



## Pensions Newsletter No 6

### ACTUARIAL PROFESSION PROPOSES NEW MORTALITY TABLES

The Continuous Mortality Investigation (CMI) is a research organisation of the actuarial profession. It has just published proposals for a new set of mortality tables for pensioners. The tables are to be called the "00 Series". The new tables are based on data for the years 1999-2002 provided by pension schemes run by insurance companies. The current mortality tables are known as the "92 Series" and are based on corresponding data for the period 1991-94.

Analysis of the data confirms that mortality fell sharply during the 1990s. The chances of dying while aged 70 have fallen by around 30% for both men and women. Mortality rates of pensioners of other ages have also improved, although by lower amounts, as can be seen from Table 1.

**Table 1**  
**Mortality rates per 100,000 and total improvement over period 1991-94 to 1999-2002**

Age	Males			Females		
	92 Series	00 Series	Improvement	92 Series	00 Series	Improvement
60	975	913	6%	585	458	22%
65	1812	1285	29%	1098	741	33%
70	3214	2219	31%	1989	1399	30%
75	5420	4082	25%	3461	2642	24%
80	8664	7071	18%	5769	4777	17%
85	13107	11152	15%	9188	8248	10%

The improvements have been higher for females than for males at younger ages and higher for males than females at older ages.

### Life expectancies

A common measure of overall mortality is life expectancy. This is an estimate of the average number of years a person should survive from any given age. Period life expectancy makes no allowance for projected future changes in mortality and is useful for demonstrating how mortality is changing over time. It is calculated using age specific mortality rates that apply in a year or period. Table 2 compares these period life expectancies between these mortality tables.



**Table 2**  
**Period life expectancies**

Age	Males			Females		
	92 Series	00 Series	Improvement	92 Series	00 Series	Improvement
60	19.37	21.43	11%	22.97	24.65	7%
65	15.48	17.44	13%	18.76	20.26	8%
70	12.07	13.68	13%	14.95	16.13	8%
75	9.22	10.41	13%	11.62	12.44	7%
80	6.95	7.78	12%	8.84	9.29	5%
85	5.21	5.79	11%	6.61	6.73	2%

### **Effect on pension scheme contribution rates**

As well as publishing mortality tables based on the actual mortality experienced by life office pensioners, the CMI also produces projections of these rates into the future. A comparison of annuity factors at ages 60 and 65 based on the mortality rates in the "00 Series" tables with those calculated on mortality rates for the same period projected forward from the "92 Series" tables shows little variation. So the previous projections are broadly on track.

The CMI has also started a study into the mortality of self-administered occupational pension schemes, since the experience of insured schemes may have features that are not so relevant for the larger work-based schemes. Further information on that study should also become available shortly.

There are widely differing views of how mortality will change in future. Adair Turner has been suggesting that previous projections have not made sufficient allowance for future improvements. Other studies have concluded that lifestyle changes or the emergence of new diseases will slow down or reverse the trends we have seen. A key issue for funded schemes will be how much prudence trustees and actuaries will need to build in to the allowance for future mortality in order to satisfy the requirements of the new regulations for scheme-specific funding requirements.

The CMI is currently considering various projection methodologies which might be applied to the new tables, with a particular emphasis on providing measures of uncertainty surrounding such projections.

The actuarial bases we propose to clients already include significant allowance for future mortality improvement. These studies so far do not suggest a need for radical change in these assumptions.

A further newsletter will be issued on this topic and the potential impact on future contribution rates to pension schemes when more details become available.