

## THE MORTALITY OF RETIREMENT ANNUITANTS UNDER APPROVED PENSION ARRANGEMENTS IN THE REPUBLIC OF IRELAND 1986-91

No investigation of Irish retirement annuitant mortality has so far been published. This report relates to the experience of those holding retirement annuity policies issued by the Irish Life Assurance Company. The policyholders included in the investigation are covered by group insured schemes, the schemes having purchased compulsory immediate annuities to cover their immediate pension liabilities. The project for publication was initiated by the late Brendan Hayes and it has been completed with the assistance of Bruce Maxwell. The Bureau is extremely grateful to these two gentlemen, and to Irish Life, for their generosity in making this data available to the profession.

The investigation covers the calendar years 1986 to 1991. No information is available to distinguish between persons retiring at or after the normal retirement age and those retiring before the normal age, whether for health or other reasons. All amounts are in Irish pounds (IR£). The basic calculations were undertaken by Irish Life; the role of the Bureau has been limited to introducing additional comparison bases and the preparation of results for publication.

Data were available for both males and females, each on the basis of both lives and amounts of pension. The figures for individual years have been combined to provide a larger data set for analysis. When looking at the combined figures it should be kept in mind that the exposed to risk is not evenly distributed over the period, but has been building up steadily year by year. Each experience has been compared against the PA(90) table, for males or females as appropriate. In addition, the experiences have been compared against appropriate projected rates for calendar year 2010 from the "80" series tables for pensioners. These latter tables were used as comparisons for the corresponding group of UK lives over the period 1987-90, as written up on pp?? in this volume.

The male experience is of a goodly size, with 2,202 deaths over the six-year period. The results using the PA(90) table show that the experience measured on the basis of 'lives' is substantially heavier than that measured on the basis of 'amounts'. A similar differential between 'lives' and 'amounts' can be observed in the case of UK pensioners in insured group pension schemes. On an 'amounts' basis PA(90) is clearly not light enough to represent the experience of Irish pensioners over the period studied. When looked at on the basis of PML80C10 it can be seen that the mortality in the Irish 'lives' experience is heavier than that in the UK 'lives' experience at all ages over 65. On the 'amounts' basis using PMA80C10 the Irish experience is heavier than that in the UK at ages up to 70. Beyond that age the two experiences are similar.

The female experience is much smaller. As was the case with males, the mortality measured on the basis of 'amounts' was much lighter than that measured on the basis of 'lives'. However, in the case of female 'amounts', PA(90) is a not unreasonable representation of the level of mortality observed over the six-year period. Looked at on the basis of PFL80C10 the mortality in the Irish 'lives' experience is substantially heavier than that in the UK 'lives' experience at all ages over 65. At ages below 65 the Irish experience is comparatively light. A similar pattern can be observed in the 'amounts' experience, using as a comparison the PFA80C10 table.

Too much should not be read into the experience over one six-year period. However, it is hoped that the results can at least provide indications which are useful to actuaries concerned with business in Ireland.

Table 1a. Pension annuity policies in payment, 1986-91, males, 'lives': exposed to risk, actual deaths and ratios of actual deaths to those expected on the bases specified.

Age group (ages last birthday)	Exposed to risk	Actual deaths	100A/E by PA(90) males	100A/E by PML80C10
-60	6,745	67	84	148
61-65	8,777	202	105	161
66-70	13,466	459	105	141
71-75	11,482	636	111	134
76-80	6,189	526	115	128
81-85	1,771	239	123	132
86-90	395	73	115	123
Total	48,825	2,202	110	136

Table 1b. Pension annuity policies in payment, 1986-91, males, 'amounts':  
 exposed to risk, actual deaths and ratios of actual deaths to those expected using  
 the table specified.

Age group (ages last birthday)	Exposed to risk IR£000pa	Actual deaths IR£000pa	100A/E by PA(90) males	100A/E by PMA80C10
-60	11,139	121	87	195
61-65	20,510	385	86	166
66-70	29,541	809	85	141
71-75	18,226	710	79	113
76-80	7,158	431	82	104
81-85	1,490	138	85	101
86-90	268	45	105	118
Total	88,332	2,639	83	127

Table 2a. Pension annuity policies in payment, 1986-91, females, 'lives':  
exposed to risk, actual deaths and ratios of actual deaths to those expected on  
the bases specified.

Age group (ages last birthday)	Exposed to risk	Actual deaths	100A/E by PA(90) females	100A/E by PFL80C10
-60	3,075	23	153	218
61-65	3,477	35	101	143
66-70	5,270	101	115	160
71-75	4,709	166	126	164
76-80	3,133	164	112	133
81-85	1,542	152	129	142
86-90	655	99	119	128
Total	21,861	740	120	146

Table 2b. Pension annuity policies in payment, 1986-91, females, 'amounts':  
exposed to risk, actual deaths and ratios of actual deaths to those expected using  
the table specified.

Age group (ages last birthday)	Exposed to risk IR£000 pa	Actual deaths IR£000 pa	100A/E by PA(90) females	100A/E by PFL80C10
-60	5,048	21.2	87	146
61-65	5,179	38.6	74	125
66-70	7,116	139.1	119	194
71-75	4,438	124.4	102	152
76-80	2,165	102.7	103	114
81-85	760	67.0	117	139
86-90	277	34.3	97	115
Total	24,983	527.3	104	144