



Self-administered Pension Schemes Mortality Committee

Summary of Working Paper 88: “Mortality experience of pensioners for the period 2007 to 2014”

February 2016

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Introduction

This document provides a brief synopsis of Working Paper 88, which is one of a series of annual reports setting out the results of the CMI SAPS Mortality investigation. Data is submitted throughout each year but, for these annual reports, a cut-off date of 30 June is used; this paper analyses the experience of data submitted up to 30 June 2015. Working Paper 76 presented the previous analysis of experience of data collected by 30 June 2014.

For more detailed analysis and full results, readers are encouraged to refer to the full Working Paper¹.

The data

The CMI SAPS investigation collects data from actuarial consultancies and the Pension Protection Fund in respect of self-administered pension schemes – the requirement for data submissions is that schemes have 500 or more current pensioners.

The analysis in Working Paper 88 includes pension scheme members exposed to risk during the eight years from 1 January 2007 to 31 December 2014; in total, 523 distinct schemes (excluding those submitted by the PPF) have data in this period. A rolling eight-year period is analysed so the overall change in the exposed to risk is a combination of the volume of data for the year that is lost relative to the data that is gained for the common years and the year that is introduced. Consequently, the dataset reviewed in this Working Paper is not materially different from the dataset analysed in Working Paper 76.

Compared with the data used to produce the CMI's “S2” Series tables, the total lives central exposed to risk has fallen by around 12% for male Pensioners and 19% for female Pensioners (as shown in Table 1 below). 20% of the exposed to risk relates to 2007, and will fall out of the dataset next year. The Committee would like to encourage firms to submit data for all schemes with 500 or more pensioners to prevent further falls in the size of the SAPS dataset and ensure the usefulness of future analyses.

The “S2” Series tables were based on the exposure period 2004 to 2011. The weighted mid-point of the latest analysis is around 35 months later than the midpoint of the dataset used for the “S2” Series tables. The reason this midpoint is not 36 months later is due to a slightly lower level of submissions for recent calendar years of exposure.

The PPF currently accounts for around 1.8% of the total exposure analysed on a lives basis.

¹ Most of the CMI's research is only available to employees of subscribers and to researchers, for non-commercial use. Details of how to access the full paper and the CMI's other research can be found on the [CMI's web pages](#).



Table 1: Summary of dataset for Working Paper 88 compared to Working Paper 65

	Pensioners Lives	Pensioners Amounts (£'000)	Average Amounts (Pensioners) (£ pa)	Dependants Lives	Dependants Amounts (£'000)	Average Amounts (Dependants) (£ pa)
Males						
WP 88 Exposure	8,736,792	80,643,752	9,230	248,232	543,836	2,191
WP 88 Deaths	304,974	2,112,759	6,928	11,585	19,160	1,654
WP 65 Exposure*	9,962,733	83,400,916	8,371	275,847	485,052	1,758
WP 65 Deaths*	353,709	2,220,839	6,279	11,901	17,059	1,433
Females						
WP 88 Exposure	4,684,109	17,740,786	3,787	3,217,550	13,655,443	4,244
WP 88 Deaths	112,890	369,712	3,275	179,461	670,309	3,735
WP 65 Exposure*	5,796,201	20,025,051	3,455	3,680,509	13,670,286	3,714
WP 65 Deaths*	144,613	440,497	3,046	194,591	644,306	3,311

*These figures relate to the dataset underlying the graduations produced for the "S2" Series tables.

Analysis

Tables 2 and 3 show the experience for males and females respectively over the period analysed. The experience has been compared to the unadjusted "S2" Series tables and the "S2" Series tables with CMI_2015 [0.0%] projections. With the latter we are effectively comparing how mortality experience has changed in the SAPS dataset against the England and Wales (E&W) general population. This comparison is against smoothed actual annual improvements for 2007-2012 in E&W and CMI_2015 projected mortality for the final two years 2013 and 2014. CMI Working Paper 83 provides the actual improvements in population mortality for these two years – close to nil for 2013 and slightly higher than the average improvement in the recent past for 2014. The choice of projection parameters such as the Long Term Rate has little impact on the results as we only project for two years in our analysis.

Because the exposure periods for the two datasets overlap for 5 out of 8 years, it appears that the mortality experience of this dataset is similar to that underlying the "S2" Series tables, albeit slightly lighter than the "S2" Series tables without projection.

