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Reserving Seminar

Taraash Gautam and Catherine Scullion

20 June 2018

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Contents

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Catastrophe development and uncertainty

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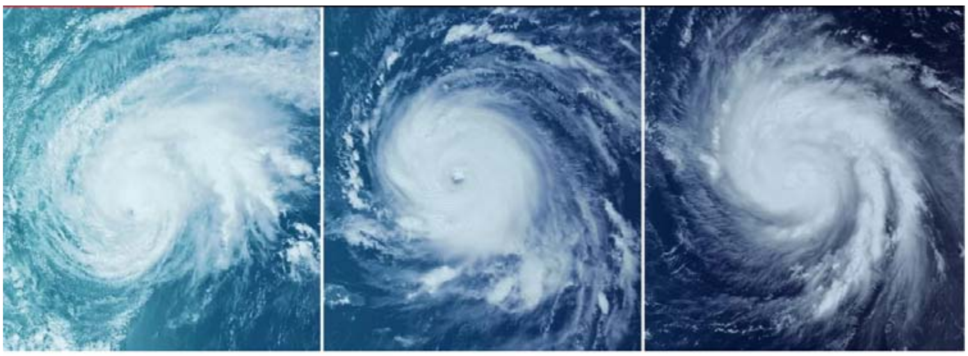
2017 Catastrophe experience

Harvey, Irma and Maria



Source: NASA

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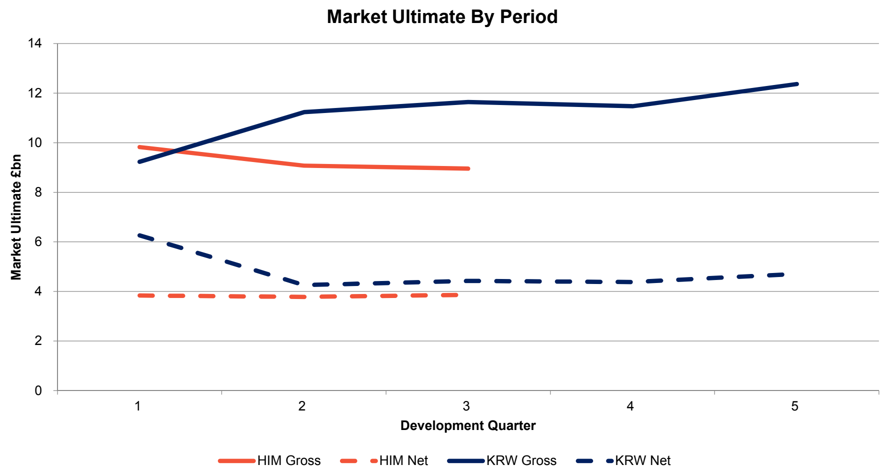
HIM Ultimate Development



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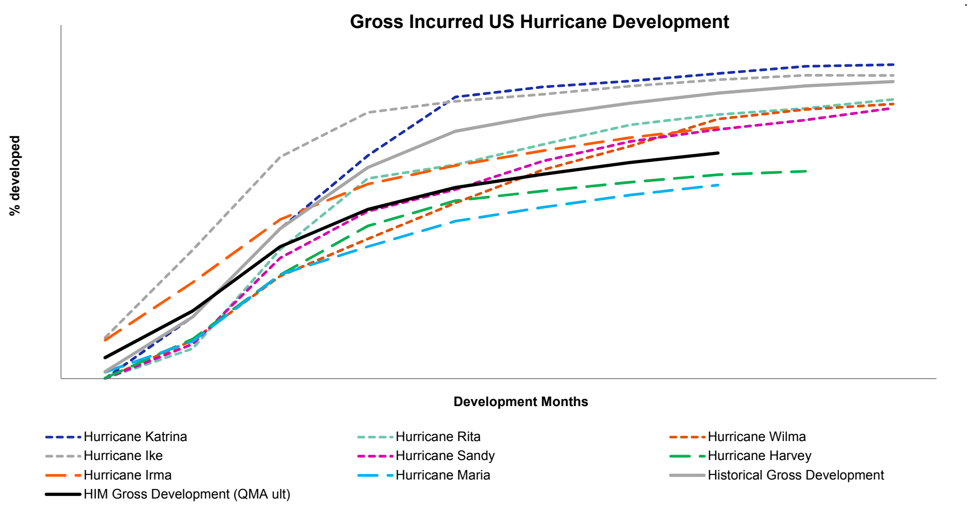
HIM Incurred Development



