Ask an expert?
Getting better judgement working party
Agenda

• Background and motivation
• Who is an expert?
• The advantage of an expert
• Ask an expert (empirical experiment)
• Conclusions
Background and motivation

• “It is a *capital* mistake to theorise before you have all the evidence. It biases the judgement.” (Sherlock Holmes, A Study in Scarlet [Italics by presenter])
Background and motivation

• The Working party was formed to try and advance awareness of bias in expert judgement and make changes as a result of this to increase confidence in the judgements elicited

• Through case studies and surveys apply our theory in real world scenarios to drive awareness and improvement

• Financial modelling places material judgments in the hands of experts

• Can we make expert judgement more scientific and less “guess work”? 

5 November 2014
Background and motivation

• “Getting better judgements” survey: web-based survey launched earlier in 2014

• Large volume of responses: 222 in total

• Representing range of geographies and types of work

• Aim to get practitioners’ views on:
  – Most important issues relating to making judgments
  – Methods used to elicit judgments
  – Types of issues commonly encountered
  – What can be done to address these
Background and motivation

- 69 in capital / risk management; 48 based in UK
- 45 commercial insurance work (consultancy / in-house)
Background and motivation

Survey results - What do you rank as most important?

Capital / Risk Managers (50)
- Expert judgment related, 28%
- Use of data in model, 14%
- Incorporate judgments in models, 10%
- End-user understanding, 48%

Reserving / Pricing (108)
- Expert judgment related, 19%
- Use of data in model, 26%
- Incorporate judgments in models, 10%
- End-user understanding, 44%
Cognitive heuristics and biases

- Small sample bias
- Overconfidence
- Availability
- Anchoring and not adjusting enough
- Deliberate bias
- Answering an easier question
- Framing
Who is an expert?

• What about theorising where the evidence will always be limited and there is inherent uncertainty

• Maybe we can’t become more correct but can we be less systematically incorrect
Who is an expert?

- Actuary
- Underwriter
- Cat modeller
- Board
Who is an expert?

- Subject Expert
- Facilitator
- Decision Maker
- Technical Expert
- Actuary
- Underwriter
- Cat modeller
- Board
Who is an expert?

- Capital modelling actuaries have many hats:
  - Statistician
  - Reporter
  - Programmer
  - Presenter
  - Firefighter?!
The advantage of an expert

- Ellsberg work
- Individuals are ambiguity averse
- Where the question is difficult/unclear they will go with the default option and be more influenced by others
- An expert often acts where there is ambiguity – but do they do this effectively?
Blending judgement with data *in court*

**Testimonial Evidence**
- Witness(es)
- Suspect(s)
- ...

**Physical Evidence**
- DNA Evidence
- Biological material
- ...

---

Guilty ? / Not Guilty?

---

5 November 2014
Ask an expert?

- Empirical experiments slides to be created on the day
Conclusion

• The use of expert judgement materially impacts financial modelling

• Statistical basis important, but not uniquely so
  – Framing
  – Wording
  – Accessibility
  – Optimism
  – Pre-conception
What are you planning to do in the next 12 months?

Easier(?) and more popular
- Private study
- Discuss more
- Seminars
- Best practice sharing

Harder(?) and less popular
- Systemic review
- Organise training
- Peer review policy rethink
- Produce checklists
- Organise internal exam for students
Working Party Plans

• ATRC, December 2014
  – Exploring judgmental topics in actuarial science – both in teaching and research
  – Who are the experts here?

• Development and consolidation of ideas
  – Write up of paper – Mid 2015?
## Working party members

<table>
<thead>
<tr>
<th>Working Party Members</th>
<th>Sectors (Employers)</th>
<th>Actuarial Activities</th>
<th>At Seminar?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bernadette Hlavka</td>
<td>London Market (Tokio Millennium Re)</td>
<td>Pricing, capital</td>
<td></td>
</tr>
<tr>
<td>Catherine Scullion</td>
<td>Public Sector (GAD)</td>
<td>Pricing, fin. modelling and risk mgt.</td>
<td>Yes</td>
</tr>
<tr>
<td>Ed Tredger</td>
<td>Consultancy (UMACS)</td>
<td>Capital, pricing, software</td>
<td></td>
</tr>
<tr>
<td>Helen Lau</td>
<td>General Insurance (Allianz)</td>
<td>Capital</td>
<td>Yes</td>
</tr>
<tr>
<td>Jo Lo (chair)</td>
<td>London Market (Aspen)</td>
<td>R&amp;D, actuarial modelling, risk mgt.</td>
<td>Yes</td>
</tr>
<tr>
<td>Michael Garner</td>
<td>London Market (Atrium)</td>
<td>Capital, reserving, pricing</td>
<td></td>
</tr>
<tr>
<td>Nick Bonello</td>
<td>London Market (ANV)</td>
<td>Capital</td>
<td></td>
</tr>
<tr>
<td>Sejal Haria</td>
<td>Regulator (PRA)</td>
<td>Risk mgt., fin. modelling, business strategy</td>
<td></td>
</tr>
<tr>
<td>Steven Fisher</td>
<td>Consultancy (LCP)</td>
<td>Capital, reserving</td>
<td></td>
</tr>
</tbody>
</table>
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.