

GENERAL INSURANCE PREMIUM RATING - THE WAY FORWARD

SUMMARY OF THE RECOMMENDATIONS OF THE GENERAL INSURANCE PREMIUM RATING WORKING PARTY (GRIP)

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[Presented to the Institute of Actuaries, 21 May 2007]

ABSTRACT

The General Insurance Premium Rating Issues Working Party (GRIP) was established by the General Insurance Board of the Faculty and Institute of Actuaries in 2005 to review actuarial involvement in premium rating issues, pricing being one of the key areas in which actuaries work.

GRIP published a full report in January 2007, which is available at www.actuaries.org.uk/grip. This short paper summarises the recommendations of that full report. Further background, discussion and the rationale for these recommendations are set out in more detail in the full report.

KEYWORDS

General Insurance; Non-Life; P&C; Premium Rating; Pricing; Ratemaking; Role of the Actuary; Communication; Education; CPD; Professional Guidance; GN12; Treating Customers Fairly; Premium Rating Manual; Wiki

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1. INTRODUCTION

1.1 *Terms of Reference*

1.1.1 The General Insurance Premium Rating Issues Working Party (GRIP) was established by the General Insurance Board of the Faculty and Institute of Actuaries in 2005 to review actuarial involvement in premium rating issues, pricing being one of the key areas in which actuaries work.

1.1.2 The terms of reference, as initially suggested by the General Insurance Board, were refined following discussion within GRIP and wider consultation with members of the Faculty and Institute of Actuaries (the Profession). It was agreed that GRIP should focus on issues of relevance to Faculty and Institute members involved in pricing direct insurance (individual and account level products) and reinsurance, and the terms of reference can be summarised as follows:

- (1) to review the areas in which United Kingdom actuaries are currently involved within the overall premium rating process, and to identify any areas where actuaries might be able to improve their contribution and/or add further value;
- (2) to summarise, in broad terms, current methods used by actuaries in general insurance premium rating, to identify areas where types of methods and approaches could potentially be improved or used more appropriately, and to suggest potential areas for further research;

- (3) to consider whether and how improvements could be made to the way in which general insurance pricing actuaries communicate with others;
- (4) to consider whether the content of the examination syllabus is adequate to prepare actuaries to work in the pricing area;
- (5) to consider whether more should be done to provide continuing professional development (CPD) in this area, and, if so, what;
- (6) to consider whether existing professional guidance should be modified or clarified to make its application to premium rating clearer, and to consider whether there is a need for more detailed best practice guidance from the Profession, setting minimum standards for a direct business pricing assignment;
- (7) to consider whether there are any implications for professional guidance or communication resulting from commercial pressures within organisations; and
- (8) to consider trends in the area of Treating Customers Fairly, and to consider what the Profession might need to consider in preparation for issues arising in this area.

1.2 Consultation

1.2.1 To assist in the formulation of views and recommendations, GRIP consulted members of the Profession, the Casualty Actuarial Society (CAS), the Institute of Actuaries of Australia (IAA), and the Society of Actuaries in Ireland.

1.2.2 In addition, to understand how actuaries were perceived in the underwriting and pricing arena, feedback was also sought from non-actuarial stakeholders in the insurance industry, including CEOs, CFOs, directors and senior underwriters.

2. FULL REPORT

2.1 GRIP's full report was published in January 2007, and is available at www.actuaries.org.uk/grip. This short paper summarises the recommendations of that full report. Further background, discussion and the rationale for these recommendations are set out in more detail in the full report.

2.2 The full report consists of the following sections and appendices:

- (1) Section 1: Introduction (including themes emerging from stakeholder feedback);
- (2) Section 2: The role of the actuary in pricing;
- (3) Section 3: Methods;
- (4) Section 4: Communication;
- (5) Section 5: Education;
- (6) Section 6: CPD;
- (7) Section 7: Guidance;
- (8) Section 8: Treating Customers Fairly;
- (9) Section 9: Summary of recommendations;
- (10) Appendix A: Terms of Reference;
- (11) Appendix B: Skills relating to roles;
- (12) Appendix C: Capital allocation methods;
- (13) Appendix D: Personal lines methods;
- (14) Appendix E: London Market methods;
- (15) Appendix F: Communication 'pitfalls';

- (16) Appendix G: Potential references for a glossary of terms;
- (17) Appendix H: Example syllabus for GLMs;
- (18) Appendix I: Response to EXD62; and
- (19) Appendix J: References.

3. SUMMARY OF RECOMMENDATIONS

3.1 *Role of the Actuary in Pricing*

A discussion of the changing role of the actuary in general insurance premium rating is set out in Section 2 of the full report. Two specific recommendations which emerged from that discussion are as follows.