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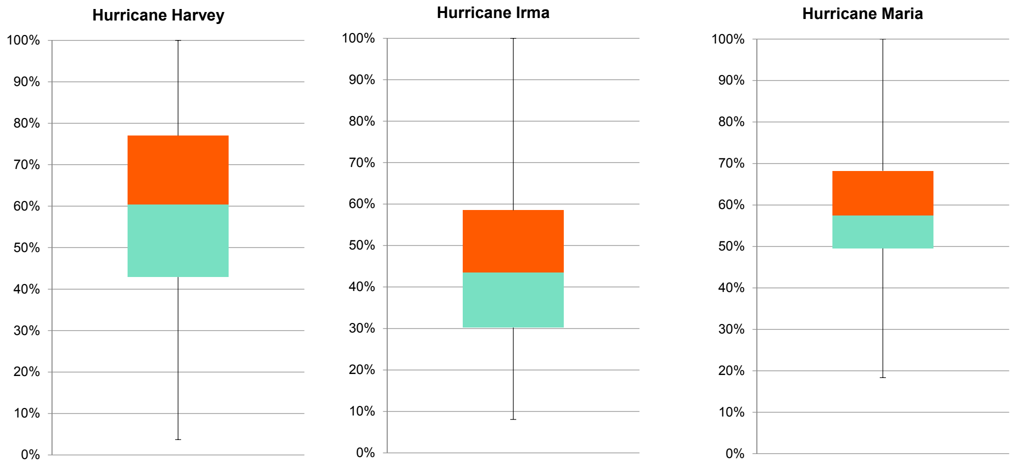
Incurred To Ultimate Development



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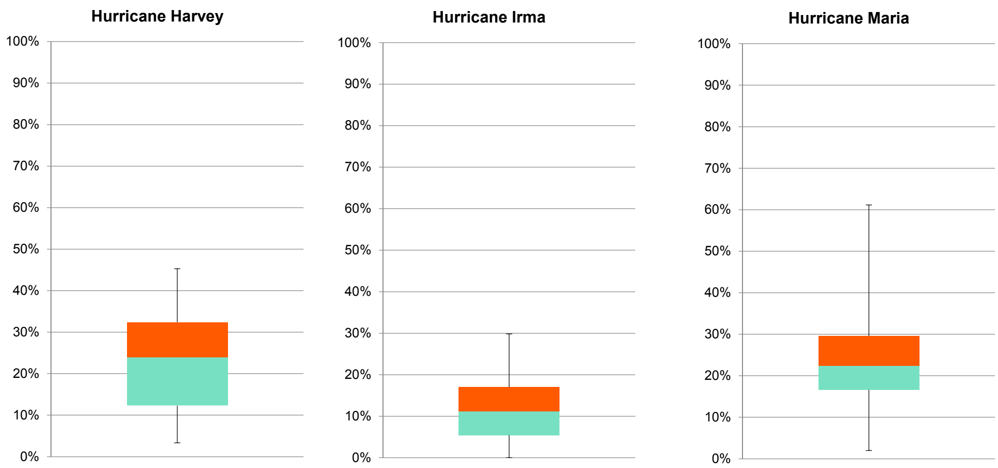
Paid To Ultimate Development



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Catastrophe / Large Loss Uncertainty – Approaches used

- Model multiple events together given common reinsurance arrangements
- Scenario based approaches
- Discussion with Exposure management to determine adverse scenarios
- Lean on syndicate estimates and scenarios
- Flexing assumptions
- Measure deterioration against return period in capital model
- Use capital model to assess deterioration
- Benchmarking - historical catastrophe development

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Catastrophe / Large Loss Uncertainty – Considerations

- Set out the Uncertainty for the loss
- Consult with exposure management, underwriters, claims
- Decide on the adverse scenario / stress
- Describe the rationale for the scenario
- Is it appropriate to set out and consider the limits?
- Link to the capital model, what is the return period for the deterioration?
- Validate the selection using historical data or other benchmarks
- Document the work!
- Don't solely rely on information provided

