

GIRO 2006 - Using the Work of Other Professionals

Case Study A: Reserving Analysis – Reliance on Attorney Estimates

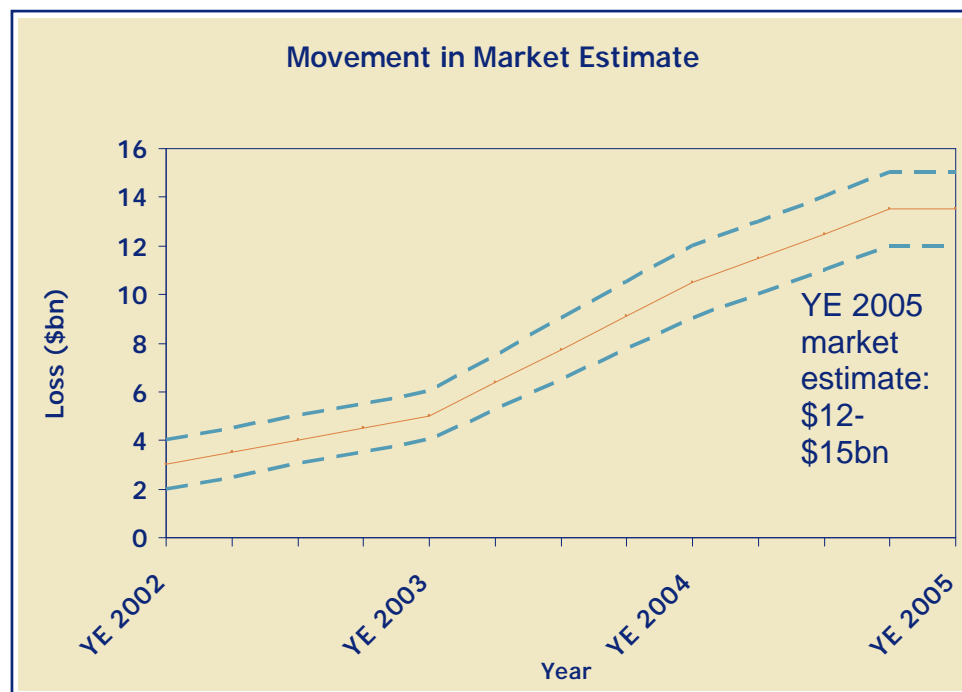
You are a general insurance actuary and signatory for a Lloyd's syndicate that wrote a large amount of US Casualty business over the 1999-2001 underwriting year period. In particular, the Syndicate wrote a large financial institutions account consisting of a large number of US investment banks (on which the Syndicate has taken varying line sizes). As such, the Syndicate has seen significant loss notifications to each of "Laddering", "Enron" and "Worldcom" ("ELW") claims.

Given the scale of the market losses for ELW claims, this has been a key feature in the Syndicate's reserves.

A number of firms of attorneys have been engaged by the lead underwriters of the investment banks to produce reports on their assessment of the losses affecting the banks, and their recommendations for insurance reserves.

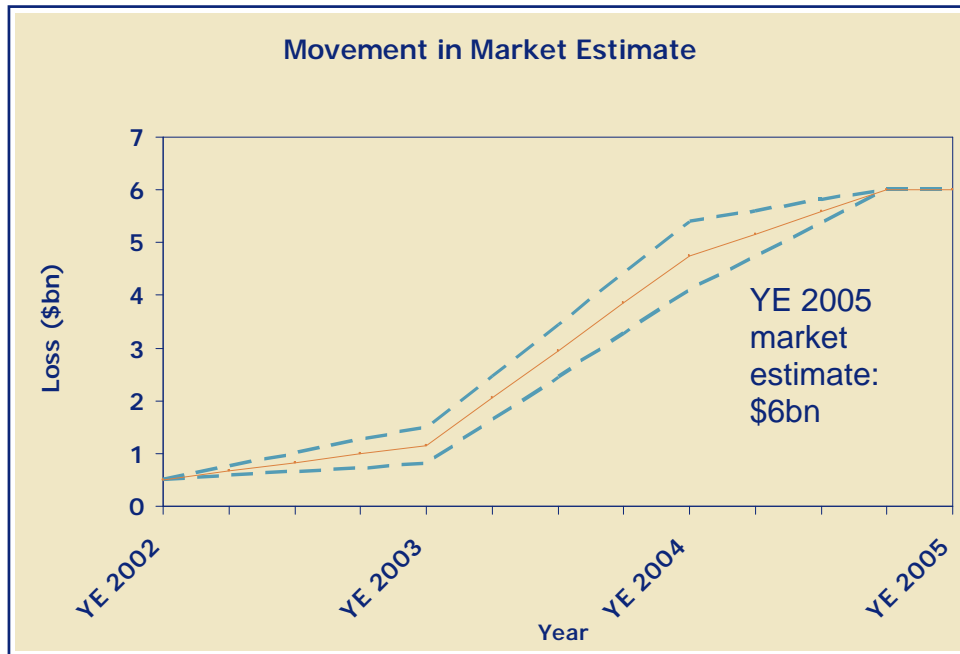
The graphs below show the movement over time in attorney market loss estimates for each of Enron and Worldcom respectively.