- (1) GRIP recommends that the General Insurance Board debates the desired role that the Profession should play in the evolution of the pricing aspect of the insurance industry, for example whether new techniques should be the subject of GIRO papers or whether they will be developed within organisations and controlled by intellectual property concerns.
- (2) GRIP also recommends that the Profession should debate and agree how to balance the need for strong governance roles with the desire for actuaries to hold management positions in value adding underwriting/pricing functions.

3.2 *Methods*

3.2.1 Although GRIP did not seek to write a comprehensive premium rating manual, the Working Party felt that such a document would be invaluable to the Profession and would feed very naturally into the education syllabus and CPD. GRIP consequently recommends that such a manual be prepared. Section 3 and Appendices C, D and E of the full report may form an extended 'Table of Contents' for such a manual.

3.2.2 Following consultation within the Profession, GRIP's recommended approach to writing such a manual is in the form of a Wiki. As well as members of the U.K. Profession, other actuaries, for example members of the CAS and IAA, could also contribute. To create and maintain such a Wiki, it may be appropriate for a new group within the Profession to be established. This is discussed in more detail in Sections 3.44 to 3.45 of the full report.

3.2.3 GRIP has also suggested a range of research topics which it feels would benefit the Profession and the industry. These are described in detail in Section 3 of the full report, and relate to the following areas:

- (1) integration with ICA models;
- (2) expense allocation;
- (3) variable capital loads;
- (4) catastrophe models;
- (5) pricing for latent claims;
- (6) implementation and delivery systems;
- (7) market prices of insurance liabilities;
- (8) game theory pricing;
- (9) effect of climate change;
- (10) market information;

- (11) using pricing models within reserving;
- (12) demand and elasticity modelling; and
- (13) price optimisation.

3.3 *Communication*

3.3.1 Stakeholder feedback and discussions within GRIP itself led the Working Party to conclude that there are two types of issues relating to communication:

- (1) issues around the communication skills of actuaries in general; and
- (2) specific issues around the communication of pricing matters (some of which are almost factual, and not all of which are 'actuarial').

3.3.2 The first point is recognised by the Profession already and, applying to a much wider field of activity than general insurance pricing alone, is somewhat outside GRIP's terms of reference.

3.3.3 For issues relating to general insurance pricing, GRIP hopes that the discussion in Section 4 of the full report is a helpful framework in which to interpret any broader skills, education or training initiatives which the Profession implements in the future. In addition, the Working Party believes that there are some specific issues which merit particular attention:

- (1) Some of the more common topics which the Working Party has found to cause problems with communication are set out in Appendix F of the full report. If sufficient interest exists, a catalogue of such pitfalls and tools to tackle such issues (including example wording, forms of graphs, 'storylines' of concepts to stress, etc.) could be developed by the Profession, perhaps as an appendix to a future premium rating manual, discussed in Section 3 of the full report.
- (2) GRIP also feels that it would be helpful if a more common way of defining the terminology within pricing could be established. The Working Party therefore recommends that a comprehensive glossary of pricing terms be compiled and published on the Profession's website. GRIP believes that such a glossary would be helpful to those writing premium rating reports under the recently revised version of GN12. Possible example sources of material to assist with the compilation of such a glossary are set out in Appendix G of the full report.

3.4 *Education*

3.4.1 A discussion of GRIP's review of the Profession's current examination syllabus is set out in Section 5 of the full report.

3.4.2 GRIP recommends that the Profession's ST and SA examination syllabuses be enhanced to cover the following topics which GRIP considers to be missing or inadequately dealt with in the current syllabuses:

- (1) pricing basics;
- (2) policy terminology, including claims made vs occurrence cover;
- (3) insurance products (based on Chartered Insurance Institute material);
- (4) data design;
- (5) understanding rating factors;
- (6) exposure measures;
- (7) exposure rating;

- (8) experience rating;
- (9) trends (exponential and linear);
- (10) profit, expense, risk and catastrophe loading;
- (11) generalised linear models;
- (12) demand modelling, price elasticity and optimisation techniques;
- (13) individual risk rating;
- (14) excess and deductible rating;
- (15) reinsurance rating;
- (16) catastrophe modelling;
- (17) medical malpractice and professional liability business; and
- (18) use of ISO and NCCI information.

3.4.3 It may be necessary to create a new examination to deal solely with general insurance pricing.

3.4.4 As an example of the level of detail envisaged a suggested draft syllabus item for generalised linear models is set out in Appendix H of the full report.

