

# CMI Annual Review 2007-2008

## A summary of work undertaken by the CMI over the past year together with some of our future plans

### *Background*

The Continuous Mortality Investigation (CMI) is the largest single research project organised by the UK Actuarial Profession. It has been accumulating and analysing data on mortality and morbidity risks arising under life assurance, annuity and pension business for over 80 years.

There has been a tremendous upsurge in public and professional interest in mortality in recent years, and much greater awareness of – and interest in – the work of the CMI. In particular, during the last year the CMI has helped to inform the thinking of both the Board for Actuarial Standards and The Pensions Regulator as they launched consultation exercises on mortality assumptions.

### *New Mortality tables*

The CMI has been publishing mortality tables – based on data collected from life insurers – for many years. However, this year saw the publication of the first draft tables based on data from self-administered pension schemes (SAPS).

The draft tables were based on data received to the end of June 2007 and were issued for consultation in January 2008. Presentations were made to sessional meetings of both the Faculty of Actuaries and the Institute of Actuaries.

Unfortunately, there was a discrepancy in the age definition between the data and the graduation software that resulted in the draft tables overstating mortality rates by half a year. This issue was widely communicated as soon as possible after it was confirmed. Issues with the data submitted for some schemes have also subsequently been identified and are being rectified for the final tables, to be published later this year.

### *Assuring quality*

The CMI has a proud heritage of producing high-quality outputs for the UK actuarial profession, and we were naturally disappointed that this was brought into question with the issue regarding the draft SAPS graduations noted above. As a result, we have initiated an external “quality assurance” review to validate our controls and processes. Although envisaged as a one-off project, to be completed by Autumn 2008, we aim to learn from this review and to incorporate any lessons into our future processes.

### *A new library*

The CMI fully recognise the difficulties facing actuaries through the absence of mortality projections in the “00” Series. Early in 2007 we established a task force that aimed to make the CMI’s research on mortality projections more accessible to actuaries. The result was the CMI Library of Mortality Projections, which incorporated 55 projections of future mortality, bringing together previously-published tables of projections, and adjustments to these in common use, with sample projections from newer methodologies, namely P-splines and Lee-Carter.

The library is intended to be a living document, although no further projections have yet been added. In addition, the CMI is considering what further tools we may be able to make available to help actuaries in this high-profile area.

### *Gender Matters!*

The UK's implementation of the EU Gender Directive brought the CMI into new territory – seeking to make data available to demonstrate the differences that exist between men and women – in a form understandable to the general public.

The CMI duly published bulletins for Life Assurance and Annuities, Critical Illness Insurance and Income Protection Insurance ahead of the legislative deadline of 30 June 2008. These were based on 1999-2002 data and consideration will be given to updating these to 2003-2006 data at an early opportunity. We are pleased that so many companies appear to be relying on CMI data for the purposes of this legislation.

### *Further progress in understanding Critical Illness*

Claim diagnosis rates – for so long the CMI Critical Illness Committee's primary objective – remained elusive during the current year, but the recently-published Working Paper 33 demonstrates further strides in analysing and interpreting UK critical illness claims experience.

For the first time the Committee has produced results that properly match exposure to claims and it hopes to progress towards diagnosis rates in the remainder of 2008.

### *Improving the Analyses*

Further progress has been made behind the scenes to transform the CMI's capability to analyse mortality data through the 'Per Policy' initiative. Substantial volumes of data have now been collected that will enable more accurate and more detailed analyses to be produced. Indeed, several submissions have been received from life offices that have not previously submitted data.

The more detailed data requirements have substantially increased the time taken to validate data, especially within the first submission from each office. We apologise if the patience of a few pioneering data contributors has been severely tested!

Detailed consideration is now being given to the exposure calculation, and the first sets of individual office results will then be produced.

### *Feedback*

Feedback is vital to many organisations, and not least to the CMI. We are grateful to all those who have taken the time to respond to our various consultations over the year. Further feedback on our activities, including any of the items listed in this Review, is most welcome. Please send any comments to [info@cmib.org.uk](mailto:info@cmib.org.uk).

### *And finally...*

The Actuarial Profession and its users benefit greatly from the time and expertise donated by the many actuaries who participate in the CMI's research committees and working parties. I would like to thank, on behalf of the CMI Executive Committee, all volunteer members and the secretariat for their commitment and support.

Considerable thanks are also due to the life offices, reinsurers and actuarial consultancies that not only provide financial support but also, in many cases, provide data too. Without your continued support our work could not even begin.

Special thanks, though, are reserved for my predecessor as Chairman of the CMI, Brian Ridsdale, who has led the CMI with distinction and through such a busy period over the past four years.

**Gordon Sharp, Chairman**

**August 2008**

## Appendix

### *CMI Publications during 2007-8*

- Working Paper 27: The “library” of Mortality projections (July 2007)
- Working Paper 28: Progress towards an improved methodology for analysing CMI critical illness experience (July 2007)
- Working Paper 29: An analysis of the results of the mortality of male and female pensioners of self-administered pension schemes for the period 2000 to 2004 based on data collected by 30 June 2006 (October 2007)
- Working Paper 30: The CMI Library of Mortality Projections (November 2007)
- Working Paper 31: Report on the preliminary results of an analysis into the mortality experience of pensioners of self-administered pension schemes for the period 2000 to 2006 based on data collected by 30 June 2007 (January 2008)
- Working Paper 32: Proposed graduations of the CMI SAPS 2000-2006 mortality experience based on data collected to 30 June 2007 (January 2008)
- Working Paper 33: A new methodology for analysing CMI critical illness experience (July 2008)

### *CMI results released to members during 2007-8*

#### **Income Protection**

- 2004 ‘All Office’ results for Group business (November 2007).
- 2004 ‘All Office’ results for Individual business (February 2008).

#### **Self-Administered Pension Schemes Mortality**

- Analysis of data received to 30 June 2007 (October 2007)

No Life Office Mortality or Critical Illness ‘All Office’ results have been released during the current year. Data is near complete for Mortality for 2006 and for Critical Illness for 2005 and it is hoped that results will be released soon.

### *CMI seminar presentations during 2007-8*

The CMI hosted consultation meetings on the draft library of projections in London and Edinburgh in July 2007 and presented the draft SAPS graduations at sessional meetings of both the Faculty of Actuaries and the Institute of Actuaries early in 2008.

In addition CMI material was presented at many of the Profession’s seminars.

Copies of the slides from all of these can be found on the CMI’s pages of the Actuarial Profession’s website ([www.actuaries.org.uk](http://www.actuaries.org.uk)).