Enron – Movement in Market Estimate



GIRO 2006 - Using the Work of Other Professionals

Worldcom – Movement in Market Estimate



Questions

- 1) What level of reliance should we be placing on the attorney estimates?
- 2) What level of review/ validation process of the attorney reports should we be carrying out, and what features should we be looking out for?
- 3) Should we be taking the attorney estimates at “face” value?
- 4) What process should we go through to decide whether it is appropriate to add an IBNR reserve to the attorney estimate?
- 5) If you are carrying out the reserve review quarterly and see the above deterioration in market estimates, at what stage do you start allowing for this in your IBNR estimate?
- 6) If the emerging claims experience is worse than expected, how do you react? Are we (as actuaries generally) reacting quickly enough? Do we sufficiently monitor the Actual vs Expected experience?
- 7) Given the new GN12 requirements relating to dealing with uncertainty, what requirements should there be on us as a profession to review the underlying attorney report assumptions to determine the level of uncertainty?
- 8) Are we including enough in our current actuarial reports on where we are relying on the work of other professionals. Are we including sufficient reliances and limitations?

GIRO 2006 - Using the Work of Other Professionals

Case Study B: Reliance on External Models (e.g. CAT Models)

One of the key reserving issues for the 2005 year-end was reserving for the Hurricanes Katrina, Rita and Wilma. In the period following these losses, insurers were seen to regularly increase their individual loss estimates to these hurricanes, with many insurers “doubling” their initial loss estimates.

There were a number of reasons for these increases, but one of the main reasons was insurers placing too much reliance on their CAT models, whether from RMS, AIR etc.

These models make a number of key assumptions as to CAT frequency, the loss types they include in any loss quantification, etc.

Questions

- 1) What level of reliance should we be placing on the output of CAT models?
- 2) What level of review/ validation process of the CAT models should we be carrying out, and what features should we be looking out for?
- 3) Should we be taking the CAT model estimates at “face” value?
- 4) What process should we go through to decide whether it is appropriate to add a “loading” to the CAT model estimate?
- 5) If the emerging claims experience is worse than expected (based upon the current estimate), how do you react? Are we (as actuaries generally) reacting quickly enough? Do we sufficiently monitor the Actual vs Expected experience?
- 6) Given the new GN12 requirements relating to dealing with uncertainty, what requirements should there be on us as a profession to review the key CAT model assumptions to determine the level of uncertainty?
- 7) Are we including enough in our current actuarial reports on where we are relying on the work of other professionals. Are we including sufficient reliances and limitations?

GIRO 2006 - Using the Work of Other Professionals

Case Study C: Reliance on Another Non-life Actuary

You are a non-life actuary employed by a professional services firm. One of your upcoming projects is to work on the audit of ABC Insurance plc at this year-end. Your main responsibility on the audit will be ABC's reserves and you will be required to advise the audit partner in this area in order to assist the partner in forming an opinion on ABC's financial statements.

You are currently planning your approach to the work. You know that ABC has a team of actuaries responsible for recommending the reserves to be held by the company. You also know that ABC commissions XYZ LLP to perform an actuarial review each year, including full projections at Q3 and an update at Q4, to give ABC's management an independent view of the reserves. The audit partner would like you to base your audit work on using XYZ's review.

Questions

- 1) A junior colleague suggests that, as XYZ has a good reputation, there is not much point in the doing additional work on the reserves: the audit partner could simply state in the audit opinion that he or she has relied on the work of XYZ in respect of the reserves. You find this idea quite attractive – perhaps you could fit in another holiday this year after all! – but you suspect there's a fly in the ointment somewhere. What is the problem?
- 2) Having accepted that Plan A above is not going to be acceptable, you console yourself with a nice hot cup of tea and settle down to work out Plan B. You know that XYZ is not performing its work with you in mind. Can you still use XYZ's report? Why / why not?