Care should be taken when interpreting the annual results in this paper due to low volumes of data in the latest years and heterogeneity in the data (as different schemes feature in different years).

Observations based on the experience of the latest dataset are that:

- Overall the mortality experience of the more recent dataset is lighter than that expected using the unadjusted "S2" Series tables. This is expected if mortality rates are improving since the midpoint of the latest dataset is about 3 years more recent than that underlying the "S2" Series tables.
- The results indicate that the mortality experience appears to have gradually improved from year to year for male Pensioners. Experience is more volatile from year to year for male Dependants, which could be explained by the lower data volumes for this subset of the data. For female Pensioners, mortality experience also appears to have improved but more volatility is observed year to year compared with male Pensioners for the same period. The experience for the female Dependants has improved too, though to a lesser degree than for female Pensioners.
- Experience for both male and female Pensioners appears to have moved broadly in line with the CMI Mortality Projections Model. There is more volatility in the years 2011 – 2014, which could be due to lower volumes of data in these years, the heterogeneity of



the dataset and the projection assumptions used in CMI_2015 [0.0%]. The experience of the female Dependants has been slightly heavier than the projected “S2” Series tables.

- More recent data submissions have been less likely to breakdown members between Normal health and Ill health retirement, resulting in a fall in the volume of ill health data.
- The patterns of mortality experience observed for members with different pension amounts in Charts A and B are similar to those seen in earlier datasets, including the dataset underlying the “S2” Series tables.
- As shown in Table 1, the exposed to risk for female Pensioners is materially less than that available for male Pensioners. In particular when the data is analysed in smaller subsets (for example, the analysis by amounts bands) this gives rise to more volatile outcomes.

Table 2: 100A/E for Males compared with “S2” Series, with and without CMI_2015 projections

Projection	Male Pensioner Lives S2PML		Male Pensioner Amounts S2PMA		Male Dependant Lives S2PML *		Male Dependant Amounts S2PMA *	
	None	CMI_2015 [0.0%]	None	CMI_2015 [0.0%]	None	CMI_2015 [0.0%]	None	CMI_2015 [0.0%]
2007	100.8	100.8	102.3	102.3	116.1	116.0	129.6	129.5
2008	98.7	101.5	99.0	101.8	111.1	114.2	118.4	121.6
2009	94.5	99.7	93.2	98.3	105.2	110.9	111.0	116.8
2010	93.4	101.0	93.5	101.1	102.8	110.6	114.7	123.3
2011	88.9	98.2	86.1	95.1	94.5	103.5	91.8	100.5
2012	90.2	101.3	87.5	98.4	97.6	108.5	97.3	108.0
2013	86.5	98.9	83.8	95.9	102.2	114.6	145.1	162.8
2014	82.4	95.8	83.0	96.7	86.2	98.2	88.3	101.4
All	94.2	100.2	93.0	99.4	104.4	110.8	111.8	119.4

* Note: the “S2” Series tables do not include a table for male Dependants. The male Dependants experience is therefore shown compared to a Pensioner table, which is not directly comparable.

Table 3: 100A/E for Females compared with “S2” Series, with and without CMI_2015 projections

Projection	Female Pensioner Lives S2PFL		Female Pensioner Amounts S2PFA		Female Dependant Lives S2PFL		Female Dependant Amounts S2PFA	
	None	CMI_2015 [0.0%]	None	CMI_2015 [0.0%]	None	CMI_2015 [0.0%]	None	CMI_2015 [0.0%]
2007	102.0	101.9	102.3	102.2	100.7	100.6	101.4	101.3
2008	100.8	103.1	102.0	104.3	101.1	103.1	101.9	103.9
2009	93.5	97.6	94.6	98.7	93.0	96.6	93.2	96.8
2010	95.5	101.6	94.2	100.2	97.2	102.8	97.5	103.0
2011	89.4	96.8	86.2	93.2	93.7	100.6	91.6	98.2
2012	94.7	103.9	90.4	99.1	98.6	107.0	94.7	102.7
2013	88.5	98.3	87.4	97.0	98.6	108.2	95.9	105.2
2014	83.9	94.3	80.8	90.9	94.1	104.4	90.2	100.1
All	96.1	100.5	95.1	99.7	97.5	101.8	96.6	101.2



