Reserve Range Case Study

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Overview of case study

Parties involved

- **Company Actuary**
- **Finance Director**
- **Board**
- **Regulators**
- **Shareholders/Policy holders and other stake holders.**

Issues involved:

- **Request of change the recommended reserve numbers in the draft report which should be compliant with GN12 or now TAS R.**

Reasons of change:

- **The draft reserve numbers may give result to lower profitability compared to expectation.**
- **This may lead to adverse market reactions leading to loss in future new business if the rating is downgraded.**

Reasons given by FD to change the draft numbers:

- **Reduce the reserves so that the profits are as per the expectation**
- **FD thinks a lot of judgement involved in setting reserves and actuary sets the reserves slightly above the mid point of an implicit range.**
- **FD therefore requests to choose the reserve in the range but nearer to a lower end**

Issues in reserving in non life insurance

- **Reserving is concerned with forecasting outstanding liabilities**
  Insurnace Profit = Premiums-*Reserves* - Expenses
- **There is uncertainty associated with any forecast**
- **Reserves are the largest part of GI liabilities and hence important**
- **Need to consider predictive distribution of ultimate losses AND the associated cash flows**
  - **Don’t just focus on “Ultimates” or “Reserves”**
  - **We need distributions of cash flows for discounting and for capital models**

- **Point estimates are required for the accounts but variability of reserves need to be considered by the Board and company actuary needs to communicate this uncertainty to the Board**
- **Board then can take decisions on setting the reserves after carefully discussing the recommended reserves by the company actuary.**

Professional issues involved

- **Chains of responsibility for the Company Actuary**

  - **To the Profession(1)**

  - **Shareholders/Policyholders(2)**

  - **Employer/Manager/Board(3)**

- **All the decisions for the company actuary must be made considering the above chains of responsibility.**

Issues to be considered

FD's observations and views

"Reserving is not exact science and actuary uses the judgement to a great extent…."

- **This is true but the judgement should be professional and should reflect the actuary's own experience, professional guidance, current market practices, data quality, methodologies and class of business involved.**
- **Reserving is not a speculative exercise and any semblance to such direction will not be professional and will not be conducive to public interest**
- **Judgements need to be made but should be backed by either the data or experience, actual vs expected analysis.**

"The actuary sets the reserves slightly above the mid-point of an implicit range and actuary should be comfortable with any figures in that range".

- **Such an apparent over-reserving will not cause any harm to the company as the money remains within the company only and will not go away as would be the case with under-reserving through profit distribution**

- **This may not be strictly true and may be based on one of examples and can't be construed as a rule or fact. Legislation, professional actuarial guidance and generally accepted accounting principles or any such accounting principles are to be considered in setting the reserves and reserving bases.**

- **Mid point is not clearly defined here; it may imply mean and/or median of reserves. Also commercial risks which are very heterogeneous and where claims experience may be volatile, the distribution of claims can be skewed and the best estimate may be between 55th percentile to 65th percentile and will be dependent on class of businesses and other factors. Even if the central value is well defined, depending on the choice of distribution and the parameters to be applied to such distribution the central point can shift. Volatility of the claim experience may be a compelling factor for the actuary peg the reserve at what percentile above the central value.**

- **There is uncertainty involved in defining any range (parameter and process uncertainty) and the range should not be considered to be maximum or minimum and the distribution of reserves should be communicated to the FD and the board as clearly as possible. This part is a difficult area as the FD and perhaps the Board as a whole is think is the 'right' level of the reserve. But the actuary must go on records how best he tried to convince them.**

Issues to be considered (Cont.)

- **FD is most often the member of board and if the company actuary is also member of the board the roles and responsibility must be clearly identified and acted upon.**
- **For example here the company actuary estimates the reserves and recommend the reserves to the Board and it's the Board's responsibility to set up the reserves to be booked in the annual statements. Even though an actuary is a member of the Board his concern is broader public interest.**

- **As a member of board the actuary's remuneration may be linked to company's declared profit and share options and there may be conflicts of interests so any decision to change the draft numbers should be carefully considered. The remuneration to the actuary should never be the criterion for actuarial judgements. Even when an actuary chooses to work with no fee or limited fee, the professional responsibility will still remain.**
- **Level of prudence in the estimate of reserves i.e. is there sufficient 'fat' in the reserves or they are strict best estimate**
- **Emerging experience and incidence of large losses, catastrophes and/or latent claims**
- **Data quality, assumptions used and actual versus expected analysis**
- **Length of service with the current company – new actuary will not know all the systems i.e. data capture, IT Systems, Case reserving philosophy, settlement procedures, TPA competence and so a conservative view may be suitable and over time the assumptions need to be changed or adapted.**
- **Class of business involved (long tail, short tail, latent claims) and reinsurance recoverability and impact on net results versus gross results.**
- **Discounted reserves and associated assumptions**
- **Risk Margin held explicitly or any such cat load?**

Issues to be considered (Cont.)

