Continuous Mortality Investigation

Working Paper 42

CMI Life Office Mortality Experience 2003-2006

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Continuous Mortality Investigation

Working Paper 42

CMI Life Office Mortality Experience 2003-2006

1 THE MORTALITY OF HOLDERS OF PERMANENT (WHOLE LIFE AND ENDOWMENT) POLICIES OF ASSURANCE 2003-2006

This report follows the format of part 1 of *C.M.I.R.* **21**, which reported on the experience of 1999-2002. In particular, in order to allow easy cross referencing to that report, most table, section and paragraph numbers follow the numbering used in *C.M.I.R.* **21**. This report contains commentaries on two sets of data. Section 1.1 covers the male holders of permanent (whole life and endowment) policies issued in the United Kingdom. The policies are divided into six sub-sets relating to the type of product, the degree of underwriting and whether they were issued on a single or a joint life basis. Section 1.2 covers female policyholders, similarly subdivided into six sub-sets. In contrast to the report in *C.M.I.R.* **21**, however, this report does not cover policies written in the Republic of Ireland as a consequence of the very low volumes of data received for this business.

The exposed to risk and deaths over the last four quadrennia are shown for each sub-group in Table ASS 0.1. This, and subsequent tables relating to the text, will be found on pp 8 to 22. The effect of smoking on mortality for this class of business is covered in a separate report on pp 70 to 103.

The term "standard medical evidence" relates to policies where the life assured has undergone a full medical examination or has completed a comprehensive health questionnaire, with or without a Medical Attendant's Report. "Minimum medical evidence" relates to policies issued after the completion of a short proposal form containing a small number of questions. "Guaranteed acceptance" relates to policies issued with no medical evidence at all. All policies are accepted at standard premium rates.

This report was based on data submitted in the traditional 'scheduled' format. Instructions on the submission of the data were provided to contributing offices in a document entitled *Consolidated Rules of the CMI Bureau*. A major exercise to switch to 'per policy' data submissions is currently under way.

1.1 MALE LIVES COVERED BY POLICIES ISSUED IN THE UNITED KINGDOM

The six experiences included in this section are:

- 1.1.1 Non-linked assurances on single lives, based on standard medical evidence.
- 1.1.2 Unit-linked assurances on single lives, based on standard medical evidence.
- 1.1.3 Joint life first death assurances, based on standard medical evidence.
- 1.1.4 Assurances on single lives based on minimum medical evidence.
- 1.1.5 Assurances on joint lives first death based on minimum medical evidence.
- 1.1.6 Guaranteed acceptance assurances on single lives.

Each of the experiences is compared against both the AM92 and AMC00 tables. Using a standard comparison basis throughout the report helps demonstrate the differences between the experiences. On this occasion the "00" Series of mortality tables is available for the first time for use in a report on the

experience of a quadrennium. Both the AM92 and AMC00 tables have been used as comparison bases in order to provide a "bridge" between future and past comparisons. The AM92 table was used as the comparison basis in part 1 of *C.M.I.R.* **21**, which reported on the mortality experience of 1999-2002, the previous quadrennium.

The summary table, ASS 1.0, shows for each investigation the number of actual deaths at durations 2 and over as a percentage of the number expected according to the AMC00 table. The relative differences between the experiences are similar to those observed at the last quadrennium: the standard medical evidence experiences exhibit broadly similar mortality to each other, the mortality of the minimum medical evidence experiences is a little higher and the experience of the guaranteed acceptance group is very different to the other groups, being very much higher at ages over 50. Furthermore, mortality has improved at many age groups compared to the previous quadrennium (see Table ASS 1.0.1 in *C.M.I.R.* 21) for these groups.

As well as the detailed reports covering recent experience, Section 2.1.1 also contains a note showing a longer term perspective detailing trends back to the 1959-1962 quadrennium.

1.1.1 Non-linked assurances on single lives, based on standard medical evidence

This investigation (together with that into the mortality of immediate annuitants) is the longest running of those carried out by the CMI. It has also historically been, in terms of the number of policies covered, one of the largest. However, as can be seen from Table ASS 0.1, the long term fall in the exposed to risk, noted in *C.M.I.R.* 14, *C.M.I.R.* 16, *C.M.I.R.* 19 and *C.M.I.R.* 21, has continued into the 2003-2006 quadrennium. Indeed, the decline appears to have accelerated, with the total exposed to risk being less than half of the level of the previous quadrennium.

The decline is due to insufficient new business to replace that going out of the experience through deaths, maturities, surrenders and lapses, as can be seen by the particularly low volumes at the earlier durations, and, particularly in more recent years, a fall in the number of offices contributing data to the investigation. During the previous two quadrennia (1995-1998 and 1999-2002) the number of contributing offices was generally stable, at around 25-30 in any one year. However, in the most recent quadrennium this has fallen to around 15-20 offices.

The decline in data volumes has been a major cause of concern to the CMI. It is hoped that the decision to switch to 'per policy' (rather than 'scheduled') data submission will not only arrest this decline but actually yield increased volumes of data which will also be more amenable to further and more detailed analyses than is possible at present.

In addition to the decline in the exposed to risk the global crude mortality rate has increased during a period that mortality rates have been improving. This, together with the exposure weighted average age, shows that the experience is ageing as it declines.

Quadrennium	Crude Mortality Rate	Exposure Weighted Average Age
1991-1994	0.004248	46.9
1995-1998	0.004519	48.4
1999-2002	0.005189	50.4
2003-2006	0.006720	53.6

Table ASS 1.1.1 shows for the whole data the actual deaths in 2003-2006 and the ratio of the actual deaths to those expected using the AMC00 table and the AM92 table. Corresponding ratios for 1999-2002 and 1995-1998 are also shown, though only the AM92 table is used as the comparison basis for

1995-1998. At durations 2 and over it can be seen from the table that the mortality experienced by policyholders has continued to fall at all ages over 30 (below this age the pattern is mixed, though data volumes are much lower). This is now a long established trend. In most age groups the number of actual deaths is around 70% of the number expected according to the AM92 table; this compares with figures of around 80% only four years ago and 90% four years before that.

At durations 0 and 1 data volumes have fallen to such low levels that it is difficult to draw conclusions.

Table ASS 1.1.2 shows, by age group and for each quadrennium going back to 1959-1962, percentage ratios of actual deaths to those which would be expected using as a comparison basis the AMC00 table. For quadrennia prior to 1991-1994 these have been calculated using 'bridging factors' derived from previous reports. The report for the 1995-1998 quadrennium (*C.M.I.R.* 19) showed 100A/E ratios using both the AM92 and AM80 mortality tables as comparison bases. Similarly the report for the 1983-1986 quadrennium (*C.M.I.R.* 11) showed 100A/E ratios using both the AM80 and A1967-70 mortality tables as comparison bases, and the report for the 1971-1974 quadrennium (*C.M.I.R.* 3) showed 100A/E ratios using both the A1967-70 and the A1949-52 mortality tables as comparison bases. Although there is necessarily an element of approximation in these calculations, it is likely that the errors are small. The results at very high ages should obviously be interpreted with caution.

From the tables the steady improvement in mortality can be clearly seen. Between ages 45 and 70 the observed mortality rates in 2003-2006 are only about 35% of those observed in 1959-1962. Outside these ages the improvement is not quite so pronounced, but is still substantial. Looking at the trend for all ages it can be seen that the improvements in mortality since 1979-1982 have been greater than in previous quadrennia. Up to 1979-1982 the 100A/E ratio improved by about 5½% between each quadrennium but has improved by about 11% between quadrennia since that time, with the greatest improvement being experienced in the two most recent quadrennia. The 100A/E values for the 96-100 age group remain very low compared with the AMC00 table. However, it should be noted that due to a suspicion of under-recording of deaths at these very old ages the comparison table was not fitted to actual data in this age range.

1.1.2 Unit-linked assurances on single lives, based on standard medical evidence Table ASS 1.2.1 shows, for the whole data, the deaths in 2003-2006 and the ratios of actual deaths to those expected using the AMC00 and AM92 tables, together with corresponding ratios for 1995-1998 and 1999-2002 (but based only on the AM92 table for 1995-1998).

For duration 0, the overall level of mortality recorded in 2003-2006 was lower than that recorded in 1999-2002, more than reversing the slight increase since 1995-1998 that was observed in *C.M.I.R.* **21**. For duration 1, by contrast, there was an overall increase in the value of the 100A/E compared with the previous quadrennium. However, for both these durations it is notable that the numbers of deaths in 2003-2006 (78 at duration 0 and 117 at duration 1) have fallen sharply since 1999-2002 (187 at duration 0 and 324 at duration 1).

For durations 2 and over, the ratio of actual to expected deaths, based on the AM92 table, in 2003-2006 for all ages is significantly lower than for 1999-2002, and there was a fall for all ages above 30. The comparison with the AMC00 table shows that the 2003-2006 experience is of a different shape to that mortality table. Despite this, the overall, the mortality for this group is similar to that of the non-linked section of the data, which was also the case with the 1999-2002 experience, as noted in *C.M.I.R.* 21.

1.1.3 Joint life first death assurances, based on standard medical evidence

The policies included in this investigation are those where payment is made on the occurrence of the first death only. It is also limited to policies set up with one male and one female life. When the first death is recorded the remaining life is treated as a withdrawal from the in force and removed from the investigation. In the case of both lives dying simultaneously (e.g. in a road accident) each death should be included in the appropriate return of deaths. As time has passed, in some cases, it is possible that one of the lives has been deleted from the policy, the other life remaining in the experience on a single life basis.

Table ASS 1.3.1 shows the analyses for this group. As in the non-linked experience, the changes in the level of mortality recorded for durations 2 and over vary according to age and over time. In general there is a continuing fall in the mortality recorded over the three most recent quadrennia. The overall level of mortality of those in the joint life investigation in 2003-2006 was similar to both the non-linked investigation and the linked investigation, though the pattern of mortality was slightly different. This investigation demonstrates slightly lighter mortality than that of the AMC00 table.

At durations 0 and 1 there are too few deaths to draw firm conclusions.

1.1.4 Assurances on single lives, based on minimum medical evidence

The analyses for this group are shown in Table ASS 1.4.1. Data volumes have increased a little since the previous quadrennium. Overall the level of mortality experienced by this group at durations 2 and over has, over time, been consistently above that observed in the fully underwritten, single life experience, and this feature continues to hold true in the 2003-2006 quadrennium. This difference has varied by age but in all age groups, above 30, the mortality experience of 2003-2006 was above that of the fully underwritten group. The greatest difference observed was between the ages 66 to 70, as was also observed in *C.M.I.R.* **21** for the 1999-2002 quadrennium. While there are fluctuations by age, the overall experience has improved a little since 1999-2002. It can also be seen that overall, and in most age groups, the experience in 2003-2006 is heavier than the AMC00 table.

At durations 0 and 1 the mortality experience is much heavier than both the AMC00 and AM92 tables, particularly at ages above 50.

1.1.5 Assurances on joint lives first death, based on minimum medical evidence The experience for this group is to be found in Table ASS 1.5.1.

