

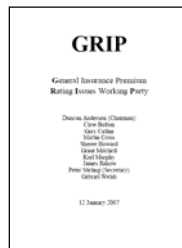
GRIP Update

Duncan Anderson

GIRO 2007

GRIP 2005 - 2007

- Born 2005
- Consultation draft Sep 2006
- Report 12 January 2007
- Special GI Board meeting March 2007
- Sessional paper May 2007
- Now disbanded
- GI Board & individual members of GRIP are pushing forward recommendations through existing and new Institute/Faculty groups



Consultation & communication

UK

- GIRO 2005
- CIGI 2006
- GIRO 2006
- CIGI 2007
- Sessional Meeting 2007

International

- USA - CAS Seminar on Ratemaking, March 2007
- South Africa - ASSA Short Term Conference, June 2007
- Japan - IAJ meeting, November 2007
- Australia - IAA Pricing Seminar November 2007

GRIP - Key Recommendations

- Role
- Methods
- Education
- CPD
- Guidance

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GRIP - Key Recommendations

- Role
- Methods
- Education
- CPD
- Guidance
- GI Board debate the desired role the Profession should play in evolution of GI pricing
- The Profession should debate and agree how to balance need for strong governance with desire for actuaries to hold management positions in value-adding pricing functions

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GRIP - Key Recommendations

- Role
- Methods
- Education
- CPD
- Guidance
- Undertake research & development in:
 - Integration with ICA models, Expense loadings, Variable capital loads, Catastrophe models, Implementation and delivery systems, Market prices of insurance liabilities, Link with reserving, Effect of climate change, Pricing for latent claims, Industry benchmarks / market information, Game theory, Demand modelling, Price optimisation
- Establish a pricing wiki
 - setting out good practice (cf best practice) "Premium Rating Manual"
 - international collaboration

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GIRO pricing working parties 07/08

- Integrating pricing with ICA models
 - Chairman: JB Crozet
- Variable capital loads in pricing
 - Chairman: Martin Cairns
 - Justin Skinner
- Demand and elasticity modelling
 - Chairman: James Tanser

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GIRO pricing working parties 07/08

- Implementation and delivery systems in pricing
- Benchmarks / market information (non-personal lines)
- Catastrophe models in pricing
- Using pricing models within reserving
- Price optimisation
- Expense allocation in pricing
- Pricing for latent claims
- Market prices of insurance liabilities
- Game theory pricing

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GI Pricing Wiki

- New group established
 - Karl Murphy (Chairman)
 - Tony Lovick
 - James Tanser
 - Will Forster
 - Gary Callan
 - Martin Cross
- Terms of reference:
 - to establish a pricing methods wiki as recommended in the GRIP paper
 - to consider where to host the wiki
 - to populate an initial wiki
 - to determine rules for access for editing
 - to publicise the existence of the wiki
 - to liaise with other interested bodies (such as the CAS and IAA) to encourage a broader involvement
 - to monitor content, to encourage contributions in under-performing areas and to moderate any disputes

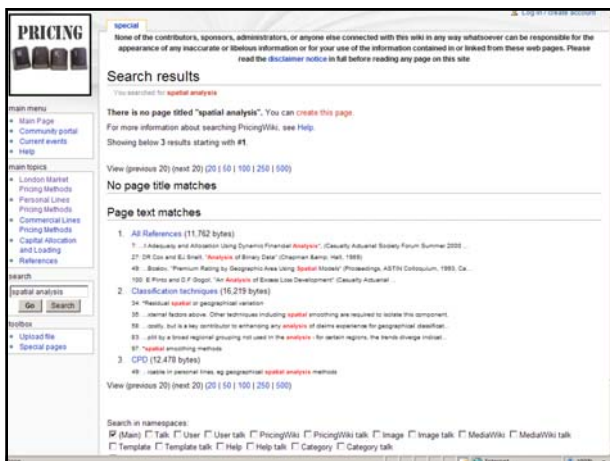
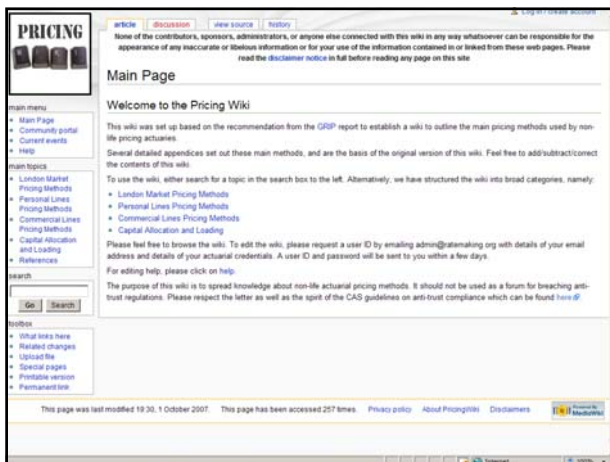
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GI Pricing Wiki

