B.A.J. **3**, III, 751–759 (1997)

1996 GENERAL INSURANCE CONVENTION

2-5 OCTOBER 1996

The 1996 General Insurance Convention was held at Stratford-upon-Avon from 2 to 5 October 1996. Again, as for 1995 and many prior years, a record number of delegates attended, but as usual we kept the emphasis to a discussion of practical, topical non-life subjects. We were delighted that the President of the Institute of Actuaries attended much of the convention.

The first session was about stochastic asset/liability modelling, and the progress of the working party was described. The paper was an interim report, with much of the detailed work to be presented in 1997. The aim of the working party was to provide a framework of concepts rather than a definitive working model. After considering some aspects of asset and liability models covered in the paper, a demonstration was given of some techniques. The feasibility of the risk transfer method in the example was questioned, and the need to incorporate an element of bad debt risk was raised. The authors had given some thought to the issues, but considered them difficult to model. It was suggested that, whilst the example was based on a one-off scenario, in practice premium income is used to pay losses, and this income may be uncertain sometimes. The authors acknowledged that this was not a definitive model, and that it would need to be expanded to suit specific requirements. The issue of static versus dynamic models was again raised, as in 1995, and the answer was that the choice of the model should depend on the purpose.

The second paper was about GISMO; being a General Insurance Stochastic Model Office. It was explained that the working model has been developed to include the short-term models and issues facing a general insurance organisation. Risk was defined as failure to meet an objective, and the objectives were considered in relation to profit, solvency and cash flow. A brief overview was given of the three models within GISMO: an economic model; a catastrophe model; and a cash flow model, and the implications of the model were discussed. A demonstration of the model was given. In the ensuing discussion a question of whether non-technicians could understand the effect of parameter change was raised, and the equilibrium model which drives the whole model was discussed. It was explained that the asset model lay somewhere between the Wilkie model and the Paretian model in terms of the skewness of the error structure, and was thought to be a good representation of general insurance. There was some suggestion that increased sophistication in the model did not add anything. The authors emphasised the need to ensure the sustainability of any simplifying

https://doi.org/10.1017/S1357321700005110 Published online by Cambridge University Press

assumptions. They indicated the intention of making a version of the model available on the Internet, once the future of the working party was determined.

The future of the motor insurance market was the next topic to be discussed. Given the vastness of the range of possible discussions, the scope was limited to the United Kingdom private motor market, and was given from an insurance perspective. The changing shape of distribution was discussed, together with a summary of the factors affecting the broker and direct writing channels. A review of the advantages of direct writers and broker insurers was included. A review of recent trends in overall profitability was provided. An analysis of the expense ratios was used to discuss the profitability of direct writers and insurers. The authors consider that consolidation is likely to occur, and discussed the factors involved in this. Future claims costs were discussed, and legal developments, including the Ogden tables, were included. Similarly, structured settlements were discussed. New underwriting factors were mentioned, including the lifestyle rating, and also discussion points included red lining and the potential impact of the Disability Discrimination Act. The paper finished with an outline of current pricing practice.

Following the success of the 1995 paper on pricing in the London Market, a follow-up paper was produced. This paper described the pricing issues. The first part dealt with the actual pricing formula used to determine a rate, whilst the second part of the paper dealt with the control cycle and stochastic profit testing techniques. The authors thought that their paper was clearly years ahead of its time in that they proposed that this paper should be expanded into an Institute paper for the 1987/88 session (a typo in their paper). More seriously, the concentration was on developing the first part of the paper, namely the formal calculation of the rates. Inevitably, as is common with so many general insurance problems, ideal data were the initial point of discussion. Uncertainty in the rating parameters and the changing market also contributed to the problems in pricing. The main part of the discussion was, in fact, a detailed workshop-style presentation on non-marine business from the perspective of the actuary and of the underwriter. This helped, as it showed the questions that needed to be answered by the actuary and by the underwriter, as well as their interaction.

Property reinsurance pricing was discussed, and was interesting, in that it was not an area in which actuaries have historically been sufficiently involved. Various methods were discussed, and the first of these was experience rating. This was specifically intended to illustrate the uncertainty in the traditional Poisson-Pareto parameter estimates widely used in the market. The second issue was that of exposure rating, and finally a few techniques were illustrated for dealing with the aggregate features in excess of loss pricing, such as reinstatements and aggregate deductibles.

https://doi.org/10.1017/S1357321700005110 Published online by Cambridge University Press

An update was given on the statutory reserve reports and opinions. Working parties have been set up and have made significant progress, although the effect of the Equitas project had seriously impaired the target dates. The working parties had produced papers on scope and general, data, technical and outwards reinsurance. The aim of the Steering Group was to produce a Guidance Note that could be issued to actuaries if some form of certification of reserves was introduced in the U.K., and to suggest possible wordings for the certificates or opinions. Other professional issues had to be discussed: such as whether practising certificates would be necessary; the qualifications and experience that should be required of those involved; whether full documentation of reports should be required; and the extent for the need to discuss issues with the directors and others.