At durations 2 and over the mortality recorded in this group is somewhat heavier than that recorded in the joint life fully underwritten group, though the pattern by age group is a little mixed. The level of mortality is below that found in the corresponding single life investigation, particularly above age 50.

No deaths were recorded at durations 0 and 1.

1.1.6 Guaranteed acceptance assurances written on single lives

The experience for this group is shown in Table ASS 1.6.1. Data volumes remain high following the extremely large increase recorded in the 1999-2002 quadrennium. In view of this significant change in the data set, direct comparisons with quadrennia prior to 1999-2002 should be treated with caution.

At durations 0 and 1, the ratio of actual to expected deaths in 2003-2006 has improved significantly at virtually all age groups compared with the previous quadrennium. Similar improvements are also seen for durations 2 and over at ages above 55.

For ages above 50, the level of mortality observed in 2003-2006 is well above that recorded in both the fully medically underwritten and the minimum evidence investigations.

1.2 FEMALE LIVES COVERED BY POLICIES ISSUED IN THE UNITED KINGDOM

This section covers six different experiences, corresponding to those for male lives reviewed in Section 1. The experiences are:

- 1.2.1 Non-linked assurances on single lives, based on standard medical evidence.
- 1.2.2 Unit-linked assurances on single lives, based on standard medical evidence.
- 1.2.3 Joint life first death assurances, based on standard medical evidence.
- 1.2.4 Assurances on single lives, based on minimum medical evidence.
- 1.2.5 Assurances on joint lives first death, based on minimum medical evidence.
- 1.2.6 Guaranteed acceptance assurances on single lives.

Each of the experiences is compared against the AFC00 and AF92 tables. As with the males, this provides a 'bridge' between future and past comparisons.

The summary table, ASS 2.0, shows for each investigation the number of actual deaths at durations 2 and over as a percentage of the number expected according to the AFC00 table. The non-linked and linked standard medical evidence groups display similar experience overall, but the pattern across age groups is different. For these two groups, overall experience is heavier than the joint life standard medical evidence group. The experience of the single life minimum medical evidence group is notably heavier than the standard medical evidence groups, whereas the joint life minimum medical evidence group's experience is similar to that of the single life minimum medical evidence group. As with males, the guaranteed acceptance group above age 50 exhibits much higher mortality than the other groups.

As well as the detailed reports covering recent experience, Section 1.2.1 also contains a note showing a longer term perspective detailing trends back to the quadrennium 1975-1978, the first quadrennium for which data on female policyholders are available. As data volumes were lower and increasing in the earlier quadrennia, the changes observed may be less reliable.

1.2.1 Non-linked assurances on single lives, based on standard medical evidence As with the male experience, though not quite to the same extent, the amount of exposed to risk has been reducing over recent quadrennia – particularly so in 2003-2006. Furthermore, the same feature of an increasing global crude mortality rate, and hence ageing experience, has been observed.

Quadrennium	Crude Mortality Rate	Exposure Weighted Average Age
1991-1994	0.002156	43.5
1995-1998	0.002488	45.4
1999-2002	0.003268	47.7
2003-2006	0.004828	51.1

Table ASS 2.1.1 shows for the whole data the actual deaths in 2003-2006 and the ratio of the actual deaths to those expected using the AFC00 and AF92 tables. Corresponding ratios are also shown for 1999-2002 and 1995-1998 though only the AF92 table is used for 1995-1998.

From the table it can be seen that, at durations 2 and over, the overall mortality recorded in this investigation has remained at a similar level to the previous two quadrennia. Closer inspection shows relatively modest improvements at most ages. The comparison with the AFC00 table shows that this mortality table is a reasonably good fit to the experience.

The numbers of deaths at durations 0 and 1 have fallen to such low levels that it is difficult to draw conclusions.

Table ASS 2.1.2 shows, by age group and for each quadrennium going back to 1975-1978, percentage ratios of actual deaths to those that would be expected using the AFC00 table as a comparison basis.

Overall observed mortality over the eight quadrennia shown continues to improve, however the rate of improvement has slowed in more recent quadrennia. Mortality in 2003-2006 was a little under two-thirds of the level observed in 1975-1978 (compared with a little under half for males over the same period). Improvements are generally greater below age 65 than they are above that age.

Comparing table ASS 2.1.2 with table ASS 1.1.2, it can be seen that female mortality has not improved as quickly as male mortality. This feature is particularly apparent over the last three quadrennia.

1.2.2 Unit-linked assurances on single lives, standard medical evidence

The experience for 2003-2006 is shown in Table ASS 2.2.1. At durations 2 and over the overall level of mortality observed is similar to that of the non-linked experience, as was also the case in 1999-2002. The heavier mortality seen in 1995-1998 is no longer apparent. However the pattern across age groups differs.

At durations 0 and 1 there is too little data for meaningful conclusions to be drawn.

1.2.3 Joint life assurances, standard medical evidence

As was noted in Section 1.1.3, the commentary on the corresponding experience of male lives, the policies included in this investigation are those where payment is made on the occurrence of the first death only and are restricted to policies set up with one male and one female life.

The experience for 2003-2006 is shown in Table ASS 2.3.1. At durations 2 and over the overall mortality observed has fallen over each of the last two quadrennia, though the pattern by age is mixed. In the three quadrennia shown, mortality is well below that observed in both the linked and the non-linked single life investigations.

At durations 0 and 1 the joint life experience has almost always been well below that of the corresponding single life experiences. However, data volumes are very low so it is difficult to draw firm conclusions.

1.2.4 Assurances on single lives, based on minimum medical evidence The experience for this group is shown in Table ASS 2.4.1.

At durations 2 and over the level of mortality recorded in the minimum evidence experience for 2003-2006 is, for all age groups, above that found in the standard experience. This would logically be expected and the same feature is observed in the other quadrennia shown. The experience has also worsened a little since 1999-2002, though not to the same extent as the deterioration between 1995-1998 and 1999-2002 that was observed in *C.M.I.R.* 21.

At durations 0 and 1 the mortality experience is much heavier than the AFC00 and AF92 tables.

1.2.5 Assurances on joint lives first death, based on minimum medical evidence The experience is shown in Table ASS 2.5.1.

At durations 2 and over the joint life experience is lighter than the corresponding single life experience. This is true for ages between 40 and 65. Mortality has improved since the last quadrennium to an overall level similar to that of the standard medical joint life experience.

There were no deaths recorded at durations 0 and 1, as in the corresponding male experience.

1.2.6 Guaranteed acceptance assurances issued on single lives

As was noted for the male experience in Section 1.1.6, there were substantial changes in the data submitted to this investigation in 1999-2002. Care is therefore required when comparing with quadrennia prior to that.

The ratio of actual to expected deaths in 2003-2006 has improved significantly at all age groups for duration 0 compared with the previous quadrennium. Similar improvements are also seen for duration 1 and for durations 2 and over at all except the highest ages.

For ages above 50, the level of mortality observed in 2003-2006 is well above that recorded in both the fully medically underwritten and the minimum evidence investigations.

1.3 CONCLUSION

The reports on the permanent assurance investigations cover a wide range of experiences. Each has its own peculiarities and, from time to time, it is suggested that an investigation be closed or certain investigations be amalgamated. However, with the exception of one or two very small investigations, each provides useful information on a particular facet of the insurance market. The CMI hopes that this continues to be of value to those involved in the day-to-day operation of the business.

Table ASS 0.1. Permanent (whole life and endowment) assurances, combined, all durations: exposed to risk and deaths.

	2003-2	2006	1999-2002		
Investigation	Exposed to risk (000)	Actual deaths	Exposed to risk (000)	Actual deaths	
Males, UK					
Non-linked, standard evidence	3,953	26,568	8,316	43,155	
Linked, standard evidence	1,311	5,842	1,764	7,321	
Joint life first death, standard evidence	1,219	3,148	2,324	5,111	
Minimum evidence	2,489	27,877	2,903	24,986	
Joint life first death, minimum evidence	1,251	3,367	1,750	3,524	
Guaranteed acceptance business	1,489	61,516	1,033	41,240	
Total	11,712	128,318	18,090	125,337	
Females, UK					
Non-linked, standard evidence	2,040	9,847	4,393	14,357	
Linked, standard evidence	897	3,413	1,263	4,470	
Joint life first death, standard evidence	1,204	1,668	2,304	2,665	
Minimum evidence	2,224	19,148	1,981	13,473	
Joint life first death, minimum evidence	1,251	1,718	1,751	2,101	
Guaranteed acceptance business	1,707	45,850	1,078	26,601	
Total	9,323	81,644	12,770	63,667	

	1995-	1998	1991-1994		
Investigation	Exposed to risk (000)	Actual deaths	Exposed to risk (000)	Actual deaths	
Males, UK					
Non-linked, standard evidence	11,394	51,487	15,191	64,536	
Linked, standard evidence	1,624	5,889	1,771	7,184	
Joint life first death, standard evidence	3,019	5,303	2,810	4,292	
Minimum evidence	2,096	4,101	2,126	2,920	
Joint life first death, minimum evidence	2,023	3,142	1,664	1,877	
Guaranteed acceptance business	136	1,125	177	431	
Total	20,292	71,047	23,739	81,240	
Females, UK					
Non-linked, standard evidence	5,208	12,956	5,587	12,047	
Linked, standard evidence	1,155	3,011	1,077	2,964	
Joint life first death, standard evidence	2,994	2,883	2,766	2,139	
Minimum evidence	765	1,147	665	612	
Joint life first death, minimum evidence	2,021	1,687	1,657	999	
Guaranteed acceptance business	61	467	60	100	
Total	12,204	22,151	11,812	18,861	

Table ASS 1.0. Permanent assurances, males, 2003-2006, combined, durations 2 and over: actual deaths as a percentage of those expected using the AMC00 table.

Age group (nearest ages)	Standard medical evidence			Minimum medical evidence			Guaranteed acceptance
	Non-linked	Linked	Joint life	Single life	Joint life		
26-30	101	98	=	69	-		
31-35	88	93	65	93	88*	}	99*
36-40	80	77	91	101	80	J	
41-45	85	79	95	93	93		55*
46-50	90	103	100	109	117		115
51-55	90	95	85	120	105		383
56-60	88	92	90	119	104		321
61-65	86	85	104	128	108		270
66-70	86	87	89	138	110		220

^{*} Ratio based on fewer than 10 actual deaths.