3.4.5 GRIP further recommends that:

- (1) The Profession considers using the CAS and IAA syllabuses as part of the basis for enhancing the ST and SA examinations, incorporating key material for each of these topics into the Core Reading. This task would require significant resources, as the relevant CAS and IAA reading will need to be read and condensed.
- (2) A comparison of examination questions as well as syllabus topics should be undertaken, as these may reveal further noteworthy differences.
- (3) Certain overseas specific topics of relevance to U.K. actuaries could be included in the examination syllabus or be made available as CPD.
- (4) The CT examinations, in particular CT6, should be reviewed to ensure that the necessary mathematics has been covered to allow students to tackle pricing topics suggested here in sufficient detail.
- (5) Some of the more 'factual' aspects of how to communicate pricing matters effectively (for example some of the issues set out in Appendix F of the full report) should be touched on in the examination syllabus.
- (6) At the same time, the Profession should seek to ensure that any changes to the examination syllabus do not detract from the goal of developing well rounded technical professionals who are able to think for themselves.

3.5 CPD

3.5.1 A discussion of premium rating CPD is set out in Section 6 of the full report. The recommendations emerging from GRIP's discussions are as follows:

- (1) The Profession should organise an annual one-day pricing conference from 2008.
- (2) The Profession should materially enhance its website to include an effective search facility. The website should also include core reading from the examinations system.
- (3) The Profession should explore the idea of approaching a third party training company to design a training package around softer skills relating to communication and management.

- (4) The Profession should consider extending the existing professionalism course to cover communication and other wider non-technical skills that should be expected of a newly qualified actuary.
- (5) The Profession should ensure that all CPD initiatives are designed bearing in mind the stakeholder feedback which calls for a greater understanding of products and insurance markets. The Chartered Insurance Institute's education material may help with this in areas relating to insurance products.

3.6 *Professional Guidance*

3.6.1 A discussion of the current position and recent changes to U.K. professional guidance is set out in Section 7 of the full report, together with a brief commentary on guidance issued by some other professional organisations, such as the CAS and the IAA, that is relevant to general insurance premium rating.

3.6.2 GRIP believes that further formal professional guidance relating to premium rating is not currently required, and that improvements to the standards and value of actuarial work in the pricing area would, instead, best be facilitated through enhanced education and CPD initiatives.

3.6.3 GRIP further believes that the IAA system of classifying actuarial activity into two different categories, each having different associated guidance, has a number of significant attractions to pricing actuaries. Notwithstanding the fact that this has wider implications than pricing or, indeed, general insurance, GRIP recommends that the Profession debates with the Board for Actuarial Standards the merit of adopting this type of approach in the U.K. In addition, there may be a strong case for making a distinction in the Profession's Guidance Notes (particularly GN50 and GN12) between actuaries in public practice and those in business, in a similar manner to that adopted by the Institute of Chartered Accountants.

3.6.4 In the shorter term, GRIP recommends that Information and Assistance Notes (IANs) should be issued to give further help to pricing actuaries on the interpretation of GN50 and GN12. Examples are provided in Section 7.15 of the full report.

3.6.5 There is a wide variation in the number and scope of pricing guidance notes issued by actuarial and other professional bodies. Many of the United States' ASOPs which are applicable to pricing include appendices setting out generally accepted actuarial practices. An area for further consideration by the General Insurance Board is the development of similar technical advisory notes for the U.K. Profession, and, indeed, some elements of a future premium rating manual, discussed in Section 3 of the full report, could, perhaps, provide a basis for such notes.

3.7 *Implementation*

3.7.1 It is not within GRIP's terms of reference to decide how the above recommendations be implemented, and which groups or individuals should be responsible for introducing changes. Nevertheless, some brief thoughts on a possible way forward are set out below.

3.7.2 In the case of the premium rating manual Wiki, it would seem appropriate that a new group should be established if this initiative is to be taken forward. In many other cases, it would appear that either the General Insurance Board could address the recommendations directly, or that appropriate groups already exist to implement those

changes agreed by the General Insurance Board. For example, the various recommended research topics could be implemented by the GIRO Committee and/or the Research Steering Committee, and the educational and CPD recommendations could be implemented through the General Insurance Education and CPD Committee.

3.7.3 As a result, GRIP does not see the need to evolve into an implementation group. Instead the Working Party recommends that responsibility for championing all the recommendations, and of addressing all other premium rating issues of importance to the Profession in the future, be assigned appropriately. Under the existing structure of the Profession, GRIP believes that this could be best achieved by assigning such responsibility to a nominated member of the General Insurance Board.

REFERENCE

ANDERSON, J. D., BOLTON, C. G., CALLAN, G. L., CROSS, M., HOWARD, S. K., MITCHELL, G. R. J., MURPHY, K. P., RAKOW, J. C., STIRLING, P. A. & WELSH, G. E. (2007). General Insurance Premium Rating Issues Working Party. www.actuaries.org.uk/grip