Reinsurance is often the biggest cost incurred by an insurance company after claims. The management of this cost is most important. The working party was surprised to find that, within an insurance company, a serious lack of attention is often paid to this cost, both at the strategic and at the management level. All too often the reinsurance purchased is on the basis of the previous year's programme, and little thought is given to the value of alternatives, or whether the programme meets the needs of the insurer in the most efficient way. It is sometimes the case that reinsurance is purchased, but there is hardly any chance of it being used. However, the working party have seen a recent change in the approach to reinsurance purchasing, and they concentrated on the actuarial issues involved in this. Also, actuaries are being involved in the following ways:

(1) the treatment of outwards reinsurance;
(2) the rating of reinsurance companies;
(3) the commutation of certain treaties; and
(4) the wind up of insolvent insurers.

Ways to improve the link between actuarial analysis and decision making formed the topic for the next paper. The working party sought to find methods of expressing uncertainty to management in ways that enabled them to make sensible decisions. It was necessary to understand the uncertainty of each element, and the interactions and correlation between the elements, and to identify the course of action which would reduce the uncertainty of outcome. Ways needed to be found to avoid giving a picture of false uncertainty and to improve the understanding of the uncertainty and the range of possible outcomes that form the basis of the decision-making process. Finally, relationships had to be engendered so that a two-way discussion could be made freely.

The important subject of equalisation reserves was tackled next. A presentation was given of the paper covering the following:

(1) a brief review of the rules covering transfers in, transfers out and taxation;

https://doi.org/10.1017/S1357321700005110 Published online by Cambridge University Press

(2) a discussion of the claims event system, highlighting some possible rules and potential problems with such a system;
(3) the models covered in the paper (namely: claims event system; claims ratio system; historical claims ratio system; cycle only and claims ratio system; cycle plus events); and
(4) other issues, such as: structural changes; reinsurance; solvency; return on capital; effect on insurance cycle; policyholder's perspective; and actuarial basis.

A lively discussion followed the presentation of the paper. The majority of the discussion centred on whether equalisation reserves were, indeed, beneficial. Although most people accepted that, at least in the short term, the deferral of tax would be a benefit to insurers, there was some criticism of the new system, particularly with regard to the fact that it was not event based. There was also some discussion of the effect of equalisation reserves in general, including whether adequate reinsurance will be purchased and the potential confusion that might arise regarding the valuation of insurance companies with equalisation reserves.

The point was made that many of the problems that people had raised during the discussion were made by the actuarial profession to the DTI during the consultation process. However, the DTI had to take into account the view of several parties, including the Inland Revenue. Despite the limitations of the new system, U.K. insurers will no longer be at a competitive disadvantage with their European counterparts, and there is always scope to improve the system in future.

There was a short presentation on the update on claims run-off data. The tables in the paper updated those presented to GISG in October 1995. The run-off patterns shown in the tables all relate to claims payments for direct insurance (and facultative reinsurance) business, before allowing for reinsurance recoveries, and they are accounted for on a one-year basis. Four sets of tables are shown for each type of business analysed. (They differed only as a result of the methodology used in the analysis.) It was requested that the data be made available on disk or on the Internet. It was suggested that the Institute Web site could be used.

A full session was devoted to the topic of professional guidance:
The session opened with a presentation on the relationship between GN12 (which covers all formal reporting on general insurance) the existing practice standard guidance notes on particular topics (GN14, GN18 and GN20) and the proposed recommended practice guidance note on statutory reports opinion and opinions (STOP). Then a progress report on the work was given of both the GN12 and STOP working parties.

The GN12 Working Party had evaluated a revised draft, in which the general aim was to remove 'text book' material, but to cover, in as clear a manner as

https://doi.org/10.1017/S1357321700005110 Published online by Cambridge University Press

possible, professional and presentational issues which were common to all types of formal reporting. Council had decided not to proceed with the working party's original suggestion that, because of the overlap between many of the guidance notes relating to reporting, in terms of general points on the content of reports, a 'GNO' be prepared to cover all areas of actuarial reporting. GN12 was, therefore, required to be complete in its own right. The note would be widened to cover all aspects of general insurance, including rating. The intention was now to restructure the guidance note (the aim being to present a re-draft to the General Insurance Board in 1997) into five key areas:

— professional issues;
— documentation;
— clarity of conclusions;
— disclosure of methodology; and
— data and related issues.