Table ASS 1.1.1. Permanent assurances (non-linked), males, 2003-2006, standard medical evidence, all data: actual deaths and ratios of actual deaths to those expected using the AMC00 table, together with comparisons of 1999-2002 using the AMC00 table and 2003-2006, 1999-2002 and 1995-1998 using the AM92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using AMC00)	100A/E 2003-2006 (using AM92)	100A/E 1999-2002 (using AMC00)	100A/E 1999-2002 (using AM92)	100A/E 1995-1998 (using AM92)
Duration 0						
All ages	19	169	138	101	79	98
Duration 1						
All ages	13	82	66	100	81	92
Durations 2+						
16-25	10	113	93	147	122	110
26-30	26	101	89	92	81	90
31-35	80	88	80	96	87	91
36-40	186	80	71	97	87	94
41-45	381	85	72	105	89	94
46-50	731	90	72	101	81	91
51-55	1,532	90	69	100	77	90
56-60	3,191	88	67	103	78	89
61-65	3,324	86	65	97	74	88
66-70	2,268	86	67	98	75	91
71-75	2,947	87	69	100	79	92
76-80	3,583	92	75	101	83	92
81-85	3,867	94	80	104	88	96
86-90	2,643	91	80	97	85	95
91-95	1,399	72	66	77	70	83
16-95	26,168	88	71	99	79	91

Table ASS 1.1.2. Permanent assurances (non-linked), males, single life, standard medical evidence, all data, durations 2 and over: actual deaths 1959-2006 as a percentage of those expected using the AMC00 table.

A go group	Quadrennium						
Age group (nearest ages)	1959-1962	1963-1966	1967-1970	1971-1974	1975-1978	1979-1982	
21-25	210	181	170	152	142	146	
26-30	139	145	129	132	115	111	
31-35	149	143	127	121	115	110	
36-40	176	176	158	150	145	127	
41-45	214	219	205	187	173	157	
46-50	244	244	239	224	201	184	
51-55	264	258	246	236	222	202	
56-60	266	258	244	224	208	198	
61-65	259	256	233	216	203	189	
66-70	228	226	214	196	183	169	
71-75	203	205	202	192	177	167	
76-80	196	189	180	176	174	163	
81-85	181	172	164	161	154	151	
86-90	165	162	149	149	145	131	
91-95	148	141	130	123	131	114	
96-100	119	104	114	104	92	67	
All ages ⁺	234	228	216	202	189	177	
No. of deaths ⁺	91,297	96,973	94,271	93,008	91,884	90,941	

A go group	Quadrennium					
Age group (nearest ages)	1983-1986	1987-1990	1991-1994	1995-1998	1999-2002	2003-2006
21-25	125	136	129	136	135	106
26-30	115	100	104	102	92	101
31-35	108	112	116	100	96	88
36-40	121	112	118	105	97	80
41-45	142	128	117	111	105	85
46-50	167	147	126	113	101	90
51-55	172	148	130	117	100	90
56-60	176	150	128	118	103	88
61-65	178	155	136	115	97	86
66-70	155	140	129	119	98	86
71-75	145	137	127	116	100	87
76-80	145	134	122	112	101	92
81-85	141	128	122	113	104	94
86-90	128	117	112	108	97	91
91-95	109	96	100	91	77	72
96-100	70	57	44	47	32	34
All ages ⁺	159	142	126	113	98	86
No. of deaths ⁺	88,442	75,095	61,806	50,069	42,644	26,536

⁺ Figures contain a small number of deaths recorded at ages under 21 or over 100.

Table ASS 1.2.1. Linked contracts of life assurance, males, 2003-2006, standard medical evidence, all data: actual deaths and ratios of actual deaths to those expected using the AMC00 table, together with comparisons of 1999-2002 using the AMC00 table and 2003-2006, 1999-2002 and 1995-1998 using the AM92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using AMC00)	100A/E 2003-2006 (using AM92)	100A/E 1999-2002 (using AMC00)	100A/E 1999-2002 (using AM92)	100A/E 1995-1998 (using AM92)
Duration 0						
21-35	6	152*	109*	140	100	79
36-50	16	88	70	100	79	41
51-65	28	88	68	99	77	99
66-80	17	60	49	73	60	47*
81-95	11	90	92	94	95	380*
21-95	78	83	67	91	74	71
Duration 1						
21-35	5	97*	80*	92	76	82
36-50	17	71	62	95	83	80
51-65	34	78	59	87	66	99
66-80	38	108	89	84	70	84
81-95	23	160	189	94	108	236*
21-95	117	96	80	88	75	89
Durations 2+						
16-25	6	161*	132*	150	123	101
26-30	10	98	87	47	42	86
31-35	38	93	84	107	97	83
36-40	82	77	68	90	81	111
41-45	144	79	67	107	91	132
46-50	290	103	82	126	101	119
51-55	463	95	73	107	82	121
56-60	768	92	69	110	83	114
61-65	729	85	64	106	81	106
66-70	706	87	67	101	78	100
71-75	712	84	66	86	68	94
76-80	659	79	65	88	72	83
81-85	594	89	75	101	85	94
86-90	308	93	81	104	91	71
91-95	123	101	92	105	96	90
16-95	5,632	88	70	101	80	106

^{*} Ratio based on fewer than 10 actual deaths.

Table ASS 1.3.1. Joint life first death assurances, males, 2003-2006, standard medical evidence, all data: actual deaths and ratios of actual deaths to those expected using the AMC00 table, together with comparisons of 1999-2002 using the AMC00 table and 2003-2006, 1999-2002 and 1995-1998 using the AM92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using AMC00)	100A/E 2003-2006 (using AM92)	100A/E 1999-2002 (using AMC00)	100A/E 1999-2002 (using AM92)	100A/E 1995-1998 (using AM92)
Duration 0						
All ages	18	43	33	74	58	59
Duration 1						
All ages	29	59	49	78	64	65
Durations 2+						
21-35	16	55	50	90	81	70
36-40	70	91	81	86	76	78
41-45	197	95	80	87	74	85
46-50	393	100	80	99	79	86
51-55	488	85	65	110	85	90
56-60	674	90	68	102	77	93
61-65	637	104	79	100	76	92
66-70	350	89	68	112	86	83
71-75	187	96	76	105	83	71
76-80	46	71	58	103	84	76
21-80	3,058	93	72	101	80	87

Table ASS 1.4.1. Minimum evidence assurances written on one life only, males, 2003-2006, all data: actual deaths and ratios of actual deaths to those expected using the AMC00 table, together with comparisons of 1999-2002 using the AMC00 table and 2003-2006, 1999-2001 and 1995-1998 using the AM92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using AMC00)	100A/E 2003-2006 (using AM92)	100A/E 1999-2002 (using AMC00)	100A/E 1999-2002 (using AM92)	100A/E 1995-1998 (using AM92)
Duration 0						
21-35	14	143	102	80	56	
36-40	12	149	117	120	94	
41-45	19	177	141	122	97	
46-50	11	81	64	98	77	
51-55	29	190	148	127	100	
56-60	42	257	199	153	118	
61-65	52	229	175	195	149	
66-70	54	222	170	1	1	
71-75	47	181	146	} 131	} 102	
21-75	280	191	148	126	97	77*
Duration 1						
21-35	13	97	79	99	81	
36-40	11	97	88	113	103	
41-45	11	70	62	89	79	
46-50	24	118	98	143	118	
51-55	44	178	141	135	107	
56-60	54	218	166	166	126	
61-65	65	216	160	167	124	
66-70	55	164	124))	
71-75	57	176	144	} 153	} 117	
21-75	334	162	129	132	107	127
Durations 2+						
21-30	25	78	68	89	79	89
31-35	70	93	85	85	77	87
36-40	236	101	90	96	86	103
41-45	424	93	79	117	99	117
46-50	614	109	87	127	102	105
51-55	894	120	92	124	96	100
56-60	1,202	119	90	122	92	97
61-65	1,083	128	97	145	110	92
66-70	1,126	138	106	148	114	96
71-75	1,993	128	101	140	111	108
76-80	4,021	119	97	125	102	105
81-85	6,474	111	94	116	98	103
86-90	5,643	109	96	113	100	111
91-95	2,968	108	99	99	90	
21-95	26,773	114	96	121	100	101

^{*} Ratio based on fewer than 10 actual deaths.

Table ASS 1.5.1. Minimum evidence assurances written on one male life and one female life, males, 2003-2006, all data: actual deaths and ratios of actual deaths to those expected using the AMC00 table, together with comparisons of 1999-2002 using the AMC00 table and 2003-2006, 1999-2002 and 1995-1998 using the AM92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using AMC00)	100A/E 2003-2006 (using AM92)	100A/E 1999-2002 (using AMC00)	100A/E 1999-2002 (using AM92)	100A/E 1995-1998 (using AM92)
Duration 0 All ages	-	-	-	0*	0*	141*
Duration 1 All ages	-	-	-	0*	0*	86
Durations 2+						
31-35	7	88*	80*	84	76	87
36-40	66	80	71	93	83	81
41-45	250	93	79	94	80	98
46-50	541	117	94	101	81	98
51-55	717	105	81	112	87	104
56-60	934	104	78	117	89	96
61-65	665	108	82	109	83	84
66-70 71-75	159 21	110 131	85 104	} 112	} 87	} 111
31-75	3,360	106	82	107	84	96

^{*} Ratio based on fewer than 10 actual deaths.

Table ASS 1.6.1. Guaranteed acceptance assurances, males, 2003-2006, all data: actual deaths and ratios of actual deaths to those expected using the AMC00 table, together with comparisons of 1999-2002 using the AMC00 table and 2003-2006, 1999-2002 and 1995-1998 using the AM92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using AMC00)	100A/E 2003-2006 (using AM92)	100A/E 1999-2002 (using AMC00)	100A/E 1999-2002 (using AM92)	100A/E 1995-1998 (using AM92)
Duration 0						
51-55	252	451	353	613	480)
56-60	442	392	302	448	346	} 436
61-65	577	292	223	355	271	295
66-70	781	242	186	295	227	222
71-75	714	196	157	237	191	176
76-80	614	149	134	184	166	193
81-85	91	129	126	140	137	129*
51-85	3,471	226	185	265	219	207
Duration 1						
51-55	230	463	364	475	373)
56-60	398	345	261	386	292	} 333*
61-65	569	261	194	329	244	263
66-70	889	218	165	253	191	164
71-75	862	183	150	197	161	119
76-80	798	145	137	165	157	113
81-85	298	130	140	116	125	94*
51-85	4,044	198	167	217	185	138
Durations 2+						
41-45	9	55*	46*	80	68	112
46-50	32	115	92	109	87	87
51-55	435	383	294	366	281	89
56-60	2,011	321	243	342	259	120
61-65	4,078	270	205	288	219	111
66-70	7,260	220	170	243	187	155
71-75	10,162	179	142	197	156	139
76-80	12,041	153	125	165	135	117
81-85	12,090	134	113	136	115	103
86-90	5,091	122	107	129	113	-
91-95	769	113	103	131	118	-
41-95	53,978	164	134	179	146	117

^{*} Ratio based on fewer than 10 actual deaths.

Table ASS 2.0. Permanent assurances, females, 2003-2006, combined, durations 2 and over: actual deaths as a percentage of those expected using the AFC00 table.

Age group	Sta	ndard medical evidence	I	Minimum medical evidence			Guaranteed acceptance
(nearest ages) Non-linked	Non-linked	Linked	Joint life	Single life	Joint life	_	
26-30	60*	44*	=	163	105		-
31-35	66	104	35*	91 }	125		_
36-40	84	88	85	99	96	_	
41-45	102	100	92	118	84	ļ	55
46-50	109	93	101	122	84	J	
51-55	100	104	76	118	89		299
56-60	94	104	81	115	90		278
61-65	87	87	77	120	74		232
66-70	90	77	81	138	95		202

^{*} Ratio based on fewer than 10 actual deaths.

