Actuarial decisions under Pressure

James Orr

19 June 2017

Contents

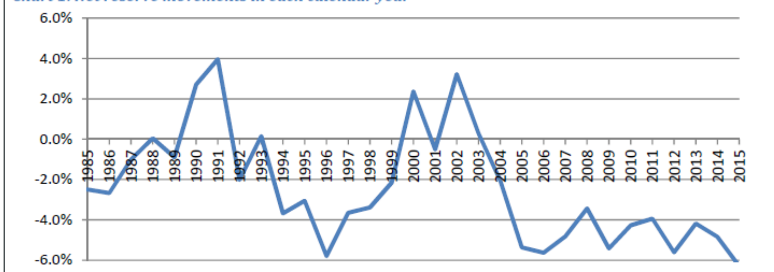
- Context and motivation
- The reserving challenge in a soft market
- Past failures
- Practical tips
- Any questions?

Context - financial

***"Dear CEO"* Letter – July 2016**

We observe that reserve releases in 2015 as measured by the percentage of reserves brought forward have been the highest for over 30 years (see Chart 1). Inevitably this raises the question as to whether these reserve releases are sustainable. We have not identified a single trend to explain the increase; however, this will be an area of continued interest as we move to analysing technical provisions under a Solvency II basis.

Chart 1: Net reserve movements in each calendar year



Institute and Faculty of Actuaries

Context - historical

- Many GI actuaries have entered the market this century
- Few will have had direct experience of
  - the implications of a prolonged soft market (and, in due course, a hard market…)
  - dealing with the consequences: "*mopping up*"
- During the 90s, GI was still "*wider fields*"
  - relatively few GI actuaries worked on firms and syndicates
  - many of these trailblazers benefited from a wider view
- In the 21st Century, more actuaries work in specialised functions
  - reserving, capital, pricing, underwriting, risk,…are these silos?

Institute and Faculty of Actuaries

Motivation

- History does not repeat itself, but
  - it does have a certain rhythm…
  - …and ignorance does repeat itself
- Sharing anecdotes and reminisces might be satisfying, but is it useful?
  - many millennials witnessed the "*Global Financial Crisis*" first-hand
  - they want practical tips, not "*waffle*"

Some scene-setting

- GI firms write policies of indemnity
  - claims contingent on events: mishaps, accidents, catastrophes
  - quantum of loss/claims determined under contract Terms & Conditions (T&Cs)
  - "*complex derivatives, with an unobservable underlying*"
- Policies are not just sold, but "*underwritten*"
  - to select risks, determine extent of cover (T&Cs) and quote a premium
- Price discovery through a bidding process
  - in general, lowest bidder wins – beware "w*inner's curse*"
  - competition reduces the average premium available in the market

Some scene-setting

- Regardless of premium / price, cost of cover is only known retrospectively
  - "*inverted production cycle*"
- Actual costs depend on
  - occurrences, notifications
  - the outcomes of assessments and negotiations
  - the costs of goods, services and determinations of liability
- Reserving required to recognise and provide for claims costs
  - essential financial discipline, enshrined in accounting and solvency regulations
  - data drawn from business plans and processes, and benchmarks

The reserving challenge in a soft market

- Excess capacity, chasing limited premium in competitive conditions
  - pressure on businesses to generate profits and returns on capital
- Consequences for underwriting & pricing
  - pressure to keep the price keen and offer attractive T&Cs
  - many firms become "*price takers*" rather than "*price makers*"
- Consequences for claims settlement
  - pressure to control costs and (possibly) prolong payment processes
- Consequences for reserving actuaries
  - responsibility to arrive at robust reserve estimate, whilst allowing for the above pressures
  - pressure to arrive at reserves that don't overstate claims (i.e. understate profits)

Past failures

- Liability catastrophes
  - pre-1990s
    - aggressive recruitment of investors and expansion of business at Lloyd's
  - losses crystallised in late 80s / early 90s
    - asbestos, pollution, health
    - LMX: Piper Alpha, Exxon Valdez, Hurricanes Hugo & Gilbert
  - late 90s…widening scope…
    - cover for free, free reinstatements, disappearance of aggregate deductibles, decrease in excess amounts, more multi-year policies, new geographies for free
    - initial expected loss ratios in Bornhuetter-Ferguson, exacerbated weak pricing

Past failures

- Motor business, this century
  - A. competition drove more rating factors, increasing scope for anti-selection
    - → higher exposure to those with criminal convictions, led to much higher claims costs
  - B. broken links between claims experience and reserving and pricing
    - → slow to identify and respond to increased bodily-injury costs
    - → continued underwriting and reserving with inadequate allowance for claims costs
  - C. downwards review of previously strong case reserves, not communicated to actuary
    - → weakening in case estimates led to inadequate reserves
  - D. pass-porting into a larger and more competitive market
    - → unable to properly select and price policies

Practical tips

Risk Adjusted Rate Change

1. Ask your underwriters* what difficulties they find in calculating "*RARC*":

$$\frac{\text{Gross Premium charged this year} - \text{Gross Premium charged for this year's coverage last year}}{\text{Gross Premium charged for this year's coverage last year}}$$

Source: Lloyd's

2. If your "*RARC*" analysis shows that new business is more profitable, work out why
3. Ask your underwriters* what cover has been added without an explicit charge
4. Speak to your claims colleagues* about their work
   - what are the key stages in the claims process and how are case estimates set?
   - what are the leading indicators of changes in claims frequency and costs?
   - how do they track the adequacy of case estimates?
   - has anything changed recently, say a review of case estimates?

 * offer to help them in their work

Practical tips

5. Capture objective exposure measures to track cover over time
   - do these capture additional cover that's been added?
6. Analyse the relationship between paid and incurred development
   - include paid projections in your analysis – why are these different from incurred?
   - compare ratios relevant to case reserve strength between origin years

     e.g. Paid ÷ Incurred ; Case Reserves ÷ Incurred ;
     Case Reserves ÷ Ultimate Claims ; IBNR "*burn*"
7. Consider and communicate clearly your key assumptions, risks and uncertainties
   - TAS 100 is your friend…
   - explain the reasons why the current reserve estimates might turn out to be wrong

One last example…

- Financial Guarantees
  - typically, insurance for financing risks
  - includes mortgage indemnity guarantees (MIG) and mono-line credit insurance wrappers
  - one problem is that corporate memories < economic / credit cycles
  - lenders periodically experience losses and seek to offload (future losses) on to insurers

8. Practical tip
   - be cautious in approaching innovative products – beware an absence of relevant data
   - include strongly calibrated stress tests to assess potential losses
   - don't mistake an absence of past losses for an absence of risk

Conclusion and key messages

- There are clear pressures present in the current insurance market
- Such pressures can influence perceptions and decision-making
- There is no magic bullet to counter these pressures
- But there are practical steps you can take…

  …are there any that you can think of?

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.