

CMI Annual Review 2011-2012

A summary of work undertaken by the CMI over the past year and our future plans

Background

The Continuous Mortality Investigation (CMI) is the largest single research project organised by the Actuarial Profession. It has been accumulating and analysing data on mortality and morbidity risks arising under life assurance, annuity and pension business for nearly 90 years.

The future of the CMI

We commented last year on the review of the CMI, with the Management Board of the Profession, to strengthen support for the CMI. There has been much work “behind the scenes” over the year, and we will be able to say more in the coming months. In particular we now have a firm proposal for revised financial contributions to the CMI, and we will be writing to all present contributors shortly about this.

Understanding SAPS Mortality

The SAPS Mortality Committee progressed two principal areas of analysis during the year – mortality improvements and industry analysis.

CMI Working Paper 53 was published in July 2011, containing an analysis of the improvements in mortality within the SAPS dataset over the period 2001-2009 compared with the improvements in ONS data. The high level nature of the analysis meant that it is not possible to draw conclusions regarding the statistical significance of the results, but the Committee felt the results to be interesting and useful nonetheless. In particular, the average improvements for the SAPS dataset and the England & Wales population are relatively close, which may provide some comfort to those using population mortality improvements in work for occupational pension schemes, including the default version of the CMI Mortality Projections Model.

The Committee has considered undertaking further research into alternative approaches that will enable more statistically rigorous analysis. However, feedback to date has indicated that the high level analysis already provided is valuable and that further research does not command high priority.

The analysis of experience by industry type – published in CMI Working Paper 61 in May 2012 (having previously been issued in draft form to SAPS members in February 2012) – also uses the dataset collected by 30 June 2010. This demonstrated the high variation between different industry groups, often correlated with differences in average pension amounts.

The Committee’s third publication was the regular annual update on the SAPS investigation – this year analysing SAPS mortality experience for the period 2003 to 2010 based on data collected by 30 June 2011 – which was published as CMI Working Paper 62, also in May 2012; having previously been issued in draft form to SAPS members in November 2011.

The main focus for the SAPS Mortality Committee for the coming year is to graduate the June 2011 dataset and produce the “S2” Series of mortality tables. The Committee is conscious that the graduation methodology used for the S1 Tables may not make full use of the data it has available and is keen to explore alternative approaches. However, feedback has indicated that there is demand for more up to date tables to be produced sooner rather than later, hence the Committee plans to use a consistent approach to that used for the S1 tables. It will graduate most of the corresponding subsets of data, but the less-used of the S1 tables may not be updated. The aim is to publish final S2 tables in early 2013, having first sought feedback on draft tables.

Life Office Mortality and Critical Illness data

In recent years, the CMI has been seeking to improve the coverage, quality and granularity of the data it collects from life offices, for the Life Office Mortality investigations in particular. Some offices have been able to submit data in the detailed format requested, but many have found it very difficult. One consequence is that the most recent All Office results for the Life Office Mortality and Critical Illness investigations are in respect of 2006.

Our experience to date has led us to recognise that the new data requirements may be over-ambitious and beyond the capabilities of some insurers at the current time. We also know that insurers’ resources are severely stretched due to Solvency II and other developments.

So the CMI is adopting a more flexible approach to data collection and validation for a special data collection exercise for the years 2007-2011. This approach avoids areas that have proved problematical and makes data submission as easy as possible for offices whilst still providing valuable aggregated results.

We are currently talking to insurers to investigate what data can be provided. Discussions to date have indicated a high level of support for this initiative. The Committees have set an ambitious timetable and aim to produce All Office results by the end of 2012 based on the data we receive by 30 September 2012.

We plan to further analyse the 2007-2010 datasets in 2013, including working towards “08” Series Life Office Mortality tables. We will also apply the lessons learned from this exercise for the data we request for 2012 and future years, to better align them with insurers’ capabilities, but with an overriding priority to keep results up-to-date and with a dataset which is as rich as is practically possible.