Table ASS 2.1.1. Permanent assurances (non-linked), females, 2003-2006, standard medical evidence, all data: actual deaths and ratios of actual deaths to those expected using the AFC00 table, together with comparisons of 1999-2002 using the AFC00 table and 2003-2006, 1999-2002 and 1995-1998 using the AF92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using AFC00)	100A/E 2003-2006 (using AF92)	100A/E 1999-2002 (using AFC00)	100A/E 1999-2002 (using AF92)	100A/E 1995-1998 (using AF92)
Duration 0						
All ages	6	128*	106*	99	84	121
Duration 1						
All ages	14	112	118	102	112	113
Durations 2+						
16-30	9	59*	54*	101	92	82
31-35	29	66	55	90	76	85
36-40	98	84	69	91	74	91
41-45	226	102	82	107	87	92
46-50	391	109	89	114	93	96
51-55	621	100	84	107	90	94
56-60	949	94	81	100	86	90
61-65	783	87	77	91	82	89
66-70	859	90	84	93	87	87
71-75	1,125	95	93	103	100	95
76-80	1,317	98	99	101	102	103
81-85	1,475	100	106	101	107	112
86-90	1,037	99	109	105	115	114
91-95	717	99	114	106	121	110
16-95	9,636	96	93	101	94	95

^{*} Ratio based on fewer than 10 actual deaths.

Table ASS 2.1.2. Permanent assurances (non-linked), females, single life, standard medical evidence, all data, durations 2 and over: actual deaths 1975-2006 as a percentage of those expected using the AFC00 table.

A as anoun (noonest		Quadrennium					
Age group (nearest - ages)	1975-1978	1979-1982	1983-1986	1987-1990			
21-25	137	120	111	109			
26-30	155	121	107	112			
31-35	139	126	113	119			
36-40	161	125	125	138			
41-45	186	142	139	144			
46-50	191	156	156	142			
51-55	173	165	136	127			
56-60	155	149	130	130			
61-65	146	129	129	115			
66-70	131	121	106	111			
71-75	137	120	104	102			
76-80	154	117	105	105			
81-85	144	159	130	108			
86-90	135	131	151	106			
91-95				89			
All ages ⁺	150	133	122	116			
No. of deaths ⁺	4,666	6,368	8,571	9,610			

A co amoun (nomest		Quadro	ennium	
Age group (nearest – ages_	1991-1994	1995-1998	1999-2002	2003-2006
21-25	91	66	59	35
26-30	100	99	109	60
31-35	117	101	90	66
36-40	127	112	91	84
41-45	129	113	107	102
46-50	131	118	114	109
51-55	120	112	107	100
56-60	114	105	100	94
61-65	105	99	91	87
66-70	100	93	93	90
71-75	105	98	103	95
76-80	97	102	101	98
81-85	101	106	101	100
86-90	91	104	105	99
91-95	91	96	106	99
All ages ⁺	106	101	100	96
No. of deaths ⁺	10,830	12,066	14,023	9,827

⁺ Figures contain a small number of deaths recorded at ages under 21 or over 95.

Table ASS 2.2.1. Linked contracts of life assurance, females, 2003-2006, standard medical evidence, all data: actual deaths and ratios of actual deaths to those expected using the AFC00 table, together with comparisons of 1999-2002 using the AFC00 table and 2003-2006, 1999-2002 and 1995-1998 using the AF92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using AFC00)	100A/E 2003-2006 (using AF92)	100A/E 1999-2002 (using AFC00)	100A/E 1999-2002 (using AF92)	100A/E 1995-1998 (using AF92)
Duration 0						
36-60	13	86	64	105	80	89
61-75	17	81	79	54	53	77*
76-90	48	138	159	108	123	161*
36-90	78	110	108	88	87	92
Duration 1						
36-60	26	101	94	96	90	159
61-75	32	106	131	65	81	115
76-90	95	209	320	95	144	102*
36-90	153	151	187	84	107	144
Durations 2+						
31-35	22	104	87	84	71	101
36-40	52	88	72	106	86	144
41-45	106	100	80	138	111	144
46-50	145	93	76	127	103	148
51-55	235	104	87	117	97	136
56-60	330	104	90	99	85	103
61-65	260	87	78	87	78	84
66-70	242	77	72	77	72	86
71-75	303	79	77	87	84	95
76-80	360	82	83	94	95	96
81-85	445	93	99	100	106	127
86-90	386	115	126	108	119	148
91-95	229	121	139	121	138	144
31-95	3,115	94	90	99	94	109

^{*} Ratio based on fewer than 10 actual deaths.

Table ASS 2.3.1. Joint life first death assurances, females, 2003-2006, standard medical evidence, all data: actual deaths and ratios of actual deaths to those expected using the AFC00 table, together with comparisons of 1999-2002 using the AFC00 table and 2003-2006, 1999-2002 and 1995-1998 using the AF92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using AFC00)	100A/E 2003-2006 (using AF92)	100A/E 1999-2002 (using AFC00)	100A/E 1999-2002 (using AF92)	100A/E 1995-1998 (using AF92)
Duration 0 All ages	16	109	71	83	56	51
Duration 1 All ages	14	60	52	53	47	91
Durations 2+						
31-35	7	35*	30*	86	72	84
36-40	61	85	69	78	64	85
41-45	174	92	74	85	68	84
46-50	309	101	82	94	76	87
51-55	296	76	64	105	87	86
56-60	347	81	69	87	75	77
61-65	211	77	69	95	85	90
66-70	136	81	75	86	80	92
71-75	64	93	90	91	88	62
76-80	24	107	108	64	65	27*
31-80	1,629	84	72	92	78	85

^{*} Ratio based on fewer than 10 actual deaths.

Table ASS 2.4.1. Minimum evidence assurances written on one life only, females, 2003-2006, all data: actual deaths and ratios of actual deaths to those expected using the AFC00 table, together with comparisons of 1999-2002 using the AFC00 table and 2003-2006, 1999-2001 and 1995-1998 using the AF92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using AFC00)	100A/E 2003-2006 (using AF92)	100A/E 1999-2002 (using AFC00)	100A/E 1999-2002 (using AF92)	100A/E 1995-1998 (using AF92)
Duration 0						
21-35	14	347	163	247	115	
36-40	11	270	152	187	105	
41-45	9	144*	92*	125	80	
46-50	13	155	111	125	90	
51-55	23	267	210	147	115	
56-60	17	177	152	118	101	
61-65	32	217	200	104	96	
66-70	26	190	186			
71-75	26	174	180	} 95*	} 98*	
76-80	26	185	204	,	,	
21-80	197	200	169	138	100	72*
Duration 1						
21-35	11	130	93	128	92	
36-40	20	238	181	89	67	
41-45	18	140	115	97	79	
46-50	22	126	112	134	120	
51-55	30	160	155	129	124	
56-60	40	227	239	62	65*	
61-65	40	161	184	66	76	
66-70	49	217	266	1)	
71-75	38	173	230	} 60*	} 76*	
76-80	33	144	207			
21-80	301	171	180	102	93	139*
Durations 2+						
21-30	35	139	126	108	97	103
31-35	55	91	77	108	91	88
36-40	138	99	80	100	82	103
41-45	292	118	96	133	108	107
46-50	422	122	99	125	102	99
51-55	574	118	98	119	99	100
56-60 61-65	632	115	99 107	108	93	83
61-65 66-70	491 813	120 138	107 129	126 134	112 125	97 97
71-75	1,432	138 124	129	134	125	97 95
71-73 76-80	2,671	116	118	112	114	110
81-85	4,286	119	126	111	117	143
86-90	3,809	113	124	108	117	94
91-95	2,543	111	127	112	128) T
						100
21-95 * Ratio based on	18,193	117	119	115	116	100

^{*} Ratio based on fewer than 10 actual deaths.

Table ASS 2.5.1. Minimum evidence assurances written on one male life and one female life, females, 2003-2006, all data: actual deaths and ratios of actual deaths to those expected using the AFC00 table, together with comparisons of 1999-2002 using the AFC00 table and 2003-2006, 1999-2002 and 1995-1998 using the AF92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using AFC00)	100A/E 2003-2006 (using AF92)	100A/E 1999-2002 (using AFC00)	100A/E 1999-2002 (using AF92)	100A/E 1995-1998 (using AF92)
Duration 0 All ages	-	-	-	0*	0*	97*
Duration 1 All ages	-	-	-	0*	0*	28*
Durations 2+						
31-35	13	118	99	94	79	67
36-40	85	96	78	103	84	88
41-45	200	84	68	97	79	80
46-50	301	84	68	112	91	85
51-55	418	89	74	108	90	90
56-60	459	90	77	98	84	83
61-65	185	74	66	76	68	107
66-70	52	95	88	115	107	70*
31-70	1,713	86	73	102	85	84

^{*} Ratio based on fewer than 10 actual deaths.

Table 2.6.1. Guaranteed acceptance assurances, females, 2003-2006, all data: actual deaths and ratios of actual deaths to those expected using the AFC00 table, together with comparisons of 1999-2002 using the AFC00 table and 2003-2006, 1999-2002 and 1995-1998 using the AF92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using AFC00)	100A/E 2003-2006 (using AF92)	100A/E 1999-2002 (using AFC00)	100A/E 1999-2002 (using AF92)	100A/E 1995-1998 (using AF92)
Duration 0						
51-55	198	504	399	559	443	
56-60	301	384	331	468	404	} 313
61-65	365	286	264	330	305	j 313
66-70	424	245	240	300	295	212
71-75	438	201	209	251	261	211
76-80	384	167	184	188	208)
81-85	56	154	176	173	198	} 179
51-85	2,166	240	239	273	276	215
Duration 1						
51-55	171	377	369	476	466	
56-60	306	302	320	349	369	} 263
61-65	451	250	286	268	307	j 203
66-70	535	215	266	244	301	314
71-75	589	180	240	183	243	228
76-80	547	149	214	148	213	1
81-85	193	138	209	111	168	} 123
51-85	2,792	198	255	202	263	206
Durations 2+						
36-50	15	55	45	73	60	136
51-55	308	299	251	328	275	115
56-60	1,713	278	240	303	261	138
61-65	3,288	232	208	238	213	150
66-70	5,198	202	188	214	199	144
71-75	6,971	176	171	183	178	126
76-80	8,599	153	156	152	155	93
81-85	9,422	133	141	132	139	85
86-90	4,534	121	133	124	136	-
91-95	837	114	130	112	127	-
36-95	40,885	158	160	166	166	118

2 THE MORTALITY OF HOLDERS OF TEMPORARY ASSURANCES ISSUED IN THE UNITED KINGDOM, 2003-2006

This report contains commentaries on the mortality experiences of holders of traditional, standalone temporary assurance policies for both males and females. It includes brief reports on the mortality of holders of temporary assurance policies effected in conjunction with personal pension policies under Section 637(1) of the ICTA 1988.