- Hosting software reviewed
- Prototype site established independently
- Intend to move to Institute systems as soon as practical
- Formal international launch will then follow
- In the meantime....

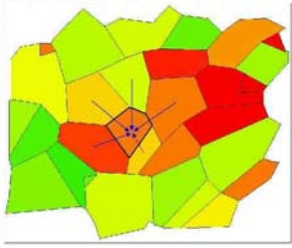
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Further details on distance based smoothing can be found in [Böhner](#), in [Christopherson and Wierland](#) and in [Anderson](#).

Adjacency-based smoothing



Adjacency-based smoothing incorporates information about directly neighbouring location codes. Each location code is influenced by its direct neighbours, each of which is in turn influenced by its direct neighbours. distributional assumptions or prior knowledge of the claims processes can be incorporated in the technique. The algorithms are therefore iterative and complex to implement.

As this smoothing method relies on defining which location codes neighbour each other, natural or artificial boundaries can be reflected in the smoothing process.

Location codes tend to be smaller in urban regions and larger in rural areas, so adjacency-based smoothing can sometimes handle urban and rural differences more appropriately for non-weather-related perils.

Further details can be found in [Boskov and Verrill](#).

Degree of smoothing

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All References

Contents [hide]

- 1 Capital allocation and capital charges references
- 2 Personal lines references
 - 2.1 GLM Reins
 - 2.2 GLMs in Insurance
 - 2.3 Classification
 - 2.4 Retention / Lifetime Customer Value models
 - 2.5 Other methods
 - 2.6 Other classes of business
- 3 London Market references

Capital allocation and capital charges references

Stewart Myers and James Read, Capital Allocation for Insurance Companies, (http://www.aib.org/RPP/Myers_Read.pdf)

Michel Denuat, Coherent Allocation of Risk Capital, (http://www.riskwaters.com/schneepdf/jor_v4i3a1a.pdf)

Donald Mango and John Mukey, Capital Adequacy and Allocation Using Dynamic Financial Analysis, (Casualty Actuarial Society Forum Summer 2000 <http://www.casact.org/pubs/forum/02forum/02f046.pdf>)

Stephen Philbrick and Robert Painter, DFA Insurance Company Case Study, Part 2 Capital Adequacy and Capital Allocation, (Casualty Actuarial Society Forum Spring 2001 <http://www.casact.org/pubs/forum/01forum/01f009.pdf>)

Shawn Wang, A Set of New Methods and Tools for Enterprise Risk Capital Management and Portfolio Optimization, (Casualty Actuarial Society Forum Summer 2002, <http://www.casact.org/pubs/forum/02forum/02f043.pdf>)

Paul Brehm, Correlation and the Aggregation of Unpaid Loss Distributions, (Casualty Actuarial Society Forum 2002 Fall, <http://www.casact.org/pubs/forum/02forum/02f051.pdf>)

Donald Mango, The Concentration Charge: Reflecting Property Catastrophe Exposure Accumulation in Rates, (Casualty Actuarial Society Forum 1998 <http://www.casact.org/pubs/forum/98forum/98f013.pdf>)

Paul Kaye, Risk Measurement in Insurance, (Casualty Actuarial Society 2005 Discussion Paper Program <http://www.casact.org/pubs/app/05-05app1.pdf>)

Donald Mango, Insurance Capital as a Shared Asset, (ASTIN Bulletin Volume 36 Issue 2, November 2006, <http://library.soa.org/06nag>)

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GRIP

GRIP was established by the UK Actuarial Profession's General Insurance Board in late 2005 to review actuarial involvement in premium rating issues, and followed the work of the GRI taskforce which considered a range of issues relating to reinsurance.

