

ACTUARIES & GENERAL INSURANCE IN AUSTRALIA

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1. INTRODUCTION

- 1.1 General insurance business in Australia is written by some 250 private companies and State Government insurance offices. Total annual premium income during the year to 30 June 1975 was \$A2,023m.
- 1.2 Natural disasters in recent years (particularly floods in Queensland in January 1974 and cyclone Tracy in Darwin in December 1974) have had severe adverse effects on insurers' underwriting results.
- 1.3 The high levels of inflation in Australia have added to the difficulties faced by the industry:
 - higher premium loadings have been necessary to maintain free reserves in balance with premiums
 - for long tail business such as employers' liability, loadings to recover past losses have been required
 - the adequacy of companies' outstanding claims provisions has become more uncertain
 - discounts and commissions have tended to reduce, and a number of insurers have restricted their portfolios, causing many clients to change insurers
 - the solvency margins of some insurers have been eroded to dangerous levels.

2. OUTSTANDING CLAIMS

- 2.1 Insurers have tended to ask actuaries for advice only when it has become clear that they are in some trouble. Most often, the advice that has been sought has been in connection with provisions for outstanding claims.
- 2.2 A variety of methods are being used to estimate these provisions but they all essentially involve deriving a claim payment distribution from a company's past payment pattern and applying that distribution to estimate future payments. Difficulties arise because of inadequate data and in trying to isolate the effects of past inflation, past changes in statutory benefit levels and possible changes in companies' underlying payment patterns. Most actuaries in this field believe that their methods should not be seen as a substitute for the individual case estimates traditionally made by insurers, but rather as a useful supplement.

3. PREMIUMS

- 3.1 Up to now, insurers have tended to be a step behind inflation - they have often had to try to recover past losses out of present premiums. It is now widely recognised that this is totally unsound and that it is vital that premiums should be adequate.
- 3.2 For long-tail business, a reasonably accurate assessment of future claim payments is obviously required in order to determine an appropriate premium. The problems mentioned above therefore arise again but

fortunately the uncertainty in an actuarial estimate of required premiums for a company is usually less than the uncertainty in an estimate of the company's total outstanding claims.

- 3.3 While it is normally possible to make a reasonably good estimate of the total premiums required for an insurer of reasonable size, it is much harder to determine the premium rates for particular risks. In a free market, it is clearly important that premium relativities be roughly right. If not, an insurer may lose his good risks to a cleverer competitor, and keep the unprofitable risks.
- 3.4 For most classes of insurance it is very difficult to make a full systematic analysis of the rate relativities for each type of risk. It seems necessary to use practical experience to group risks into a few broad risk groups, and then to use statistical methods to determine premium rates for each of these groups.

4. SOLVENCY

- 4.1 The Insurance Act 1973 requires companies to have free reserves of at least 15% of premium income. The reserves actually needed will depend largely on the actions of the federal and state governments on such matters as controlling inflation and altering statutory benefits. These are obviously unpredictable but in the light of recent experience we believe it is desirable for companies to hold larger reserves, say 30% of premiums for short term business such as comprehensive motor and 60% of premiums for long-tail business. At the moment research is being carried out in this area by a number of actuaries in Australia.
- 4.2 One difficult question is the extent to which free reserves should be accumulated on an after tax basis, rather than by making more than an apparently reasonable provision for outstanding claims. In theory the provision for outstanding claims should be reasonable, but in practice there is always some uncertainty.
- 4.3 An insurer may take a pessimistic view of inflation one year, and a year later improvements in the economy might lead him to believe that a lower long-term inflation rate assumption was justified.
- 4.4 If he used this lower rate in determining provisions, a large profit would emerge for that year, followed possibly by a large loss the next year.
- 4.5 In order to avoid large profit fluctuations, the insurer might perhaps adopt an inflation rate assumption intermediate between his old and current views. If his current view of inflation eventually proved correct, there would be a gradual release of profit. Thus the question of desirable free reserves cannot be looked at without also considering possible margins in provisions for outstanding claims.

5. REINSURANCE

- 5.1 One area in which actuaries should be able to help, but in practice seldom do, is the arranging of reinsurance. For example, employers' liability insurers are now using several different forms of excess of loss reinsurance. The addition of indexation or burning cost adjustments to such treaties can profoundly alter the benefit gained by the insurer.
- 5.2 At present actuaries can offer little help because very little relevant information is available. It is hoped that more detailed statistics on claim sizes will become available. Insurers would then be in a better position to assess the need for reinsurance, the appropriate form, and reasonable premiums.

6. THE FUTURE

- 6.1 It seems inevitable that the insurance industry will continue to be affected greatly by government decisions. A major difficulty is the poor understanding of insurance frequently encountered amongst government officials and politicians. This is partly a public relations problem, but has also arisen from the insurance industry's failure to collect and publish relevant statistics. For example, insufficient effort has been made to demonstrate that over-generous workers' compensation benefits cause unnecessary absenteeism.
- 6.2 The Insurance Council of Australia has made some progress in overcoming the public relations problem. The industry has made constructive proposals in relation to disaster insurance and national compensation. The experience of actuaries in explaining technical subjects to non-technical clients should equip them to be of some help in discussions with government.

- 6.3 It is possible that a national compensation scheme will be introduced in Australia in the near future. Various proposals are currently being considered. The scheme endorsed in principle by the previous Government would have provided substantial benefits to every person injured or sick between the ages of 15 and 65. If the scheme had been implemented, most of the existing arrangements to compensate victims of accidents, and most employer sickness and disablement schemes, would have been discontinued. The present Government may introduce a more limited national scheme to operate in conjunction with existing arrangements.
- 6.4 Marketing is an area where mathematical analysis is likely to prove useful. A scientifically priced policy is of little value if it cannot be sold. Yet there is evidence to show that (for example) motorists behave in a rational and predictable fashion when buying insurance. The data needed to make projections for a comprehensive motor insurer can also be most useful in planning marketing strategies.
- 6.5 Many complex statistical methods have been devised in the field of general insurance. While some of these can be helpful to the actuary, it is important that people in the industry should not feel they are being blinded by science. By providing practical advice, simply explained, actuaries in Australia should be able to continue to convince general insurers that actuaries can help them with some of their problems.
- 6.6 Members interested in keeping in touch with developments in general insurance in Australia may be interested to know that a General Insurance Bulletin is produced monthly.