The exposed to risk and deaths over the last four quadrennia are shown for each sub-group in Table TEMP 0.1. This, and subsequent tables relating to the text, will be found on pp 25 to 29. The effect of smoking on mortality for this class of business is covered in a separate report on pp 70 to 103.

It can be seen from Table TEMP 0.1 that, in contrast to the permanent assurance investigations, data volumes have remained relatively stable over recent quadrennia.

2.1 TEMPORARY ASSURANCES ON MALE LIVES

2.1.1 Traditional standalone policies written on standard medical evidence

The policies included in this group are those issued after a full medical examination and those issued after the completion of a comprehensive medical questionnaire, with or without a medical attendant's report. The analyses for this group are shown in table TEMP 1.1.1. For 2003-2006 and 1999-2002 the comparison bases are the TMC00 and the TM92 tables. The results for 1995-1998 are given using the TM92 table only as the comparison basis.

Looking at the duration 0 experience detailed in TEMP 1.1.1, overall there has been a significant improvement in the level of mortality recorded over the three quadrennia shown. This feature is also apparent when considering each age group individually, and the experience now exhibits mortality at about two-thirds of the level of the TMC00 table.

At durations 1 to 4 there has been an improvement in the mortality recorded in 2003-2006 at all ages. The deterioration in mortality at ages 31-40 noted in *C.M.I.R.* **21** for the preceding quadrennium is not apparent in 2003-2006. The overall fall in the value of 100A/E between 1999-2002 and 2003-2006 is of broadly similar magnitude to the value of the fall seen between 1995-1998 and 1999-2002. As noted at duration 0, the experience in 2003-2006 exhibited significantly lighter mortality than the relevant "00" Series table, being about three-quarters of the level of the TMC00 table.

At durations 5 and over there has also been an improvement in mortality at nearly all ages over the three quadrennia shown. Higher mortality was recorded in 2003-2006 than in 1999-2002 for ages above 75 and, to a lesser extent, below 35. Again, the overall fall in the value of 100A/E between 1999-2002 and 2003-2006 was similar to the value of the fall seen between 1995-1998 and 1999-2002. The overall mortality recorded in 2003-2006 is lighter than the TMC00 table, though not to the same extent as that observed at shorter durations.

The comparison bases used in table TEMP 1.1.2 are AMC00 and AM92 for 2003-2006 and AM92 for 1999-2002. From this table it can be seen that at durations 0 and 1 temporary assurance mortality experience is well below that of standard evidence permanent assurances.

At durations 2 and over, the temporary assurance 100A/E ratios are below those for the permanent assurance experience at all ages except for 76-80 in 2003-2006. The differences are greatest for ages below 40 and also for the 66-70 age group. A similar feature was observed in the 1999-2002 experience, as reported in *C.M.I.R.* 21.

2.1.2 Assurances effected in conjunction with personal pensions under Section 637(1) of the ICTA 1988

The experience is shown in table TEMP 1.2.1. For duration 0 and durations 1 to 4 the total number of deaths is too small to allow firm conclusions to be drawn. At durations 5 and over the experience continues to exhibit lower mortality than that of the standalone category, though the pattern by age group is a little more mixed than in previous quadrennia.

2.2 TEMPORARY ASSURANCES ON FEMALE LIVES

2.2.1 Traditional standalone policies written on standard medical evidence The experience is shown in table TEMP 2.1.1.

At duration 0 a consistent overall improvement in the level of mortality experienced has been recorded. However, the number of deaths is small and too much should not be read into this.

At durations 1 to 4 the 2003-2006 experience shows an improvement in mortality in all age groups above 30 and below 70. The experience is lighter than the TFC00 mortality at all age groups and overall is about three-quarters of the level of that table.

At durations 5 and over there has been an improvement in mortality over the three quadrennia for ages below 70. The overall improvement has slowed somewhat in 2003-2006, though this reflects improvements below age 70 being offset by deteriorations above this age. Between ages 40 and 65 (where most of the deaths are recorded), the 2003-2006 experience follows a similar pattern to the TFC00 table but the actual number of deaths recorded is some 10% lower than expected from this table. At younger ages the experience is significantly lower than this level and above age 65 it is significantly higher – higher in fact than the TFC00 table.

Table TEMP 2.1.2 compares the experience of the temporary assurance data with that of the permanent assurances. As for males, at durations 0 and 1 the temporary assurance mortality experience is well below that of standard evidence permanent assurances.

At durations 2 and over the temporary assurance mortality experience is lower at ages above 25 and below 70, and overall the experience is significantly lower.

2.2.2 Assurances effected in conjunction with personal pensions under Section 637(1) of the ICTA 1988

The experience is shown in table TEMP 2.2.1. The number of deaths is too small for any significant conclusions to be drawn. However for durations 5 and over it can be noted that the overall experience recorded was lower than that of the TFC00 table and, as with the male experience, was lower than that of the standalone category.

Table TEMP 0.1. Temporary assurances, combined, all durations: exposed to risk and deaths.

	2003-2	1999-2002		
Investigation	Exposed to risk (000)	Actual deaths	Exposed to risk (000)	Actual deaths
Males, UK				
Temporary assurances	3,569	5,477	3,289	6,564
Temporary assurances –	415	875	712	1,224
637(1) of ICTA 1988				
Total	3,984	6,352	4,001	7,788
Females, UK				
Temporary assurances	3,024	2,620	2,555	2,616
Temporary assurances –	116	148	216	205
637(1) of ICTA 1988				
Total	3,140	2,768	2,771	2,821

	1995-	1991-1994		
Investigation	Exposed to risk (000)	Actual deaths	Exposed to risk (000)	Actual deaths
Males, UK				
Temporary assurances	3,099	6,654	3,901	8,664
Temporary assurances – 637(1) of ICTA 1988	495	550	253	275
Total	3,594	7,204	4,155	8,939
Females, UK				
Temporary assurances	1,970	2,020	1,940	1,928
Temporary assurances – 637(1) of ICTA 1988	167	124	88	39
Total	2,138	2,144	2,028	1,967

Table TEMP 1.1.1. Temporary assurances, males, 2003-2006, all data: actual deaths and ratios of actual deaths to those expected using the TMC00 table, together with comparisons of 1999-2002 using the TMC00 table and 2003-2006, 1999-2002 and 1995-1998 using the TM92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using TMC00)	100A/E 2003-2006 (using TM92)	100A/E 1999-2002 (using TMC00)	100A/E 1999-2002 (using TM92)	100A/E 1995-1998 (using TM92)
Duration 0						
16-30	12	62	25	115	47	70
31-45	97	77	44	88	50	77
46-60	120	66	36	105	57	57
61-75	39	66	33	97	48	77
16-75	268	70	37	99	53	67
Durations 1-4						
21-30	41	85	44	106	58	70
31-35	82	81	53	105	69	58
36-40	138	77	54	104	74	67
41-45	185	75	52	91	64	84
46-50	210	75	51	93	63	87
51-55	265	81	53	105	70	81
56-60	253	66	43	109	72	84
61-65	168	68	45	94	62	82
66-70	119	72	48	90	59	92
71-75	91	80	55	107	72	110
76-80	57	80	61	95	67	84
21-80	1,609	74	50	100	67	82
Durations 5+						
26-35	40	90	80	90	79	76
36-40	73	66	61	89	83	86
41-45	178	83	74	94	83	92
46-50	339	92	76	102	84	82
51-55	492	84	67	97	77	93
56-60	771	84	66	100	78	85
61-65	589	84	66	100	79	85
66-70	271	79	63	92	73	88
71-75	299	89	72	107	87	108
76-80	382	111	91	107	88	96
81-85	119	95	78	80	66	69
26-85	3,553	87	70	99	79	88

Table TEMP 1.1.2. Temporary assurances, males, 2003-2006, all data: comparison of temporary assurance mortality with that for permanent assurances using the AMC00 tables for both data sets, together with the 2003-2006 and 1999-2002 equivalents using the AM92 table.

	2003-2006 100A/E (AMC00)		2003-2006 100A/E (AM92)		1999-2002 100A/E (AM92)	
Age group (nearest ages)	Temporary	Permanent	Temporary	Permanent	Temporary	Permanent
Duration 0						
21-80	42	144	33	114	46	79
Duration 1						
21-80	46	85	37	68	47	81
Durations 2+						
21-25	76*	106*	63*	89*	49*	112
26-30	48	101	42	89	71	81
31-35	67	88	60	80	75	87
36-40	60	80	53	71	77	87
41-45	72	85	61	72	75	89
46-50	79	90	63	72	77	81
51-55	76	90	59	69	73	77
56-60	73	88	56	67	73	78
61-65	75	86	57	65	71	74
66-70	66	86	51	67	63	75
71-75	77	87	61	69	77	79
76-80	97	92	80	75	78	83
21-80	75	88	59	69	73	78

^{*} Ratio based on fewer than 10 actual deaths.

Table TEMP 1.2.1. Temporary assurances effected under section 637(1) of the ICTA 1988 (i.e. in conjunction with personal pensions), males, 2003-2006, all data: actual deaths and ratios of actual deaths to those expected using the TMC00 table, together with comparisons of 1999-2002 using the TMC00 table and 2003-2006, 1999-2002 and 1995-1998 using the TM92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using TMC00)	100A/E 2003-2006 (using TM92)	100A/E 1999-2002 (using TMC00)	100A/E 1999-2002 (using TM92)	100A/E 1995-1998 (using TM92)
Duration 0	2	212*	11 <i>5</i> \	140	00	70
All ages	2	212*	115*	149	80	72
Durations 1-4						
All ages	31	91	68	115	80	84
Durations 5+						
21-35	14	157	140	65	58	69
36-40	20	68	63	77	71	77
41-45	57	83	73	92	81	57
46-50	100	80	66	103	85	76
51-55	194	93	74	93	74	59
56-60	278	88	68	96	75	70
61-65	152	68	53	90	71	60
66-70	21	59	47	54	43	75*
21-70	836	82	66	92	74	67

^{*} Ratio based on fewer than 10 actual deaths.

Table TEMP 2.1.1. Temporary assurances, females, 2003-2006, all data: actual deaths and ratios of actual deaths to those expected using the TFC00 table, together with comparisons of 1999-2002 using the TFC00 table and 2003-2006, 1999-2002 and 1995-1998 using the TF92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using TFC00)	100A/E 2003-2006 (using TF92)	100A/E 1999-2002 (using TFC00)	100A/E 1999-2002 (using TF92)	100A/E 1995-1998 (using TF92)
Duration 0						
All ages	97	57	44	93	71	84
Durations 1-4						
21-30	16	91	37	73	31	55
31-35	39	91	41	109	52	54
36-40	65	72	38	94	50	73
41-45	87	65	38	94	57	72
46-50	109	71	47	103	71	93
51-55	103	65	47	95	71	95
56-60	100	77	59	110	87	87
61-65	52	74	58	137	110	102
66-70	34	81	60	110	83	117
71-75	21	81	58	79	57	93
76-80	21	89	67	40*	30*	66
21-80	647	73	47	100	66	83
Durations 5+						
26-35	22	62	50	73	59	93
36-40	71	71	58	105	86	87
41-45	185	93	78	105	88	81
46-50	263	94	81	99	85	95
51-55	266	85	75	93	82	100
56-60	254	85	77	97	88	102
61-65	135	88	81	87	81	107
66-70	101	102	98	110	105	123
71-75	178	122	120	113	111	94
76-80	273	119	119	96	95	111
81-85	93	112	114	74	75	41*
26-85	1,841	95	86	99	88	96

^{*} Ratio based on fewer than 10 actual deaths.

