The Actuarial Profession
making financial sense of the future

33rd ANNUAL GIRO CONVENTION

Hilton Vienna Hotel, Am Stadtpark

WHY RUN-OFF COMPANIES SHOULD TAKE DFA SERIOUSLY

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Aims of workshop

- Overview of:
  - Why do DFA in run-off?
  - Where is it useful / What are the benefits?
  - When is it essential / What do FSA expect?
  - How widely used currently
  - DFA techniques available
- Debate
  - Current practice
  - Reasons why not widely embraced in run-off
  - Next few years

Warm up questions

- 1st – What do we mean by DFA?

- Who currently works in run-off?
- Who has used DFA in run off?
- In what areas have you used DFA in run-off?

Benefits - general

- (Understand the business/risks – Aim of ICAS!)
- Make informed decisions
- Improve / Gain competitive advantage

BUT

- Need buy-in from management & claims staff
  - so assumptions are sensible
  - so results of model are used

But what's different in Run-Off?

- No ongoing business
- Possibly limited funds
- Much less room for errors!

- So even more crucial (?) to:
  - Make informed decisions
  - Get a competitive advantage

Why avoid DFA in Run-Off?

- We’re doing fine, Thanks!
- Cost / Resources
- Poor data
- Don’t understand how it’ll help
- FSA may not ask to see an ICA

FSA / Regulators

- ICAs – required by FSA, but pragmatic
- Lloyd's – ICA needed for ALL syndicates
- Sale of Company – FSA will require "ICA"
- Part VII Transfer – Usually need "ICA"
  - If not obvious, then how else can Expert form their conclusion?

FSA – Capitalisation Requirements

- If Live, consider ultimate losses from run-off book + future business
- 1 year horizon – Usually 99.5% (1-in-200)
- 3 year horizon – Usually 98.5% (3-in-200)
- 5 year horizon – Usually 97.5% (1-in-40)

- Run-off – Typically 97.5% (“Plausible Worst Case”)

- BUT Depends where risk is / goes!

- Lloyd’s Run-off: 97.5% (But if Active Members: 99.5%)

Part VII Transfer

- Independent Expert appointed
- Section 109 (FSMA 2000)
- Chapter 18 of Supervision Sourcebook (FSA Handbook)
- Civil Procedure Rules

- "*The FSA's regulatory objectives include market confidence and the protection of consumers. Either or both of these might be impaired if a transfer were approved that led to loss, or perceived loss, to consumers or other market participants.*"

- Need to be happy with security of policyholders:
  - Those transferring
  - Those left behind
  - Those in accepting company

Transfer/Sale – Diversification Effects

- 2 classes of business
  - one : stable with consistent profit (small capital requirement)
  - other: volatile (high capital)
- Combined
  - overall risk lower (less capital)
  - risk increase for class one policyholders

ICA Capital Calculation & Risk

- Capital is Proxy for Risk
- Can use model to measure risk in:
  - Accepting Commutation Liabilities
  - Removing Commutation Liabilities
  - Reserving
  - Part VII Transfer
  - Sale/Purchase

Benefits - Reserving

- Understand/explain uncertainty & downside risk
- How else calculate mean?
  (High XOL layers / Extreme Events)
- Allow net position to be properly calculated
- Feed into ICA model – reserve risk

Benefits - Commutations

- Stochastic only way sometimes
  (e.g. High XOL layers / Extreme Events)
- Negotiation strategy?
- Risk premium calculation
- Remaining book - more risk/need more capital?

Benefits – Other

- Scheme Creditor - Claims Submission (Usually Best Est but for high level XOL / Extreme Events, value is in the tail)
- Replacement Cover for Run-Off Companies