Following extensive consultation involving members of the Profession and external stakeholders, the working party has produced its final report which can be found [here](#).

The report sets out the findings of a number of separate workstreams which were established to consider the following different areas:

- Chapter 1 Introduction
- Chapter 2 Role - The role of the actuary in pricing
- Chapter 3 Methods - Issues relating to methods in use and areas for further research (personal lines, commercial lines and London Market)
- Chapter 4 Communications - Issues relating to communication, in particular in the light of stakeholder feedback
- Chapter 5 Education and
- Chapter 6 CPD - Reviewing the relevance of the current syllabus, CPD and other education issues
- Chapter 7 Guidance - Reviewing the needs for amendments/additions to formal professional guidance
- Chapter 8 Treating Customers Fairly - discussing trends in this area of relevance to pricing
- Chapter 9 Summary

The Report also contains a number of appendices expanding on the above themes, including two sections which describe in detail methods currently used in personal lines pricing and London Market pricing

- Appendix A - Terms of Reference
- Appendix B - Skills relating to Roles
- Appendix C - Capital Allocation Methods
- Appendix D - Personal Lines pricing methods
- Appendix E - London Market pricing methods
- Appendix F - Communication Pitfalls
- Appendix G - Potential References for a Glossary of Terms
- Appendix H - Example Syllabus
- Appendix I - Response to EXD62
- Appendix J - All References

Any queries concerning the GRIP report should be addressed to Peter Styling, Secretary of the General Insurance Board. #

Pricing Wiki

- Please visit
- Please sign up as editor

www.ratemaking.org

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GRIP - Key Recommendations

- Role
- Methods
- Education
- CPD
- Guidance
- GI element of examination syllabus be enhanced to provide more detail on:
 - pricing basics
 - policy terminology
 - insurance products
 - exposure measures
 - experience rating
 - trends
 - profit, expense, risk and catastrophe loads
 - GLMs
 - demand modelling
 - price optimisation
 - understanding rating factors
 - individual risk rating
 - excess and deductible rating
 - reinsurance rating
 - catastrophe modelling
 - medical malpractice and professional liability
 - use of ISO / NCCI information

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Syllabus re-write

- GIECPD Committee driving forward re-write of GI education material
- Majority of GRIP's recommendations on course to being included
- Target date for revised exams April 2009

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GRIP - Key Recommendations

- Role
- Methods
- Education
- CPD
- Guidance
 - Introduce one day annual UK pricing seminar from 2008
 - Profession to consider
 - partnering with a third party training company to develop training material relating to communication and management skills
 - extending professionalism course to cover non-technical skills

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One Day Pricing Seminar

- **Friday 13 June 2008**
- Royal College of Physicians
- ~20 speakers already
- Personal lines, commercial lines, London Market
- Mostly concurrent workshops

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Proposed Communication Course

- Two day (assessed) residential communications course as part of exam syllabus
- Specialist external trainer in communications will be used as necessary to develop the programme and assist with running as required
- First courses Spring 2009

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GRIP - Key Recommendations

- Role
- Methods
- Education
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- Guidance
- Profession debate with BAS the merits of adopting the IAA "two hat" approach (even though this is wider than pricing and even GI)
- *Information and Assistance Notes* (IANs) should be issued to help pricing actuaries interpret GN12 and GN50

Professional Guidance

- Two hat point communicated to BAS
 - informally
 - formally in Profession's July response to BAS's consultation paper "Towards a Conceptual Framework"
- Issues around use of GN12 et al (including IANs) being led by GI Professional Standards Committee
 - workshop C10
 - Peter Copeman

GRIP

General Insurance Premiums
Rating Review Working Party

Devison Anderson (Chairman)
Alan Bailey
Glynis Collier
Graham Cross
Nathan Edwards
Gordon Hurrell
Gail Hughes
Gavin Taylor
Paul Taylor (Secretary)
Gordon Smith


12 January 2007

www.actuaries.org.uk/grip

Next steps...

- Sign up for a pricing working party today
- Feed back pricing issues on professional guidance to GI PSC / Peter Copeman
- Visit and add sign up to **www.ratemaking.org**
- Come to the pricing seminar on 13 June 2007!

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GRIP Update

Duncan Anderson

GIRO 2007