Table TEMP 2.1.2. Temporary assurances, females, 2003-2006, all data: comparison of temporary assurance mortality with that for permanent assurances using the AFC00 tables for both data sets, together with the 2003-2006 and 1999-2002 equivalents using the AF92 table.

	2003-2006 100A/E (AFC00)		2003-2006 100A/E (AF92)		1999-2002 100A/E (AF92)	
Age group (nearest ages)	Temporary	Permanent	Temporary	Permanent	Temporary	Permanent
Duration 0						
21-80	50	118*	35	95*	57	82
Duration 1						
21-80	51	121	46	124	62	110
Durations 2+						
21-25	58*	35*	56*	33*	_	57*
26-30	24*	60*	21*	54*	23*	97
31-35	55	66	47	55	58	76
36-40	58	84	47	69	75	74
41-45	72	102	58	82	77	87
46-50	79	109	64	89	78	93
51-55	75	100	62	84	76	90
56-60	79	94	68	81	84	86
61-65	81	87	72	77	81	82
66-70	89	90	83	84	100	87
71-75	111	95	108	93	104	100
76-80	111	98	113	99	83	102
21-80	80	95	69	86	80	90

^{*} Ratio based on fewer than 10 actual deaths.

Table TEMP 2.2.1. Temporary assurances effected under section 637(1) of the ICTA 1988 (i.e. in conjunction with personal pensions), females, 2003-2006, all data: actual deaths and ratios of actual deaths to those expected using the TFC00 table, together with comparisons of 1999-2002 using the TFC00 table and 2003-2006, 1999-2002 and 1995-1998 using the TF92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using TFC00)	100A/E 2003-2006 (using TF92)	100A/E 1999-2002 (using TFC00)	100A/E 1999-2002 (using TF92)	100A/E 1995-1998 (using TF92)
Duration 0 All ages	0	0*	0*	57*	46*	114
Durations 1-4 All ages	12	164	122	122	83	107
Durations 5+ All ages	136	85	75	94	82	72

^{*} Ratio based on fewer than 10 actual deaths.

3 THE MORTALITY OF IMMEDIATE ANNUITANTS, HOLDERS OF RETIREMENT ANNUITY POLICIES, AND HOLDERS OF PERSONAL PENSION PLANS 2003-2006

The first part of this report contains analyses of the mortality of immediate annuitants over the quadrennium 2003-2006. This is followed by commentaries on the experience of holders of retirement annuity contracts now written under Chapter III of Part XIV of the ICTA 1988 and of personal pension policies issued under Chapter IV of Part XIV of the same Act. The final part of the report, on pp 35 to 49, contains all the tables referred to in the earlier parts.

Table ANN 0.1 shows the development of these investigations over recent quadrennia for all ages and durations combined. It should be noted that the number of offices contributing data over this period has not been stable as offices join and leave the investigations. For example, of the nineteen offices that have contributed to the immediate annuitant investigation at some point over the twelve years from 1995 to 2006, only four have contributed data for the entire period. Similar patterns are apparent from the other investigations in this section.

In 2003-2006 there was a fall in the number of offices contributing to all of these investigations compared with earlier quadrennia, which may in part be due to consolidation in the life industry. This continued the decline for the immediate and retirement annuitants in deferment and reversed the increasing trend for the personal pension investigations that had been noted in *C.M.I.R.* 21.

The size of the in payment personal pensions investigation is growing rapidly despite the fall in the number of contributing offices and has now overtaken that of the retirement annuitants in payment even though that too has grown. Measured by amount of exposed to risk, it is now significantly larger than the immediate annuitant investigation – about thirty-five times for males. The in deferment section, although reduced from the previous quadrennium, is now more than 50% greater than the permanent assurances investigation.

3.1 MALE IMMEDIATE ANNUITANTS

Table ANN 1.1a shows the experience for 2003-2006, on the basis of lives, using the IML00 mortality table. Table ANN 1.1a also gives comparisons for 1999-2002 using the IML00 table and for 2003-2006, 1999-2002 and 1995-1998 using the IML92 table projected to 2020. Table ANN 1.1b shows similar information but for the mortality experiences measured by amounts. The comparison tables are IML00 and IMA92 projected to calendar year 2020.

At durations 1 and over, overall mortality in 2003-2006 improved quite markedly compared with 1999-2002, for both lives and amounts. Using a consistent "92" Series comparison basis, Table ANN 1.1a shows that the experience recorded for 2003-2006, based on lives, was lighter than that for 1999-2002 for all ages above 65. Similarly, Table ANN 1.1b shows that the experience recorded for 2003-2006, based on amounts, was lighter than that for 1999-2002 for all ages except those in the 76-85 range. It can also be seen that both the lives and amounts experience was lighter than the IML00 table at all ages above 65. Volumes at duration 0 are too low to draw conclusions.

Table ANN 1.2a compares the experience measured on a lives basis in each year from 1992 to 2006 at durations 1 and over with that expected according to the IML00 table. While one should bear in mind the changing mix of contributing offices, this shows a downward, albeit fluctuating, trend in the level of mortality recorded, though it appears that the pace of improvement has increased in more recent years. 1994, 1998 and 2000 are the only years in the fourteen-year period when there is not a year on year decrease in the overall level of mortality. The rate of mortality in 2006 is around 30% lower than that in 1992.

Table ANN 1.2b shows, for amounts, similar information to Table ANN 1.2a, again using the IML00 table as the comparison basis (since no amounts tables for immediate annuitants were graduated as part of the "00" Series). These results show a fairly level pattern of mortality over the period leading up to the current quadrennium, albeit with a greater fluctuation around the trend, but as with the lives experience there appears to have been greater improvements in more recent years.

3.2 Female Immediate Annuitants

The experience recorded for female annuitants for 2003-2006 is shown in Tables ANN 2.1a and ANN 2.1b (lives and amounts respectively) using as a comparison basis the IFL00 table. In addition the experiences of 2003-2006, 1999-2002 and 1995-1998 are shown using as comparison bases the IFL92 and IFA92 tables, for lives and amounts respectively, projected to calendar year 2020, together with the 1999-2002 experience using the IFL00 table.

At durations 1 and over a comparison of the levels of mortality between 1999-2002 and 2003-2006, using consistent "92" Series tables, shows that both the lives and amounts experiences have improved overall. This feature is observed for all age groups above age 75, where the majority of deaths have been recorded. Volumes at duration 0 are too low to draw conclusions.

Table ANN 2.2a compares the experience at durations 1 and over on a lives basis for each year from 1992 to 2006 with that expected according to the IFL00 table. The table shows a general improvement in mortality over the period although this feature varies year by year and between age groups, and as observed in the male experience appears to have accelerated in more recent years. Table ANN 2.2b shows similar information for the amounts experience, again using the IFL00 table as the comparison basis. This experience is more volatile, though the mortality was particularly high for the years 1999 and 2000 and has improved somewhat in more recent years. As with the male experience, the changing mix of contributing offices should be borne in mind.

3.3 MALE HOLDERS OF RETIREMENT ANNUITY CONTRACTS

The experience of male holders of retirement annuity contracts in 2003-2006 is shown in Tables ANN 3.1a and ANN 3.1b for policies in deferment and in payment respectively. The 'in deferment' mortality is compared against the RMD00 table. The 'in payment' mortality is compared against the RMV00 table. The 2003-2006, 1999-2002 and 1995-1998 experiences are also shown using the ultimate rates of the AM92 table for the in deferment section and the projected rates for the calendar year 2020 from the RMV92 table for the in payment section. In addition, the 1999-2002 experience is shown using the RMD00 and RMV00 tables as comparison bases for the in deferment and in payment sections respectively.

The combined experience of policies in deferment and policies in payment, compared with the RMC00 table, is shown in Table ANN 3.2. In addition, for 2003-2006, 1999-2002 and 1995-1998, there is a comparison against the projected rates for 2020 from the RMV00 table and a comparison of the 1999-2002 experience against the RMC00 table.

Table ANN 3.1a shows that, overall, there has been a small improvement in mortality between 1999-2002 and 2003-2006 using the AM92 table as a comparison basis, though the pattern by age group is mixed. It can also be seen that below age 65 the mortality experience is heavier than that for assured lives (see Table ASS 1.1.1). This contrasts with the previous two quadrennia when it was noted that the experiences were fairly similar. However, at ages over 65 the retirement annuitant policyholders continue to experience much lighter mortality in deferment than assured lives, suggesting that the less healthy lives may have transferred to the in payment section. This feature was also noted for the

previous two quadrennia. The table also shows that the RMD00 table gives a reasonably close match to the data, both overall and at all age groups with significant volumes of data.

Table ANN 3.1b shows that the feature witnessed in previous quadrennia, where the mortality suffered by retirees at the younger ages is generally heavier than at the higher ages, appears to have disappeared. The actual to expected ratios are now relatively stable over the majority of the age range. This may be a result of greater improvements in mortality being experienced at the younger ages to bring them more into line with the older ages, where improvements have been generally less pronounced. The mortality is lighter than the RMV00 table, though it is of a similar shape over the majority of the age range.

The combined experience, detailed in Table ANN 3.2, shows some interesting features. Combining the in deferment and in payment sections suppresses the effect of any selective early retirement and gives a smooth progression of the 100A/E ratios through the age range. It should be noted that, below age 50, the mortality recorded was a little heavier than that of the RMC00 table, while above age 50 the mortality was just a little lighter than that table.

Comparisons of 2003-2006, 1999-2002 and 1995-1998 are also shown using a consistent comparison basis, the projected rate for 2020 from the RMV92 table. These show little change below age 60, but reasonably consistent improvements above that age. The apparent overall worsening in mortality is somewhat misleading since it is a consequence of fairly large falls in data volumes at the younger ages reducing the expected deaths to a much greater degree than the actual deaths from the overall totals.

3.4 Female Holders Of Retirement Annuity Contracts

The experience of female holders of retirement annuity contracts in 2003-2006 is shown in Tables ANN 4.1a and ANN 4.1b for policies in deferment and in payment respectively. The in deferment mortality is compared against the RFD00 table. The in payment mortality is compared against the RFV00 table. These tables are also used as comparison bases for the respective 1999-2002 experiences. In addition, corresponding ratios for 2003-2006, 1999-2002 and 1995-1998 are shown using the ultimate rates of the AF92 table for the in deferment section and the projected rates for 2020 from the RFV92 table for the in payment section.