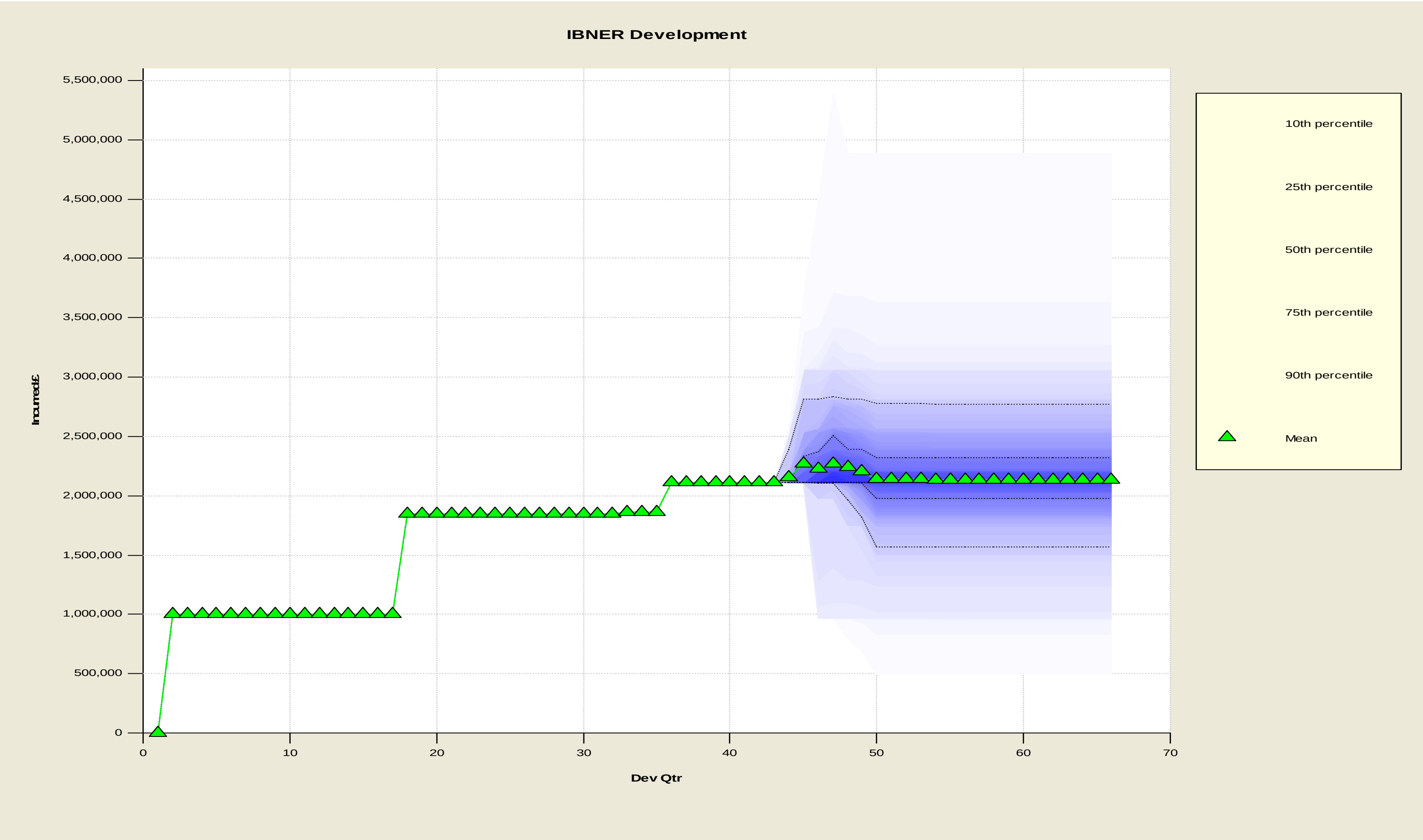
DFA – techniques available

- Degrees of sophistication
  - Stress / Scenario Testing (L/M/H?)
  - Stochastic spreadsheet
  - Full Stochastic model