During 2011, the Life Office Mortality Committee made considerable progress in a number of areas regarding the processing of the Per Policy data that we have successfully validated. In particular, the initial methodology was finalised, following the consultation in CMI Working Paper 45, as well as the initial format for results using Per Policy data. These were set out in CMI Working Paper 56, published simultaneously with a discussion and consultation on how these might be developed in future, in CMI Working Paper 57. This methodology and results format will be followed as closely as possible for the 2007-2011 Life Office Mortality data. The Critical Illness Committee also intends to move to a similar approach, based on incurred claims and an allowance for late-reporting.

This initiative is limited to the Life Office Mortality and Critical Illness investigations. No changes are currently planned for the Income Protection investigation, where the collection and processing of data for 2008 and 2009 is well advanced; preliminary results were shared at the Health and Care Conference in May 2012.

Mortality Projections

The CMI Mortality Projections Model now appears to have become widely adopted as a valuable tool for benchmarking projections of improvements in mortality rates.

We were conscious that previous versions of the Model had been issued in late November, which is far from ideal for life offices, in particular. This timing had been driven by the release date for the full England & Wales population dataset by the ONS, used to derive the default assumptions for initial rates of mortality improvements. We therefore tested the feasibility of using the partial dataset, released by the ONS earlier in the year, in order to accelerate the release of the Model. The successful results of this test were published in CMI Working Paper 54 and we were then able to release CMI_2011 in September 2011. The ONS published their estimates on 11 October 2011 and their high-age estimates corresponded very closely with ours.

Unfortunately, we do not expect to be able to release CMI_2012 as early this year, because the 2011 Census will be factored into the population estimates, leading to later releases of some data by the ONS. Our understanding is that the mid-2011 estimates may be released in September 2012 (compared to June, in 2011) in which case we would expect to release CMI_2012 in November.

When the Model was first launched, we indicated that a review of the structure and parameterisation would be undertaken, after at most 5 years, in particular to take account of how the Model is being used in practice. We will shortly consider the timing and nature of this review, which may result in a formal consultation following the release of CMI_2012. This consultation would also encompass the CMI library of mortality projections, to which two updates were released in 2011, the second including the ONS 2010-based National Population Projections.

New Morbidity Tables

Considerable work has been undertaken in recent years by our two morbidity committees to produce formal tables of rates. The “IPM 1991-98” rates for Individual Income Protection were completed in July 2010 and the “AC04” Series rates for accelerated critical illness in January 2011. Both committees had previously indicated that further work would be undertaken to assist practitioners using these tables.

The Critical Illness Committee published two further papers in 2011. The first, CMI Working Paper 52, contained illustrative cause-specific claim diagnosis rates for the principal causes of claim based on consistent data to that used for the all-causes, AC04 rates. The second, CMI Working Paper 58, contained a number of supplementary analyses including an illustration of the uncertainty associated with the AC04 rates and analyses of the experience of subsets of the data, to examine whether they exhibit different underlying claims experience and hence whether the characteristics used to define these subsets could be regarded as risk factors not allowed for explicitly in the AC04 rates. Finally, as the AC04 rates apply only to accelerated critical illness business, the paper examined the experience of stand-alone business.

The Income Protection Committee’s planned work to augment its new rates was completed in February 2012 with the publication of two papers. CMI Working Paper 59 summarised the revised methodology and reporting format which were used in CMI Working Paper 60 to compare experience in 1991 to 2006 with that expected using the IPM 1991-98 rates.

No sex please... we're European!

We have been monitoring developments following the European Court of Justice ruling on the “Test-Achats” case with considerable interest! The guidance issued by the European Commission in December 2011 confirms our expectations that insurers will be able to continue to collect gender and to use this for reserving and financial reporting. It will therefore remain appropriate for the CMI to produce gender-specific analyses and tables and we welcome views on whether there is also value in the CMI producing our mainstream analyses and tables on a unisex basis.

