

GIRO40 8 – 11 October, Edinburgh



Lies, damn Lies and Stochastics

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Or... If it's so good, why isn't it used everyday?

- A quick question or two (or three)
- Where is it used?
- Are there any benefits?
- What are the challenges?

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Some quick questions...

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- 1. Do you think stochastic reserving techniques are useful?
- 2. Do you think others do?
- 3. Specifically, do you think the Management of insurers do?



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Does this tell us anything?

Well if the audience is like the survey...

- 1. Technically minded actuarial types think it's great
- We suspect our colleagues like it but maybe they're not as smart as us
- 3. Management certainly don't get it
 - If only they'd listen to us!
- 4. It's not necessarily that different elsewhere...

Why is this so?

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Where is it used?

"...increasing interest in stochastic claims reserving methods, they are still only used by a limited number of practitioners... Main reason is probably lack of need for the methods..." England/Verrall 2002

"curve fitting and stochastic methods are rarely employed outside of motor compulsory third party bodily injuryThis result is perhaps a little disappointing given the potential benefits..." GIPC Australia 2006

Potential uses of Stochastic Reserving

Stochastic claims reserving methods extend traditional techniques to assist with questions about uncertainty

- Ranking lines of business according to (reserve) risk
- Comparing a range of best estimates within a distribution of outcomes
- Reinsurance/risk transfer decisions (eg adverse development covers and portfolio transfers)
- Investigating the significance of changes in Ultimates
- · Developing a companywide range
- Financial reporting, including IFRS risk
 adjustments
- · Variability statements in reserve opinion
- Mergers & acquisition

- Actual vs. Expected analysis
- Feeding into pricing decisions
- Quantifying "data uncertainty" when parameterizing UW risk models
- Informing decisions about closing down lines of business (portfolio management generally?)
- Considering risk appetite and the capacity for new business given reserve risk exposures
- · Asset liability matching
- Monitoring against business plans
- Asset/Liability matching
- Assisting with ERM considerations generally

Uses of Stochastic Reserving

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What are the benefits?

- · Understanding variability
 - Particularly in the tail
 - 'How bad can it get'

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What are the challenges?

- We like lots of data
 - There isn't always a lot of it
- · Complexity of models
 - Over parameterisation
 - Lack of control cycle
- · Tying the range to traditional deterministic estimates

What are the challenges?

- · Need for judgement
 - We are familiar with the 'boundaries' of deterministic judgements
 - And how to explain it
- Validation.....
- Capacity
 - People
 - Time constraints
- · Articulation of results to decision makers
 - cf scenario analysis

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What needs to change?

- Maybe nothing?
 - Life is too short!
- · An external 'push'
 - IFRS.....
- · 'Integration' with capital modelling
- · Simplify to key drivers
 - Making judgements more explicit
- · 'integration' with scenario analysis



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The views expressed in this presentation are those of the presenter.

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