From Table ANN 4.1a it can be seen that the overall mortality experienced by the in deferment section was little changed between 1999-2002 and 2003-2006, though the pattern by age group is very mixed. It can also be seen that the RFD00 table provides a better match to both the level and shape of the experience than the AF92 table.

From Table ANN 4.1b it can be seen that the particularly heavy mortality suffered by the retirees in the 56-60 age group in previous quadrennia has disappeared. Mortality has improved at all age groups compared with the previous quadrennium, though the improvements have generally tended to be greater at the younger ages. It can also be seen that, relative to the comparison basis, ages below 65 have experienced lighter mortality than the older age groups.

The combined 2003-2006 experience of the in deferment and the in payment policies, compared with the RFC00 table, is shown in Table ANN 4.2, with the 1999-2002 experience also shown using this table as the comparison basis. Comparative figures for 2003-2006, 1999-2002 and 1995-1998 are additionally shown using the projected rates for 2020 from the RFV92 table. As with the males, this shows that the dedicated mortality table, RFC00, is a much better measure of the experience than the projected RFV92 table.

3.5 MALE HOLDERS OF PERSONAL PENSION CONTRACTS

The experience of male holders of personal pension contracts is shown in Tables ANN 5.1a and ANN 5.1b for policies in deferment and in payment respectively. The in deferment mortality is compared against the PPMV00 table. The in payment mortality is compared against the PPMV00 table. These tables are also used as comparison bases for the respective 1999-2002 experiences. In addition, corresponding ratios for 2003-2006, 1999-2002 and 1995-1998 are shown using the ultimate rates from the AM92 table for the in deferment section and the projected rates for 2020 from the RMV92 table for the in payment section.

Table ANN 5.1a shows that in deferment the overall mortality experienced has improved marginally over the last two quadrennia, but the pattern by age group is very mixed. The mortality is a little heavier than that of retirement annuitants in deferment (see Table ANN 3.1a), but does seem to give a reasonable fit to the PPMD00 table. The rates are generally heavier than those found among assured lives at ages up to 65. Above that age the rates compared to assured lives (see Table ASS 1.1.1) are lighter.

Table ANN 5.1b shows that the in payment experience has been relatively stable over recent quadrennia, and again, as was the case in 1999-2002 and 1995-1998, the mortality recorded is well below that of retirement annuitants in payment (Table ANN 3.1b). The experience is lighter for each individual age group (except for 61-65 where it is the same). Apart from the youngest and oldest age groups, the experience is a very close match to the PPMV00 table.

The combined experience is shown in Table ANN 5.2. The comparison bases are the PPMC00 table for 2003-2006 and 1999-2002 and the RMV92 rates projected to 2020 for 2003-2006, 1999-2002 and 1995-1998. This table shows similar patterns to the combined retirement annuity experience (see Table ANN 3.2). The PPMC00 table closely fits the experience, whereas the projected RMV92 table is clearly a poor comparison basis, particularly at ages below 60.

3.6 FEMALE HOLDERS OF PERSONAL PENSION CONTRACTS

The experience of female holders of personal pension contracts is shown in Tables ANN 6.1a and ANN 6.1b for policies in deferment and in payment respectively. The in deferment mortality is compared against the PPFD00 table. The in payment mortality is compared against the PPFV00 table. These tables are also used as comparison bases for the respective 1999-2002 experiences and corresponding ratios for 2003-2006, 1999-2002 and 1995-1998 are shown using the ultimate rates from the AF92 table for the in deferment section and the projected rates for 2020 from the RFV92 table for the in payment section.

Table ANN 6.1a shows that the in deferment mortality experienced by personal pension contract holders has improved overall and at most age groups since the 1999-2002 quadrennium and currently exhibits broadly similar mortality to that observed among retirement annuity contract holders (see Table ANN 4.1a).

Overall, and at most age groups, the mortality recorded for personal pensions in payment (Table ANN 6.1b) is lighter than that recorded among the retirement annuitants (see Table ANN 4.1b) reflecting the pattern observed among their male counterparts. Overall there has been an improvement in experience compared to the previous quadrennium.

The combined experience is shown in Table ANN 6.2. The comparison bases are the PPFC00 table for 2003-2006 and 1999-2002 and the RFV00 rates projected to 2020 for 2003-2006, 1999-2002 and 1995-

1998. As was the case with males, similar patterns to Tables ANN 4.2a and ANN 4.2b) are observed.	the combined retirement annuity experience (see

Table ANN 0.1. Immediate annuitants (lives), retirement annuitants and personal pensioners: all ages and durations combined: exposed to risk and deaths over recent quadrennia.

		2003-2006	1999-2002	1995-1998	1991-1994
Males					
	Immediate annuitants				
	Exposed to risk (000)	29	36	31	40
	Deaths	1,954	2,591	2,263	2,990
	Crude death rate	0.068	0.072	0.074	0.075
	Retirement annuities in deferment				
	Exposed to risk (000)	2,423	3,880	3,795	4,511
	Deaths	9,719	13,329	12,721	14,664
	Crude death rate	0.004	0.003	0.003	0.003
	Retirement annuities in payment				
	Exposed to risk (000)	976	893	638	641
	Deaths	31,667	29,654	19,030	20,200
	Crude death rate	0.032	0.033	0.030	0.032
		*****	0.000	*****	
	Personal pensions in deferment Exposed to risk (000)	6,244	8,563	6,043	3,831
	Deaths	14,236	16,544	10,467	5,827
	Crude death rate	0.002	0.002	0.002	0.002
		0.002	0.002	0.002	0.002
	Personal pensions in payment	1.041	602	207	5 0
	Exposed to risk (000)	1,041	692	207	50
	Deaths	15,843	9,775 0.014	2,420	564
	Crude death rate	0.015	0.014	0.012	0.011
Females					
	Immediate annuitants				
	Exposed to risk (000)	45	53	52	74
	Deaths	3,528	4,340	4,475	6,009
	Crude death rate	0.078	0.082	0.086	0.082
	Retirement annuities in deferment				
	Exposed to risk (000)	413	679	672	829
	Deaths	1,120	1,644	1,590	1,671
	Crude death rate	0.003	0.002	0.002	0.002
	Retirement annuities in payment				
	Exposed to risk (000)	403	291	156	151
	Deaths	5,752	4,716	2,535	2,695
	Crude death rate	0.014	0.016	0.016	0.018
	Personal pensions in deferment				
	Exposed to risk (000)	3,201	4,327	2,998	1,883
	Deaths	3,842	4,507	2,774	1,251
	Crude death rate	0.001	0.001	0.001	0.001
	Personal pensions in payment				
	Exposed to risk (000)	543	294	84	20
	Deaths	3,461	1,835	459	110
	Crude death rate	0.006	0.006	0.005	0.006
	Crude death rate	0.000	0.000	0.003	0.000

Table ANN 1.1a. Immediate annuitants, males, lives, 2003-2006, all data: actual deaths and ratios of actual deaths to those expected using the IML00 table, together with comparisons of 1999-2002 using the IML00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the IML92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using IML00)	100A/E 2003-2006 (using IML92C20)	100A/E 1999-2002 (using IML00)	100A/E 1999-2002 (using IML92C20)	100A/E 1995-1998 (using IML92C20)
Duration 0						
61-90	4	36*	57*	109	171	134
Durations 1+						
61-65	12	134	211	56*	87*	152*
66-70	22	71	85	110	132	168
71-75	82	83	91	106	117	156
76-80	192	87	96	98	108	126
81-85	414	95	110	99	115	120
86-90	515	86	105	103	126	120
91-95	479	85	108	97	123	118
96-100	202	84	107	100	127	96
61-100	1,918	87	105	100	120	122

^{*} Ratio based on fewer than 10 actual deaths.

Table ANN 1.1b. Immediate annuitants, males, amounts, 2003-2006, all data: actual deaths and ratios of actual deaths to those expected using the IML00 table, together with comparisons of 1999-2002 using the IML00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the IMA92 table.

Age group (nearest ages)	Actual deaths 2003-2006 (£000 pa)	100A/E 2003-2006 (using IML00)	100A/E 2003-2006 (using IMA92C20)	100A/E 1999-2002 (using IML00)	100A/E 1999-2002 (using IMA92C20)	100A/E 1995-1998 (using IMA92C20)
Duration 0						
61-90	9	13*	19*	100	149	124
Durations 1+						
61-65	30	145	239	13*	21*	153*
66-70	61	80	101	129	163	182
71-75	149	58	67	115	132	118
76-80	553	89	103	89	103	109
81-85	1,092	84	102	83	100	110
86-90	1,883	90	114	99	126	135
91-95	1,609	89	116	107	141	130
96-100	436	78	104	96	128	94
61-100	5,814	86	108	97	122	123

^{*} Ratio based on fewer than 10 actual deaths.

Table ANN 1.2a. Immediate annuitants, males, durations 1 and over, lives, 1992-2006: actual deaths for individual years expressed as a percentage of those expected using the base (2000) rates from the IML00 table.

Age group (nearest ages)	1992	1993	1994	1995	1996	1997	1998	1999
61-65	305*	157*	53*	43*	91*	185*	62*	-
66-70	161	124	125	143	136	146	116*	103
71-75	132	101	128	131	174	88	169	99
76-80	116	132	130	135	119	98	79	96
81-85	108	100	118	116	108	83	97	88
86-90	95	96	102	88	101	102	100	111
91-95	116	96	89	100	82	78	112	103
96-100	95	94	104	72	83	61	81	95
61-100	109	102	108	105	103	90	102	101

Age group (nearest ages)	2000	2001	2002	2003	2004	2005	2006
61-65	118*	15*	163*	114*	79*	128*	411*
66-70	107	110	119	61*	82*	80*	72*
71-75	110	108	107	74	88	100	75
76-80	124	82	94	97	81	109	54
81-85	101	111	97	108	102	82	82
86-90	91	109	102	95	81	90	73
91-95	108	95	88	94	86	78	81
96-100	99	98	104	80	95	74	87
61-100	103	101	97	94	89	86	77

^{*} Ratio based on fewer than 10 actual deaths.

Table ANN 1.2b. Immediate annuitants, males, durations 1 and over, amounts, 1992-2006: actual deaths for individual years expressed as a percentage of those expected using the base (2000) rates from the IML00 table.

Age group (nearest ages)	1992	1993	1994	1995	1996	1997	1998	1999
61-65	130*	327*	9*	29*	118*	128*	98*	-
66-70	198	106	106	205	133	126	95*	104
71-75	180	116	96	76	127	58	157	81
76-80	94	110	77	138	92	87	48	84
81-85	121	92	98	112	100	73	74	85
86-90	99	85	88	86	111	130	97	124
91-95	95	95	101	97	96	83	118	105
96-100	58	165	106	60	107	60	55	90
61-100	107	100	93	100	104	97	93	103

Age group (nearest ages)	2000	2001	2002	2003	2004	2005	2006
61-65	35*	5*	16*	96*	13*	626*	60*
66-70	96	120	203	40*	120*	60*	131*
71-75	126	158	90	55	71	56	47
76-80	129	63	82	100	62	136	54
81-85	72	84	90	77	79	95	88
86-90	83	102	89	92	91	90	86
91-95	115	127	84	90	102	74	88
96-100	67	99	126	63	80	69	96
61-100	93	103	91	85	88	88	84

^{*}Ratio based on fewer than 10 actual deaths.

