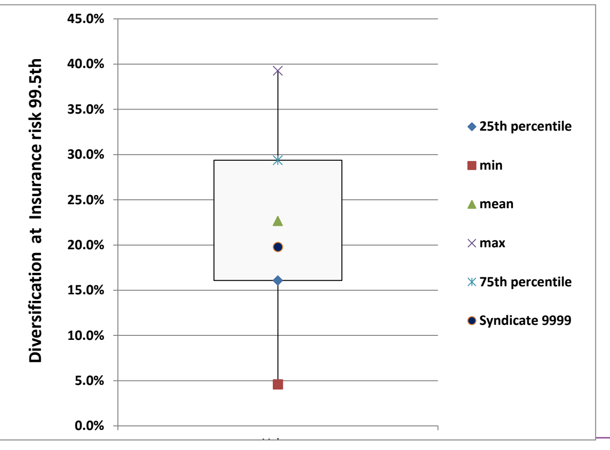
Limitation: simulation error becomes an issue at higher percentiles

Relative size and number of risks (3rd & 4th drivers)

- The credit will be larger if (all else being equal)
  - The risks are of similar size
  - There are more risks (e.g. reserve classes)
- Max Diversification Ratio = [SST(ρ=100%) – SST(ρ= 0%)] / SST(ρ= 100%)
- Useful index for comparing diversification “potential”
- But…it has the limitations of the SST

Diversification credit (result)

- Synd 9999 is just below average (surprise!)
- Also have the results from the Qualitative Q'aire



Next steps

- Lloyd's to review data from September submission and Supplementary Questionnaire
- The intention is to issue further guidance on diversification (post completing the reviews)

Lloyd's and Solvency II

Where is Lloyd's in terms of Solvency II?

- Lloyd's is Solvency II ready
- SII project transitioned into business as usual
- PRA review of Lloyd's internal model nearing completion
- PRA model approval won't be granted until SII in force
- PRA feedback pushing for some refinements
- Will be addressed over the coming year

Where is Lloyd's in terms of Solvency II?

Benefits

– Better modelling & parameterisation
– Better articulation of risk appetites
– Better link between capital and risk management

Better Modelling & Parameterisation

Reserve Volatility (attritional)

- 50 risk groups, 20 years of account, 1 year and ultimate basis $\Rightarrow$ 2000 parameter values
- Challenge
  – How to apply expert judgment consistently
  – How to explain expert judgment
- Use structured approach, based on consistency considerations

Reserve Volatility

Consistency considerations

- At any dev period, volatility to ultimate ≥ one year volatility
- For volatility to ultimate, UW volatility ≥ reserve volatility
- Ultimate reserve volatility decreases with increasing dev year
- For older dev periods, one year volatility approaches volatility to ultimate
- Volatility for a high level class < volatility for subclasses
- At late stages of development, volatility tends to constant

Reserve Volatility – Structured Review

Steps

1. Ultimate volatilities
   - By high level class of business
   - First six development years only
2. 1 year to ultimate ratios
3. Uplift for subclasses
4. Uplift for influence of reserving cycle on casualty
5. Extend to older development years

Reserve Volatility

- Direct estimation based on reserve change ratios
- Over one year

$$\frac{\text{Reserve}_{t+1} + \text{Paid during the year}}{\text{Reserve}_t}$$

- To ultimate

$$\frac{\text{Reserve}_{now} + \text{Paid since t}}{\text{Reserve}_t}$$

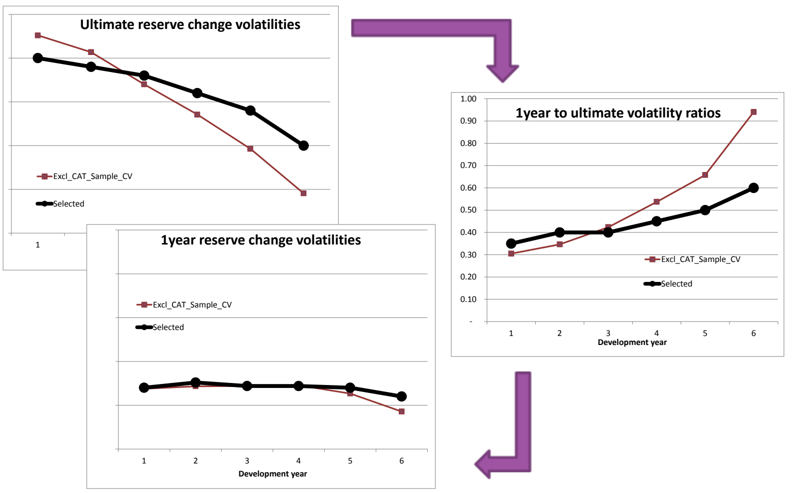
Note: the formulae given here are simplified for presentation purposes and ignore credit for future profit, adjustments for premium development and rate changes

Reserve Volatility

- Sample CoVs based on sliding window of development years
- Eg CoV for dev year 2 is based on data from dev years 1-3 (ignoring latest three years of account for ultimate volatility)

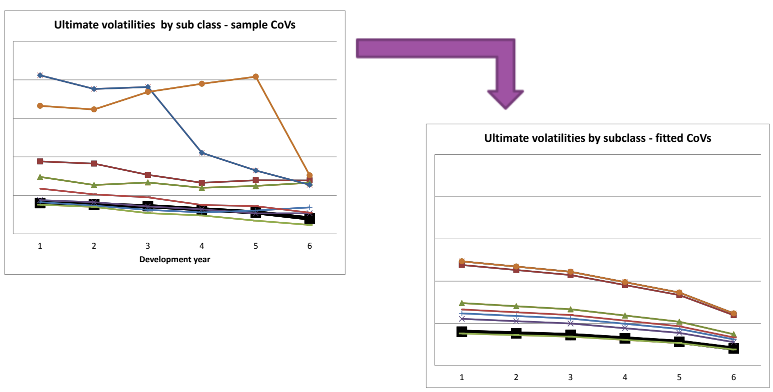
YoA	1	2	3	4	5	6	7	8
2005	0.67	0.74	0.77	0.83	0.89	0.91	0.95	0.95
2006	0.81	0.81	0.87	0.86	0.92	0.91	0.88	
2007	1.15	1.05	1.08	1.13	1.01	0.97		
2008	1.32	1.26	1.25	1.09	0.99			
2009	1.08	1.10	1.03	1.04				
2010	1.08	1.02	0.99					
2011	1.06	1.05						
2012	1.18							
CoV	0.23	0.21	0.17	0.14	0.10	0.05		

Reserve Volatility – high level class



Reserve Volatility

- Uplift for risk groups within one high level class



Summary and reminders of dates

	Deadline
US Trust Fund SAOs	14 February 2014
Worldwide SAOs	20 February 2014
SAO Reports	31 March 2014

Please submit two copies of the SAO report:

- one of which must be a hard copy, electronic copies are encouraged
- Jerome Kirk, Market Reserving & Capital, G5, Lloyd's, One Lime Street, EC3M 7HA
- electronic copies via email to SAOReports@lloyds.com

- Reserve Margins
- FAQs:
  - we expect the Data Accuracy Statement (DAS) to be signed by a Director or formally recognised by the Board
  - signing actuary rotation
- Governance one pagers…
- upcoming events:
  - Lloyd's Seminar 8 November
  - Signing Actuaries Forum 2 December