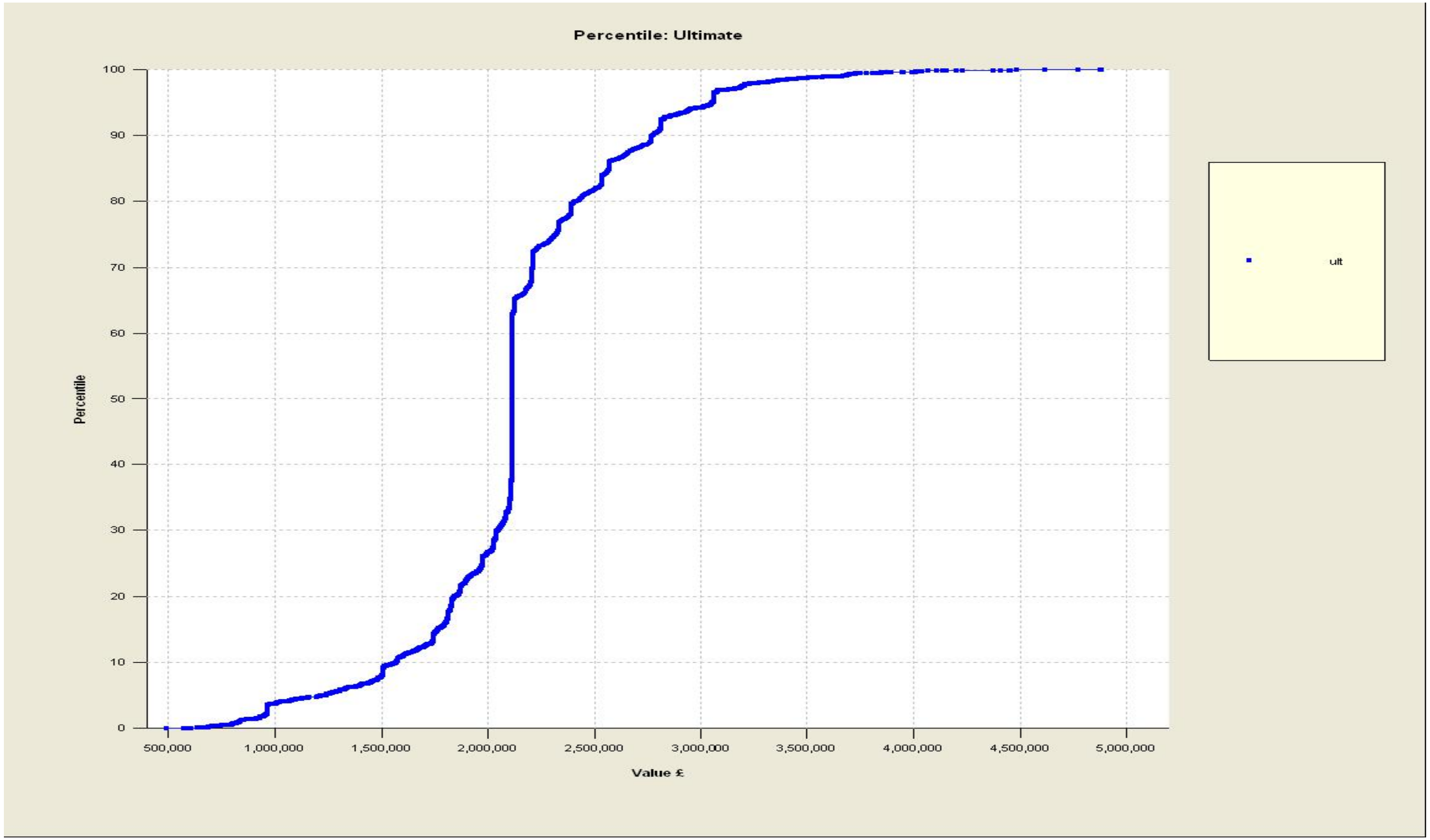
DFA – techniques available

- Advanced model will include
  - Reserving by COB / currency
  - Separate Treatment of LLs / Cats / Latents
  - Dependencies specified
  - Tail Dependencies specified
  - Netting off explicit
  - Bad debt explicit (dependency with Reserving Risk?)
  - Link to investments – consistent assumptions
  - Other ICA risk groups + dependencies