Assuming that you are going to use XYZ's work (rather than using ABC's own work or performing your own projections), consider the following issues:

- 3) What do you see as the differences in the work that you need to do when you use the work of a professional in the same field as you, compared to using the work of a professional in a field that you are not trained in?
- 4) What aspects of XYZ's work, and of XYZ itself, will you need to consider? In each case, what will you need to do in order to get comfortable with XYZ and its work?
- 5) In question 4, how did you decide how far you needed to go in your work in order to get comfortable?
- 6) The report that XYZ produced last year contained a discussion of uncertainty. How does their uncertainty feed through into yours?

(Note: If you are familiar with SAS520 or ISA620 please ignore them for now and discuss from first principles what work you think is necessary.)

GIRO 2006 - Using the Work of Other Professionals

Case Study D: Part VII transfer

You are a general insurance actuary who has been appointed to be the independent expert of the transfer of all non-motor insurance business (c. \$200m of annual premium income) from SandCo UK (the UK branch of SandCo Bermuda) to SeaCo Ltd, a recently acquired UK subsidiary of SunRück AG, based in Dresden.

SandCo UK was set up in late 2001, and writes off-shore energy risks, and property catastrophe cover in addition to its ongoing UK motor account. The Bermudan parent also supports a syndicate at Lloyd's using an LOC and writes a small amount of life reinsurance business. SeaCo writes largely European commercial property risks using its EU passporting rights, and SunRück is a global reinsurer taking all sorts of risks from all over the world.

SandCo UK has sadly suffered greatly from losses caused by Hurricanes Katrina, Rita and Wilma.

Reliance made on other professionals

There follow some thoughts on some of the number of other professionals that the actuary could rely upon in reviewing the various portfolios above in order to assess whether any of the policyholders involved in this transaction are adversely affected:

SandCo UK

Reserving for the off-shore energy business interruption losses has been carried out based upon a report by a firm of US forensic accountants – Claims Services Inc (CSI). They discuss the true economic losses caused by the inability to produce oil for a three week period for a number of the insured companies.

There are legal disputes with cedants who wrote business in New Orleans over what proportion of the flood/storm surge should be covered. The firm's attorneys – Billem & Run LLP - advise that the potential exposure is \$50m to SandCo UK, but that the case is strongly in their favour – probably 80/20 chance of winning.

The company also buys significant reinsurance. They post a bad debt reserve, relying on the published views of rating agents and applying a factor based upon security to their estimated exposure.

SandCo (Bermuda)

In order to understand the capital backing of SandCo UK, one of your life insurance qualified colleagues has offered to look at the liabilities in the life reinsurance arm of SandCo (Bermuda) for you. They have prepared a report on their findings.

The external auditors of SandCo (Bermuda) have verified the existence of the letter of credit for the Funds at Lloyd's.

You have commissioned a report from a tax accountant (Dodge & deFrord) in the UK to advise on the tax implication of transferring business with large losses on it from Bermuda into the UK, and are taking account of this in your Independent Expert's report.

GIRO 2006 - Using the Work of Other Professionals

Questions

- 1) Which, if any, of these other professionals is it sensible to rely upon?
- 2) What steps would or should you take to gain comfort that this is appropriate?
- 3) What documentation should you make?
- 4) Answer the above questions again, assuming that each response must end “your honour”.

GIRO 2006 - Using the Work of Other Professionals

Case Study E: Reliance on Client

Situation

You are a non-life actuary employed by a re/insurance company with complex reinsurance arrangements. One of your tasks is the periodic review of reserves. You review the reserves gross of reinsurance and the reinsurance department feeds your estimates through its reinsurance model to arrive at the reserves net of reinsurance. You have to report on the reserves net of reinsurance.

Questions

- 1) What level of review should you conduct on the reinsurance model regarding:
 - a. data;
 - b. assumptions;
 - c. structure;
 - d. other features; and
 - e. output / results?
- 2) Is this any different from using the gross and net data triangles as a basis for your work? If so, why?
- 3) How do you avoid duplication of effort?
- 4) What do you do and what do you say to address the new GN12 requirements relating to dealing with uncertainty?
- 5) Would this be different if you were an external consulting actuary?