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Market trends

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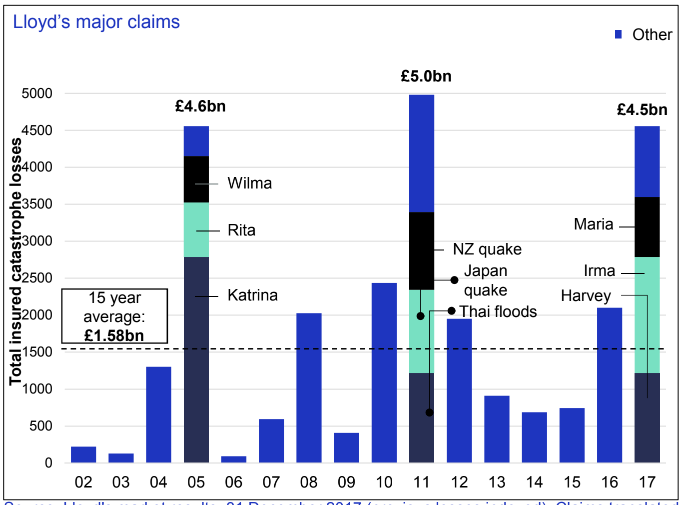
2017 was not an exceptional CAT year

Even though losses were higher than average

Lloyd's major claims



- 2017 was **not** an exceptionally poor year for CAT losses
  - but **did not have the support** of strong attritional performance
- **Underwriting** performance worsening

	UW loss UK£ bn	UW profit ex - CAT
2005	1.4	3.2
2011	1.2	3.8
2017	3.4	1.1

- **Attritional** loss ratios have been **climbing steadily** for several years

Source: Lloyd's market results, 31 December 2017 (previous losses indexed). Claims translated at rate of exchange prevailing at date of event.

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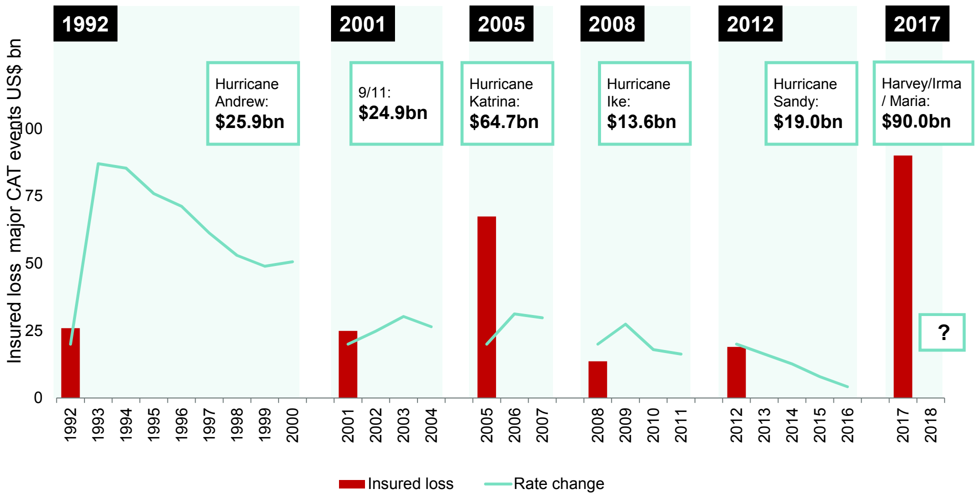
The "cycle" will not solve profitability challenges

Rate changes following recent **headline** catastrophe events



Source: Guy Carpenter: Insurance Information Institute: Deloitte analysis

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Updating Expectations

What questions should a (reserving) actuary expect to answer

- Change in loss ratio in absence of unexpected experience is a change in reserving basis
  - Why has it been made?
  - Is it the right amount?
  - Is there a different level of uncertainty?
  - Have other assumptions been updated consistently (patterns etc.)?
  - How has it been communicated?
  - How has it been fed-in to other areas – pricing, business planning, reinsurance, capital?
- Being wrong is a learning opportunity and actuaries are key to taking this
  - Why was the effect/trend/outcome/claims source/level of inflation/reinsurance response/… not anticipated?
  - Could another policy/binder/class/account be affected?
  - How much better/worse could it get?
  - How does it impact the assumption setting process?
  - Who has ownership of the assumption(s) made?
  - Can you disclaim responsibility for this?
  - Will you lose credibility if the answer is always the same?