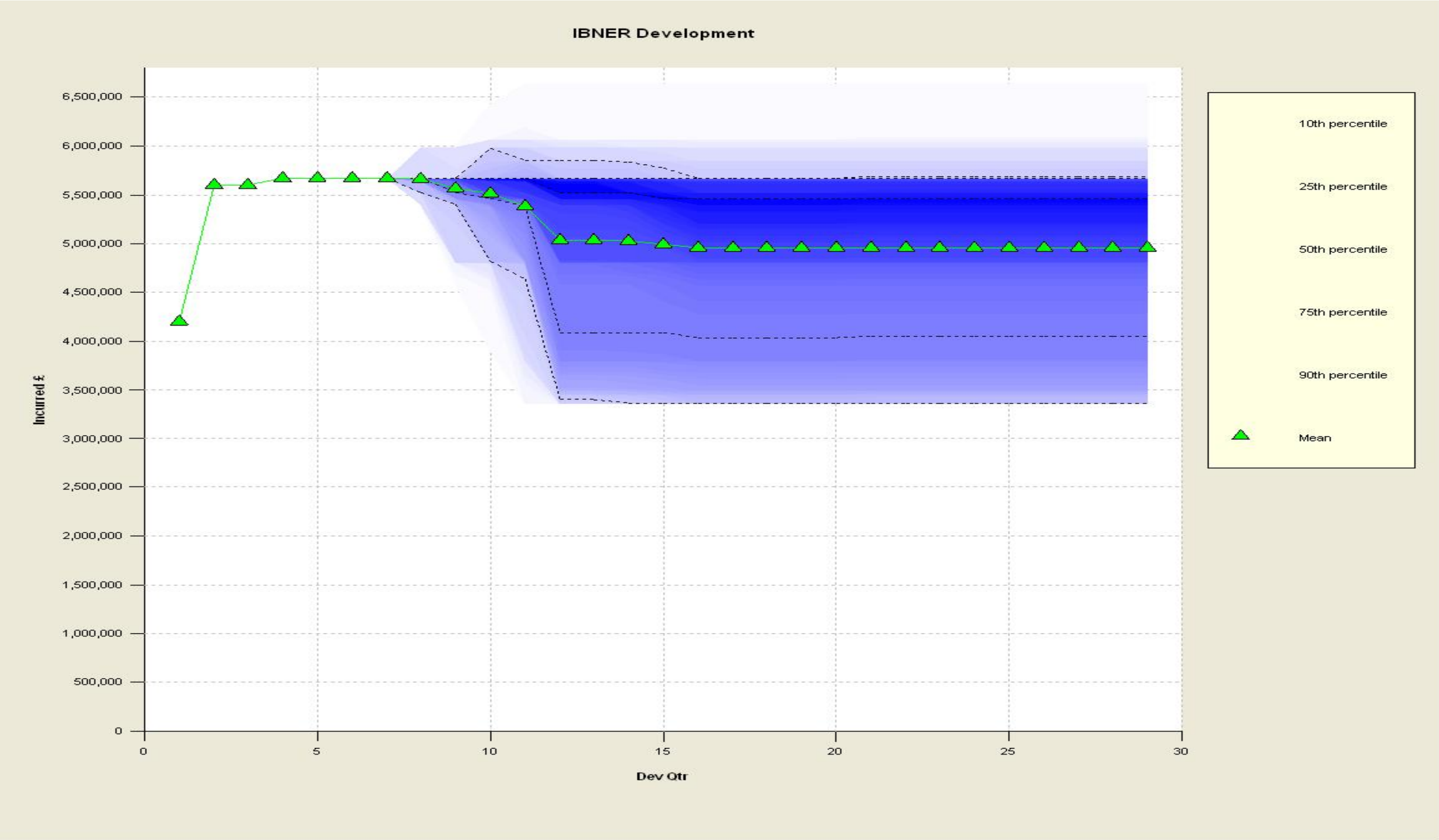
Example Claim 1 – IBNER Development



Example Claim 1 – Ultimate Development



Example Claim 2 – IBNER Development



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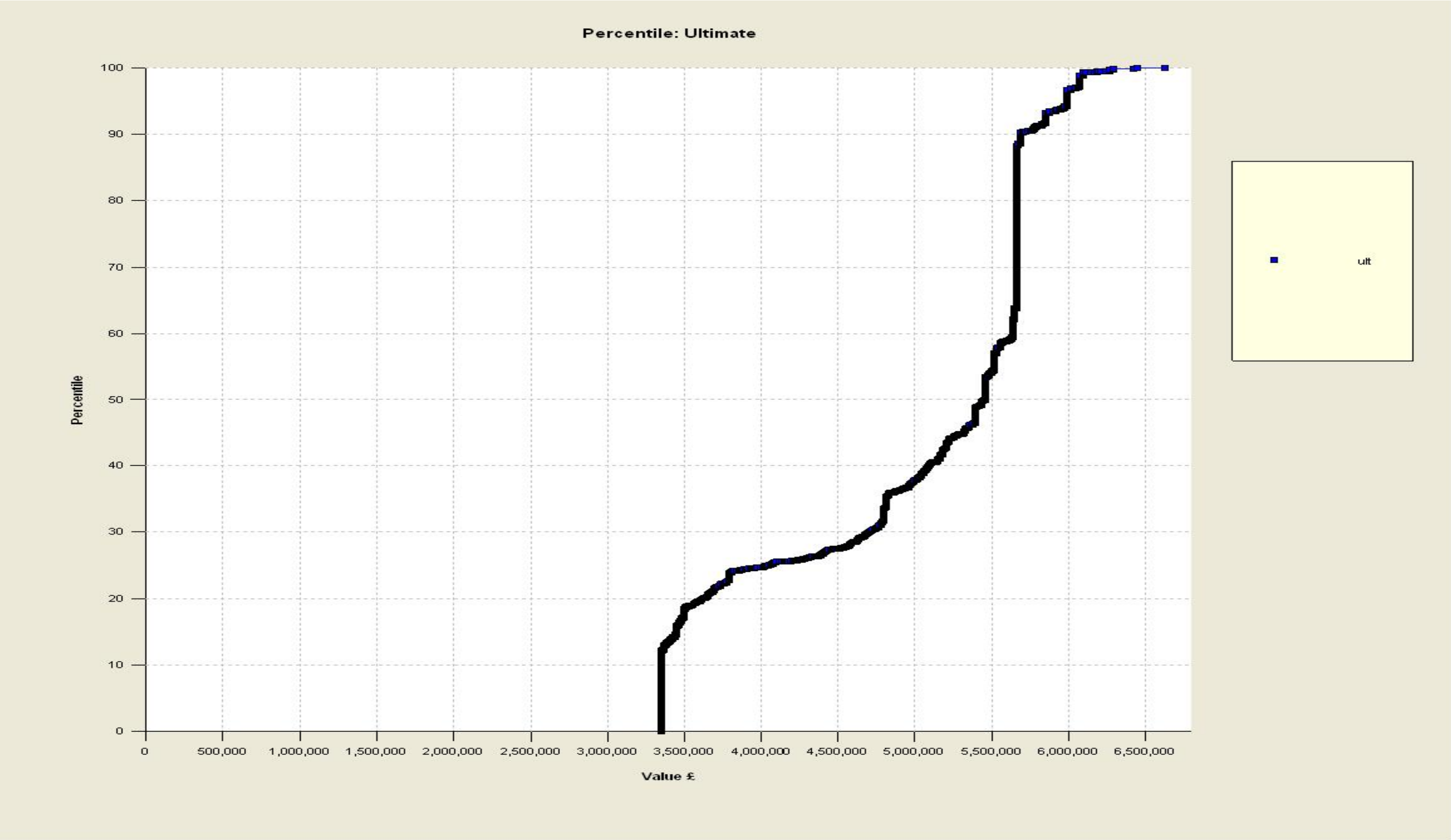

DFA in Run-Off : Preliminary Conclusions

- Not generally used in reserving
- Not generally used in commutations
- Few ICAs (Lloyd's run-offs plus live with run-off)
- Not generally used in scheme work
- Becoming essential for most Transfers
- Are used for Sales

Debate 1

- Run-off Book
- > 25% of Reserves are US Asbestos Direct
- Calculate Reserves at 99.5th percentile

- Is estimate completely unreliable?

Debate 2

- Run-off Book
- > 25% of Reserves are US APH RI/Retro
- Calculate Reserves at 99.5th percentile

- Is this estimate unreliable?

Debate 3

- Should all run-off companies (be forced to) undertake an ICA?
  - Less frequently than live?
  - Only in a "sale" scenario
  - Only if capital can flow?
  - Above a certain size?