The STOP working party had been established to ensure that the profession would be well prepared if statutory reporting requirements were introduced. Key issues had been identified, and draft notes produced on outwards reinsurance and data, and initial thoughts on technical/methodology. The aim is to draft a complete guidance note and specimen opinions, and to consider the desirability of practising certificates.

Current thinking was then explained on the relationships between the content of GN12 and the STOP note. Several points under each of the five key areas described above were highlighted, and it was explained which of these points would be covered under either GN12, STOP or both.

There was then a general discussion on the issue of guidance, focusing on GN12, with contributions from many speakers. The discussion served to illustrate the difficulties faced by the GN12 working party in providing meaningful general guidance and in producing a revised draft which would be generally acceptable. On many of the issues raised, contrasting points of view were put forward by different speakers.

Difficult issues included when work by an employed actuary should come within the scope of GN12, particularly with the trend towards the actuary working as part of a team and contributing to the decision in discussion. It was felt that GN12 applied to formal actuarial reporting when signing as an actuary, and that the existence of the guidance note would support an actuary in a working environment where there was disagreement.

Differing opinions were given in relation to the inclusion of premium rating in the scope of the guidance, with some speakers welcoming this development and others expressing concern as to the practical difficulties that this would raise. Others queried whether such guidance was needed, given the policy to only introduce guidance where absolutely necessary. Some emphasised that customers' needs were important, and that we should continue to question the need for GN12 and avoid being too prescriptive in guidance.

https://doi.org/10.1017/S1357321700005110 Published online by Cambridge University Press

There appeared to be general agreement that the technical and 'educational' content should be removed from GN12; this had been more appropriate for inclusion when the note was introduced in a less mature general insurance actuarial market.

Several speakers emphasised the need to give guidance on how to address levels of uncertainty and ranges of results in reports, and also to highlight where the situation was 'unprojectable' or 'unquantifiable'.

Continuing this theme of uncertainty, the meeting ended with an inconclusive show of hands on the desirability of including bad debts within reserve opinions, and a significant minority remaining similarly unconvinced that actuarial certification was desirable.

Closely connected to the professional matters, we were pleased to have the President of the Institute, Mr Duncan Ferguson, to address the convention. He is keen to have a profession of good actuaries, not merely mathematicians. Actuaries should have a high level of technical skill, be able to apply judgement and have the highest professional and ethical standards. At present, a position statement is being worked on to show what actuaries uniquely do that is of value to society. This will be communicated widely to increase demand for actuaries and the supply will be expanded to meet this demand.

There was then a report on the work of the General Insurance Board (GIB) in the last year. Friendships with influential groups have increased, thanks to advice being given to the DTI, the ABI, Lloyd's, the Building Society Commission and others. Press releases on various issues have been issued and guidance notes updated or written. The Bournemouth convention was a success, as shown by the numbers of new people attending this year.

The current chairman of the GIB explained that five members of the Board each have specific responsibility for one area of work: strategic development; customers; public relations; guidance; and education. The GIB have established regular liaison meetings with the ABI. The Institute for Public Policy Research have asked for help with their research into redlining. The low pass rate in subject G is causing concern, and may be improved by more non-life actuaries marking exams; volunteers are requested. The GIB are exploring the possibility of a joint meeting with ASTIN in 1998. More volunteers are needed to write good quality papers for Congress in 1998 and also for sessional meetings, the convention and ASTIN in 1998.

There were a large number of workshops that were particularly popular and well attended.

Non-triangulation reserving is quite a novel approach to actuarial projections. The methods used by the presenter, in practice, included:

(1) individual contract valuation;

https://doi.org/10.1017/S1357321700005110 Published online by Cambridge University Press

(2) individual event valuation;
(3) mark one eyeball; and
(4) clutching at straws.

Another workshop discussed the shareholder value in insurance companies. Clearly, with what we have seen in the life assurance market, it is important that we fully understand exactly what is the role of shareholders within proprietary non-life insurance companies.

A workshop discussed what was happening, at the current time, in the household market. Clearly such business is susceptible to statistical analysis, and the business is getting increasingly complex and quite sensitive. Although it presents relatively few reserving problems, pricing seems far from straightforward, with competing rating bases and great diversity of area rating plans. It is also sensitive to catastrophe risks and a volatile claims experience. Given the state of flux of the market, with new companies entering and the development of tele-marketing, it is clear that changes will occur in the future. Increasing selectivity and other factors, such as redlining and lack of cover, might well lead to significant changes.

The next discussion was on the current development at Lloyd's. Clearly a whole convention could have been devoted to what has happened in Lloyd's in the last year or two. Much attention was focused on the prospects for the Equitas reinsurance company, and many views have been given about its ability to survive in the future. However, those who work in the market have been seen drawing significant sighs of relief and becoming increasingly optimistic about the future for the market. This must be good for future prospects.