There are a number of instances where CMI tables are specified in regulations and legislation and we are able to support the production of unisex tables for these, if required. Following discussions with the Board for Actuarial Standards and the FSA, a spreadsheet of unisex rates was added to the website that can be used by actuaries producing Statutory Money Purchase Illustrations or undertaking Transfer Value Analyses. We anticipate updating these rates after the publication of CMI_2012. We have also held discussions with HMRC and the ABI regarding Purchased Life Annuities and Discounted Gift Schemes.

Feedback

Feedback is vital to many organisations and the CMI is no different. We are grateful to all those who have taken the time to provide their views on our work 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.

And finally...

The Actuarial Profession and users benefit greatly from the time and expertise donated by the many actuaries and others 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. Particular thanks are due this year to Professor Howard Waters, of Heriot-Watt University, who has retired from CMI work having made an outstanding contribution to the CMI spanning four decades. Thanks are also due to Dave Heeney who has also stepped down from the CMI; his service as Chairman of the Critical Illness Committee was of a significant (though shorter!) duration.

In recent years, we have sought to adopt a more open approach to seeking new members of the CMI committees and all vacancies are advertised on the Profession's website. It is gratifying to note that there is a strong desire amongst actuaries to support the CMI's committees – on each occasion when we sought volunteers during the year, we received more strong candidates than we could accommodate.

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.

Gordon Sharp, Chairman

May 2012

Appendix

CMI Publications during 2011-12

- Working Paper 52: Cause-specific CMI critical illness diagnosis rates for accelerated business, 2003-2006 (June 2011)
- User guide for version 1.2 of the CMI library of mortality projections (June 2011)
- Working Paper 53: An initial investigation into rates of mortality improvement for pensioners of self-administered pension schemes (July 2011)
- Working Paper 54: Advancing the release date of the CMI mortality projections model (August 2011)
- Working Paper 55: The CMI mortality projections model, 'CMI_2011' (September 2011)
- User guide for the CMI mortality projections model, 'CMI_2011' (September 2011)
- Working Paper 56: CMI life office mortality 'per policy' results: the initial methodology and format (September 2011)
- Working Paper 57: CMI life office mortality 'per policy' results: consultation on the future format of results (September 2011)
- User guide for version 1.3 of the CMI library of mortality projections (November 2011)
- Working Paper 58: Supplementary analyses to CMI critical illness diagnosis rates for accelerated business, 2003-2006 (December 2011)
- Working Paper 59: Reporting sickness experience for the CMI individual income protection investigation: summary statement of revised methodology; description of updated format of results tables; and analysis of change in methodology and comparison basis (February 2012)
- Working Paper 60: Sickness experience for individual income protection policies: experience for 2003-2006 compared with 1991-2002; results for 1991-2006 re-stated using IPM 1991-98 as the comparison basis (February 2012)
- Working Paper 61: An investigation into the mortality experience by industry classification of pensioners of self-administered pension schemes (May 2012)
- Working Paper 62: Report on the preliminary results of an analysis into the mortality experience of pensioners of self-administered pension schemes for the period 2003-2010 based on data collected by 30 June 2011 (May 2012)

CMI seminar presentations during 2011-12

- Recent progress in the SAPS Mortality investigation and the Committee's planned future work (Pensions Conference, June 2011, and Current Issues in Pensions seminars, October 2011)
- The CMI's work and future plans to the Bristol Actuarial Society (December 2011)
- The evolution and current use of the CMI mortality projections model at the ACA members' conference (February 2012)
- Trends in Income Protection experience 1975-2009 and the IPM 1991-98 graduations, at the Health & Care conference (May 2012)
- Life Office Mortality and Critical Illness data collection at CILA (May 2012)

Copies of the slides can be found on the CMI's pages of the UK Actuarial Profession's website (<http://www.actuaries.org.uk/research-and-resources/pages/continuous-mortality-investigation-presentations>).