Decision time

- **Change the draft numbers to accommodate FD's view**

Pluses:

- **The declared profit may be in line with expectation and new business volumes will not be impacted and shareholders will get the right RoE and employees will have their bonuses**
- **If the reserves are slightly below the draft numbers it should be OK.**
- **If there is an implicit margin in the reserves then bringing down the numbers will not pose a big risk.**
- **If the class of businesses involved are long tail classes, then short term fluctuations in reserve estimates may be explained**
- **FD has made some valid point regarding the judgement involved and level of estimates and may be knowing the company procedure better.**
- **FD is important in the organisation and so good rapport with him and s/he will think company actuary is a "nice" guy**

Negatives:

- **The reserves may prove to be deficient and the company may not have sufficient funds to pay the claims**
- **There may not be any margin left in the reserves and so any reduction in reserves may not be possible**
- **Professional guidance may mean that the reserves can't be reduced further as they may not be sufficient**
- **Lose the rapport with the FD and potential fear of company actuary job**
- **Professional misconduct**
- **Shareholders may sue the company and loss or reputation**

Decisions and alternatives

Don't reduce the draft reserve numbers:
Pluses:

- **May be right thing to do in the interests of shareholders/policyholders and most importantly for professional conduct**
- **Professional conduct is important here as the Actuarial Profession is broadly self regulated and each member of profession has the responsibility to adhere to the highest standards of professional ethics.**

- **The company actuary thinks that although judgement involved in the reserve estimation process it will be hard to justify the reduction in numbers given the adequacy of data and reserving models and uncertainty involved.**

Negatives:
- **The company may be downgraded and company may lose future new business which will lead loss of jobs, profits and reduction in share prices**

Alternative actions available for the company actuary to make a right decision:

- **Take an external independent opinion i.e. from an external consultancy but cost and time constraints might need to be considered. Get the results peer reviewed by another suitably qualified actuary internally.**
- **The Actuary can also explain to the FD that reporting higher reserve numbers does not necessarily result in rating agencies downgrading the company. Instead if that is the case then company can engage with rating agency to explain them the cause of deterioration if one-off and the steps undertaken to offset the impact of this in the future. E.g. rate increase, impact across the market. such an idea about rating agencies is based on the thought that they rate the company mainly by the profit numbers. In fact a good rating agency will first look at how strong is the company is and how substantial the reserves are. Solvency is paramount. Profits if they are there will any way emerge in course of time.**

- **Undertake more detailed analysis using the sensitivity tests, scenario tests and using interval estimates by analysing reserve variability.**

Implications of decisions

- **Go with the same numbers to the board and explain in detail why the numbers can't be reduced further and ask the board to consider other impacts, i.e. capital infusion, impact on ICA and regulatory implications.**
- **Ask the professional ethics committee of the profession for advice anonymously if needed. This is a last line of action if truly the actuary is uncomfortable. By qualifying his report appropriately may be enough to alert auditors and regulators. Most actuarial judgements cannot be expected to be settled by the Profession case by case.**

Will the decision change if the bonuses declared on a "good" year and the company actuary shares the bonus pool and share options?

- **The decision here will be more tricky and the conflict of interests should be carefully considered. If the actuary is confident that his judgement is right, there is no scope for any such inducement to back track. The actuary is rewarded not for making profits that never was there but how best he protects the company and thereby the public. Persuasive skill is a prerequite that an experienced actuary should possess and can help him ride over such situations unscathed**

- **The professional judgement should not be impacted with the consideration of bonuses and other monetary gains.**

- **Consider the chains of responsibility and then make the decisions.**

Conclusions

Conclusions:

- **The decision to act on the FD's decision will depend on the circumstances and the confidence level of the actuary in data, assumptions, methodologies and associated level of reserving risks.**
- **The recommended reserves should be consistent with professional standards, guidance notes, accounting regulations and other generally accepted principles.**
- **Communication of reserve risk and uncertainty of reserves to the Board is the key and sufficient level of details, information by the Company Actuary should be given to the Board so that Board can set the level of reserves which is right and consistent with company policies and regulations.**
- **Reducing the reserves in a reasonable range might be OK as long as the actuary understands the level of reserves to be reasonable under valid and justifiable professional logic.**
- **Alternative actions so as to take external opinions, peer review of reserve models and discussion with other stakeholders might help to make the right decision.**
- **Monetary incentives should not impact the professional decisions of the Company Actuary however it should be noted that it may be difficult situation.**

Thank you

Any Questions, comments?

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