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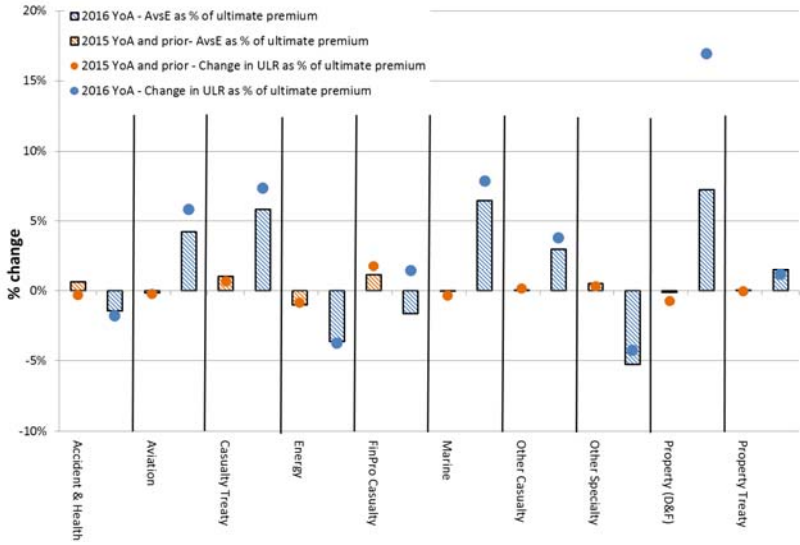
Market AvsE and ULR movements for 2015 & prior and 2016 YoA

Diagnostics used to identify any change in reserving basis



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Initial Expected Loss Ratios Expectations

Are a key input to reserving, pricing and business planning

Do you check how right they were?	How right should you expect them to be?
Do you know why they've been wrong – individually/systematically?	How right do users expect them to be?
What is the feedback loop?	What input should the "actuarial skillset" bring?

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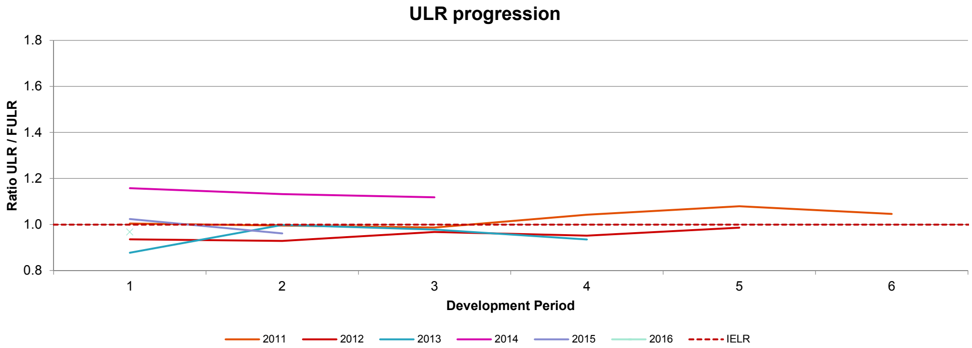
Initial Expected Loss Ratio Expectations

Are a key input to reserving, pricing and business planning



- Systematic bias – As many points start below as above, the average movement is 1.0(03)
- Emerging trends – Mix of older/newer years above/below the line
- Unanticipated impacts – No clear calendar year effects

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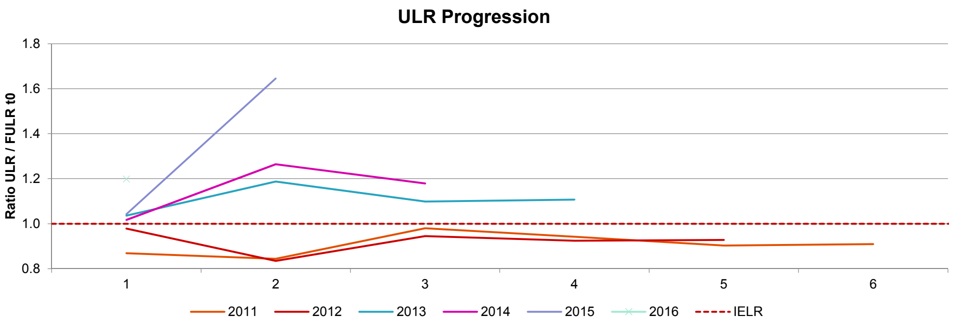
Initial Expected Loss Ratio Expectations

Are a key input to reserving, pricing and business planning



- Systematic bias – Slightly more points above than below, the average movement is 1.0(40)
- Emerging trends – Most recent years all started above initial selection, and deteriorated from there
- Unanticipated impacts – Trend that initial position is insufficient in recent years

