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The debate

This house believes that deterministic reserving methods should no longer be used

The debate

Chair: Kathryn Morgan

Speaking:

- For the motion: Dewi James
- Against the motion: Lis Gibson

Responding:

- For the motion: Roger Hayne
- Against the motion: Peter Green

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Speaking for the motion

Dewi James

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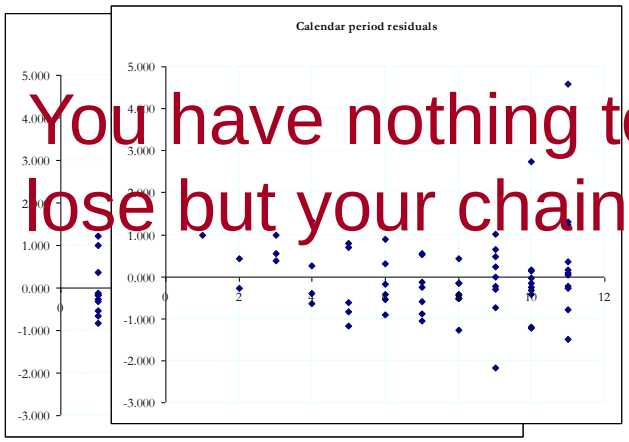

You have nothing to lose but your chains

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Speaking against the motion

Lis Gibson

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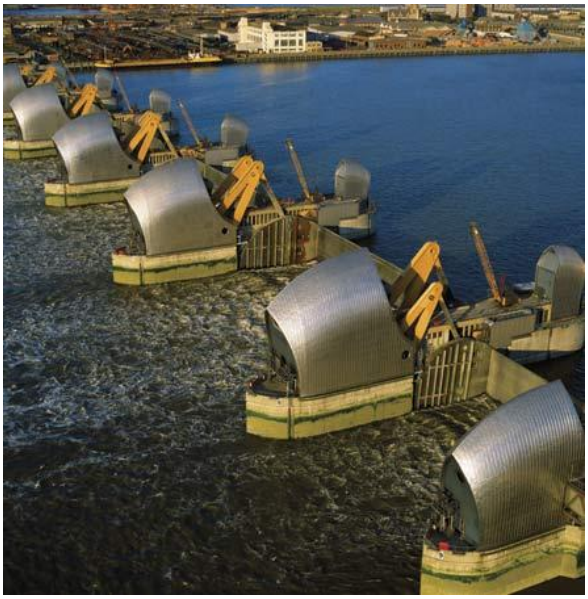

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Responding for the motion

Roger Hayne

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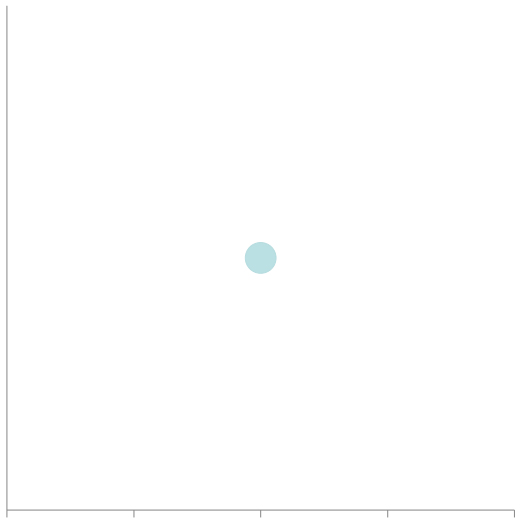
Non-Stochastic Information

Non-Stochastic Method (Ex. Chain Ladder)

- Assume:
  - A specific model
  - That losses from year one to year two will move as selected based on existing data
  - That losses from year two to year three will move as selected based on existing data
  - That losses from year three to year four will move as selected based on existing data
  - …
- Under all these myriad of assumptions then the final losses for each exposure year will be …



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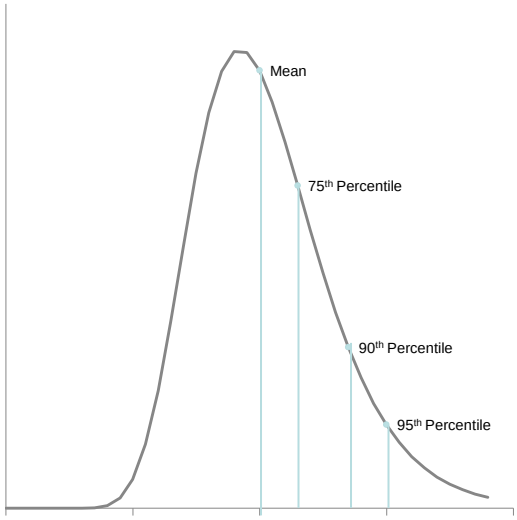
Stochastic Information

Stochastic Method

- Assume:
  - A specific model including assumptions about underlying uncertainty. The model usually has one or more parameters
  - Using existing observed data and statistical tools estimate the parameters of this model
  - A good estimation process will give you information as to how well the parameters "fit"
- If one is willing to assume the model is appropriate then a stochastic model can provide:
  - The likelihood of outcomes given particular parameters (process uncertainty)
  - Parameter likelihood given data values (parameter uncertainty).
  - The likelihood of future outcomes within the model accounting for both process and parameter uncertainty



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More is Better

- Both stochastic and non-stochastic approaches require assumptions
- Non-stochastic methods tell nothing about what happens if all those assumptions are not exactly followed
- Stochastic approaches give a wealth of additional information at little to no added cost
- More definitely is better!

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Responding against the motion

Peter Green

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What is the actuary's craft

- Understanding the data
  - Data is usually rough hewn and needs shaping and honing
  - Paucity versus data rich
  - Impact of the business process
  - Silk purses, sow's ears and lemons
- Understanding the business
  - Underwriting/business mix
  - Claims
  - Reinsurance – often biggest remover of risk but least sophisticated part
- Variety of methods
  - How do we choose between them
  - What deterministic methods are used and challenges they have met
  - Continuity vs one off exercises

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What type of actuaries do we want to be?

- **World's view of actuaries**
- **What takes the time**
- **Is sophistication always appropriate**
- **Beware the large database and software packages**

Which question do we prefer:

- **Provide a statistical analysis of the insurance data?**
- **What do you think of the numbers?**

I would contend the latter expects and requires:

- **Experience of the business**
- **Judgment and input into decision making**
- **All the tools in the actuarial box both deterministic and stochastic**

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Questions and Discussion

Contributions from the floor

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Concluding the debate

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