Following on from this was a paper on Lloyd's corporate capital. The paper produced gave an overview of the rationale for the introduction of corporate capital, a description of different types of corporate capital, and where the backing comes from. Indications of the innovative use of corporate capital were given, and especially where the capital came from people not traditionally in the Lloyd's market. The workshop expanded on the innovative future uses of corporate capital and how the current corporate capital vehicles being set up differ quite significantly from the early vehicles. Several case studies were given that followed the corporate capital vehicles from initial set up to their current forms.

Following the success of the aviation paper at the previous conference, a paper tackled the practical decisions of how rating was done. The view was that actuaries could contribute significantly in placing the rating of aviation business on a more efficient basis. A description of the class of aviation was given, followed by the practice by which it is written in the market. The rating of

https://doi.org/10.1017/S1357321700005110 Published online by Cambridge University Press

aviation insurance was described in general, and also for the main classes. Space risks and personal accident were described, as they are subjects deserving special interest.

The next workshop was a discussion on the increase in number and use of simulation packages for the purposes of modelling catastrophe exposures and costs arising from actual perils. It provided a demonstration of the use of these models, showing the data input required and the output available. Two models were shown, based on U.K. and United States exposures.

The next workshop involved neural network. These form a mysterious representation of the human brain in order that problems can be solved. The paper described what neural networks are and how they compare with traditional statistical models. This was taken further to describe their scope in general insurance. A comparison was made with general linear models from a theoretical perspective, and some practical examples were also given, based on real life general insurance data.

Mortgage indemnity guarantee business was visited as part of a review, and also to discuss the techniques used by actuaries in dealing with the peculiarities of the current form of such business. Recent developments were discussed, such as the increasing use of mortgage protection insurance, or mortgage indemnity risks, and also how the mortgage indemnity premium charged by lenders fits in with the overall pricing of the mortgage product.

Practical issues affecting the use of no-claims bonuses in motor insurance were discussed. The paper looked at the current use of bonuses and variations present in the current U.K. market. It then introduced two different bonus systems similar to those used in Europe, one based on similar principles, but with a much longer time scale, and one in which the claiming penalties are applied by means of high excess rather than high premiums. Finally, the paper considered technical developments in the U.K., and whether these may lead to sufficient improvements in the quality and security of direct claim experience rating to end bonus as we know it as no longer necessary.

The 'Underwriter's View of Stress' discussed the potential for claims to arise from this area in the future. This was looked at from the employer's liability perspective, and also from the view of society in general. Legal liability was examined, and also practical issues, such as the period of possible latencies.

The subject of uncertainty is, and always has been, a key issue in insurance. A paper on statistical error, parameter error and model error showed a true uncertainty of future outcome. This greatly exceeds that caused purely by random chance, owing to errors in the modelling process. It is important that actuaries

https://doi.org/10.1017/S1357321700005110 Published online by Cambridge University Press

quantify possible errors. The workshop discussed some of the issues that affect the results of the modelling process and also what practical approaches exist to describe the components of uncertainty.

The next paper was particularly topical, in that it monitored personal injury compensation. The effect of the Ogden tables and the current court decisions being taken all contribute to a very uncertain future. Considerable research is taking place in this area, and actuaries must consider this both from the view point of rating and also of reserving.

This theme continued in the next workshop, where the impact of the Ogden tables on U.K. personal injury awards was discussed in detail. Certain classes of business, including motor, employer's liability, and public liability, potentially face a dramatic increase in the cost of large claims, because of the widespread adoption of the Ogden tables in U.K. personal injury awards. This is likely to affect reserves as well as the profitability of on-going business. The workshop included a presentation of the historical development of this issue, including an update of the current debate, an analysis that was performed to quantify the impact of the tables and a discussion of the above points.

Some carefully selected invited lawyers presented a paper on current legal developments affecting financial reporting on reserving for insurance companies. This area is moving quickly on several fronts. Whilst the volume of new legislation coming out of Europe has slowed down considerably, there is much more on the way, and, in particular, a draft directive on insurance groups. Very few insurance companies will escape the effects of this directive, but few have taken any active steps to prepare for its arrival. Several recent judgments have emerged which will influence the manner in which London Market companies and Lloyd's syndicates will address their reserving in the future.

This was a good lead in for the final workshop, which was entitled 'Actuaries in a Litigious Environment'. This addressed the points arising from the court case between NRG and Bacon & Woodrow. All points that arose affecting potential actuarial valuations of the future were fully discussed, and it is clear that all of us can learn much from this particular court case. An important point is that actuarial expert witnesses need to keep copious and detailed notes for at least several years.

This article was enhanced by some excellent reports from individuals who offered to contribute. Many thanks go to those volunteers.

C.J.W. CZAPIEWSKI

https://doi.org/10.1017/S1357321700005110 Published online by Cambridge University Press