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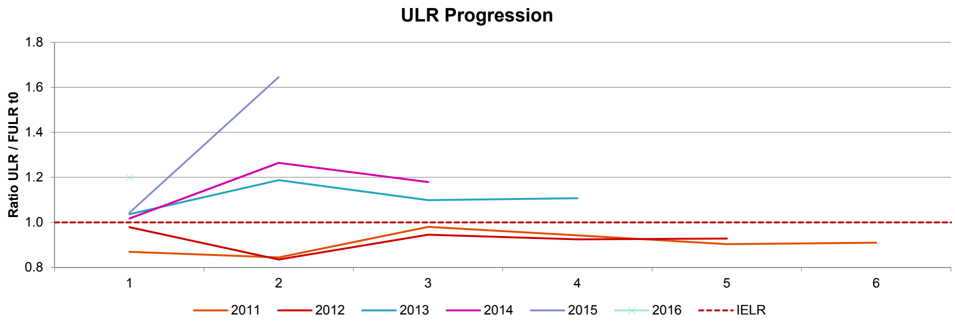
Initial Expected Loss Ratio Expectations

Are a key input to reserving, pricing and business planning



- Systematic bias – Slightly more points above than below, the average movement is 1.0(40)
- Emerging trends – Most recent years all started above initial selection, and deteriorated from there
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We can (readily) update reserving assumptions. Where else should there be an impact?

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Actuarial Function Reporting – A way out of any silo?

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Actuarial Function has two sides for Lloyd's…

Market and Society levels

Reports received from the market	Report produced by the Lloyd's Actuarial Function
• Two submissions per year • Self-assessment template of requirements met, reviewed by Lloyd's	• Overview of internal Actuarial Function work and outcome from Syndicate report reviews • (Voluntary) completion of self-assessment template for confidence on compliance

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…Primary purpose of each side is the same

Actuarial Function has two sides for Lloyd's

The Actuarial Function is required to inform the board of the key findings from their work and recommendations to address these

It is a key route for Actuarial work to influence the business

The Actuarial Function Report does not:

- Have a primarily regulatory audience, it is for the board
- Provide sign-off for business plans/reinsurance purchase – it provides an opinion on these for the board to consider
- Include all of the actuarial work undertaken in the year – this is too long!

Our message has been consistent in recent reviews…but we haven't seen much action

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Is it a user issue?

We have found NEDs to be an engaged and valuable group

- We held our first NED forums last year
- We had to hold two sessions due to demand
- NEDs should be informed by the Actuarial Function

As an internal Actuarial Function we have tried to practice what we preach…users are the best judge of our success

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Actuarial Function Primarily seeks to inform users

A user's view – Jon Hancock, Lloyd's Performance Management Director

Lloyd's has lots of information and analysis underlying business plan consideration

The Actuarial Function view provides:

- Independent perspective
  - Focus on data and past performance, the art of the possible grounded in reality
- Clear links to analysis
- Limitations of data and reliance clearly highlighted
  - Maybe more is possible, but **explicitly** what is being assumed compared to history in plans
- Appropriate timing of conclusions to be able to influence as decisions are being made

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Actuarial Function Primarily seeks to inform users

A user's view – Jon Hancock, Lloyd's Performance Management Director

The actuary is right . . .

. . . now discuss!

The function is the key driver of 'Lloyd's loss ratios'

How reliable are your loss ratio picks?

What loss ratios are agreed for plans?

How much capital is charged?

Your Board has access to better data than we do

We rely on it

We rely on you to use it

You will get better outcomes by using your actuarial data

They have the context

They understand the initiatives

If the packs are not understandable . . .

change the packs!

My request last week of the Boards . . .

. . . own your plans

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What the NEDs want

WHY?

- Not just statement of facts
- Planning vs actual
- Is it important? Tell us

Embedded in business

- No surprises in documentation
- Review of loss ratios over time for the underwriting opinion
- Careful of working in a silo
- Have opinions
- Turn recommendations into actions
- Issues regularly flagged in a different format to the Actuarial Function Report

Messaging

- Write the exec summary first
- Conclusions first then method
- Do you have to duplicate?
- Articulate uncertainty / limitations
- Is this a report for the Regulator or the board?
- Robust opinions are important
- Clarity – insight vs evidence

Engagement

- Be willing to take on feedback
- Be open to train board members
- Responsive to recommendations

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Questions/Comments

taraash.gautam@lloyds.com
catherine.scullion@lloyds.com

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