Chart A: 100 A/E values for Male Pensioners amounts-weighted compared to S2PMA

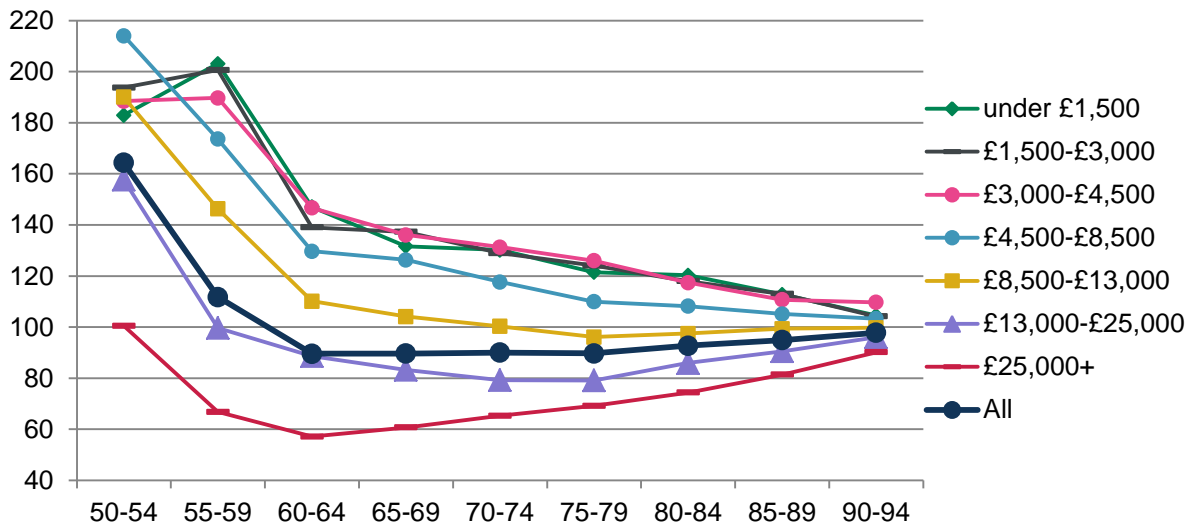
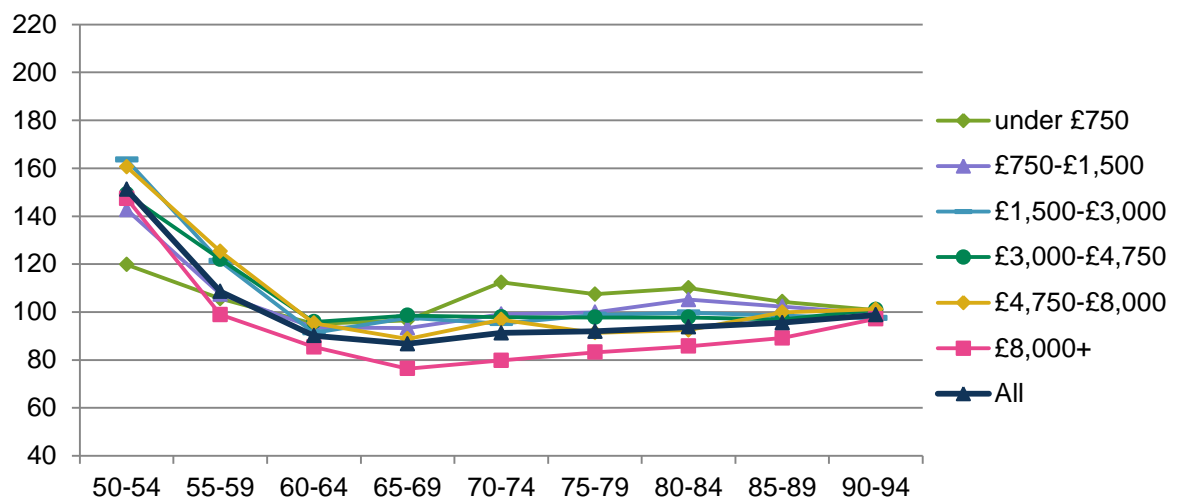


Chart B: 100A/E values for Female Pensioner amounts-weighted compared to S2PFA



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