Table ANN 2.1a. Immediate annuitants, females, lives, 2003-2006, all data: actual deaths and ratios of actual deaths to those expected using the IFL00 table, together with comparisons of 1999-2002 using the IFL00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the IFL92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using IFL00)	100A/E 2003-2006 (using IFL92C20)	100A/E 1999-2002 (using IFL00)	100A/E 1999-2002 (using IFL92C20)	100A/E 1995-1998 (using IFL92C20)
Duration 0						
71-100	26	52	71	98	134	111
Durations 1+						
61-65	4	78*	118*	115*	175*	387
66-70	15	107	117	95	103	179
71-75	48	103	105	98	99	174
76-80	126	81	87	108	117	130
81-85	423	84	99	98	114	125
86-90	911	92	113	97	118	123
91-95	1,158	90	109	103	124	118
96-100	646	94	107	100	114	114
61-100	3,331	91	107	100	119	122

^{*} Ratio based on fewer than 10 actual deaths.

Table ANN 2.1b. Immediate annuitants, females, amounts, 2003-2006, all data: actual deaths and ratios of actual deaths to those expected using the IFL00 table, together with comparisons of 1999-2002 using the IFL00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the IFA92 table.

Age group (nearest ages)	Actual deaths 2003-2006 (£000 pa)	100A/E 2003-2006 (using IFL00)	100A/E 2003-2006 (using IFA92C20)	100A/E 1999-2002 (using IFL00)	100A/E 1999-2002 (using IFA92C20)	100A/E 1995-1998 (using IFA92C20)
Duration 0						
71-100	183	52	63	108	131	92
Durations 1+						
61-65	20	181*	436*	151*	353*	390
66-70	14	54	81	66	99	176
71-75	84	83	105	83	104	268
76-80	316	72	88	115	140	127
81-85	1,379	87	105	104	126	128
86-90	3,201	95	115	109	131	116
91-95	3,853	95	110	116	134	120
96-100	1,797	96	104	116	125	105
61-100	10,663	93	109	111	131	120

^{*} Ratio based on fewer than 10 actual deaths.

Table ANN 2.2a. Immediate annuitants, females, durations 1 and over, lives, 1992-2006: actual deaths for individual years expressed as a percentage of those expected using the base (2000) rates from the IFL00 table.

Age group (nearest ages)	1992	1993	1994	1995	1996	1997	1998	1999
61-65	245*	121*	172*	154*	270*	485*	127*	83*
66-70	178*	207	213*	130*	244	113*	169*	56*
71-75	152	175	168	181	164	162	176	113
76-80	126	90	130	127	128	110	109	117
81-85	98	104	122	98	128	96	103	101
86-90	113	87	95	95	100	101	110	105
91-95	97	102	107	100	98	95	95	104
96-100	106	93	105	95	107	107	92	92
61-100	107	97	107	100	107	101	102	103

Age group (nearest ages)	2000	2001	2002	2003	2004	2005	2006
61-65	85*	60*	325*	33*	-	156*	303*
66-70	117*	72*	148*	58*	163*	48*	254*
71-75	128	98	58*	96	98	95*	138
76-80	114	108	94	78	82	87	76
81-85	104	98	90	99	82	83	70
86-90	93	98	93	98	91	94	83
91-95	96	111	99	97	88	84	90
96-100	104	110	95	101	101	92	81
61-100	99	105	95	97	90	88	84

^{*} Ratio based on fewer than 10 actual deaths.

Table ANN 2.2b. Immediate annuitants, females, durations 1 and over, amounts, 1992-2006: actual deaths for individual years expressed as a percentage of those expected using the base (2000) rates from the IFL00 table.

Age group (nearest ages)	1992	1993	1994	1995	1996	1997	1998	1999
61-65	302*	230*	54*	38*	136*	409*	36*	248*
66-70	63*	127	142*	34*	163	120*	187*	58*
71-75	131	104	171	281	101	100	398	75
76-80	98	114	126	111	123	88	107	97
81-85	95	92	120	108	139	88	83	149
86-90	117	87	95	81	103	104	97	112
91-95	105	98	125	113	86	91	123	119
96-100	116	106	94	82	109	118	79	120
61-100	108	95	110	99	105	98	106	120

Age group (nearest ages)	2000	2001	2002	2003	2004	2005	2006
61-65	43*	9*	365*	249*	-	38*	347*
66-70	80*	23*	109*	32*	101*	12*	83*
71-75	85	96	75*	93	49	53*	147
76-80	180	84	93	96	53	66	69
81-85	102	91	71	92	66	119	67
86-90	111	104	110	91	98	107	86
91-95	115	120	109	96	87	101	99
96-100	121	109	115	112	94	76	102
61-100	115	107	104	96	86	99	91

^{*} Ratio based on fewer than 10 actual deaths.

Table ANN 3.1a. Retirement annuity policies in deferment, males, 2003-2006: actual deaths and ratios of actual deaths to those expected using the RMD00 table, together with comparisons of 1999-2002 using the RMD00 table and 2003-2006, 1999-2002 and 1995-1998 using the ultimate rates from the AM92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using RMD00)	100A/E 2003-2006 (using AM92)	100A/E 1999-2002 (using RMD00)	100A/E 1999-2002 (using AM92)	100A/E 1995-1998 (using AM92)
31-35	11	312	265	107	91	92
36-40	54	105	91	107	93	91
41-45	255	106	92	91	79	107
46-50	715	107	91	102	87	99
51-55	1,422	95	78	100	82	92
56-60	3,050	98	75	100	76	86
61-65	2,771	98	68	102	70	81
66-70	1,000	100	61	90	55	66
71-75	408	98	51	111	58	62
31-75	9,686	99	71	100	74	85

Table ANN 3.1b. Retirement annuity policies in payment, males, 2003-2006: actual deaths and ratios of actual deaths to those expected using the RMV00 table, together with comparisons of 1999-2002 using the RMV00 table and 2003-2006, 1999-2002 and 1995-1998 using the rates for the calendar year 2020 from the RMV92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using RMV00)	100A/E 2003-2006 (using RMV92C20)	100A/E 1999-2002 (using RMV00)	100A/E 1999-2002 (using RMV92C20)	100A/E 1995-1998 (using RMV92C20)
51-55	103	61	91	96	141	166
56-60	304	89	130	115	167	255
61-65	1,244	84	118	97	137	186
66-70	3,428	86	121	99	139	160
71-75	5,700	93	128	102	141	154
76-80	7,477	93	124	99	132	141
81-85	7,305	94	125	96	128	131
86-90	4,126	96	127	107	141	124
91-95	1,696	95	127	96	128	104
96-100	239	68	93	76	103	75
51-100	31,622	92	124	100	135	147

Table ANN 3.2. Retirement annuity policies in deferment and in payment combined, males, 2003-2006: actual deaths and ratios of actual deaths to those expected using the rates from the RMC00 table, together with comparisons of 1999-2002 using the RMC00 table and 2003-2006, 1999-2002 and 1995-1998 using the rates for the calendar year 2020 from the RMV92 table.

Age group (nearest ages)	Actual deaths ^φ 2003-2006	100A/E 2003-2006 (using RMC00)	100A/E 2003-2006 (using RMV92C20)	100A/E 1999-2002 (using RMC00)	100A/E 1999-2002 (using RMV92C20)	100A/E 1995-1998 (using RMV92C20)
31-35	11	310	12	107	4	4
36-40	57	110	6	108	6	6
41-45	258	107	10	92	8	11
46-50	745	111	19	104	18	21
51-55	1,525	99	34	103	36	39
56-60	3,354	99	66	100	66	76
61-65	4,015	93	97	98	101	124
66-70	4,428	90	115	97	125	146
71-75	6,108	92	124	102	137	149
76-80	7,505	95	124	100	132	141
81-85	7,308	95	124	98	127	131
86-90	4,127	95	126	106	141	124
91-95	1,696	95	126	95	128	104
96-100	239	68	92	76	103	79
31-100	41,376	94	89	100	75	65

^φ Includes deaths among retirees at ages below 50. Note that this means that the total number of actual deaths is greater than the sum of those shown in tables ANN 3.1a and ANN 3.1b.

Table ANN 4.1a. Retirement annuity policies in deferment, females, 2003-2006: actual deaths and ratios of actual deaths to those expected using the RFD00 table, together with comparisons of 1999-2002 using the RFD00 table and 2003-2006, 1999-2002 and 1995-1998 using the ultimate rates from the AF92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using RFD00)	100A/E 2003-2006 (using AF92)	100A/E 1999-2002 (using RFD00)	100A/E 1999-2002 (using AF92)	100A/E 1995-1998 (using AF92)
31-40	10	85	88	115	119	74
41-45	53	119	119	95	96	99
46-50	96	95	90	93	88	120
51-55	185	93	81	110	96	90
56-60	355	96	77	95	76	93
61-65	236	105	77	100	73	70
66-70	128	121	80	88	58	80
71-75	50	100	59	123	73	71
31-75	1,113	101	79	100	80	89

Table ANN 4.1b. Retirement annuity policies in payment, females, 2003-2006: actual deaths and ratios of actual deaths to those expected using the RFV00 table, together with comparisons of 1999-2002 using the RFV00 table and 2003-2006, 1999-2002 and 1995-1998 using the rates for the calendar year 2020 from the RFV92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using RFV00)	100A/E 2003-2006 (using RFV92C20)	100A/E 1999-2002 (using RFV00)	100A/E 1999-2002 (using RFV92C20)	100A/E 1995-1998 (using RFV92C20)
51-55	34	75	97	90	115	225
56-60	96	69	91	123	162	246
61-65	424	72	90	95	118	150
66-70	635	87	103	101	119	154
71-75	915	94	110	100	116	147
76-80	1,205	96	114	103	122	135
81-85	1,182	94	114	98	119	124
86-90	748	92	111	93	113	115
91-95	411	98	117	109	131	114
96-100	88	89	104	93	109	102
51-100	5,738	91	109	100	119	139

Table ANN 4.2. Retirement annuity policies in deferment and in payment combined, females, 2003-2006: actual deaths and ratios of actual deaths to those expected using the rates from the RFC00 table, together with comparisons of 1999-2002 using the RFC00 table and 2003-2006, 1999-2002 and 1995-1998 using the rates for the calendar year 2020 from the RFV92 table.

Age group (nearest ages)	Actual deaths ^φ 2003-2006	100A/E 2003-2006 (using RFC00)	100A/E 2003-2006 (using RFV92C20)	100A/E 1999-2002 (using RFC00)	100A/E 1999-2002 (using RFV92C20)	100A/E 1995-1998 (using RFV92C20)
31-40	10	84	6	114	7	4
41-45	56	125	16	98	12	13
46-50	99	97	24	97	24	32
51-55	219	102	48	113	53	51
56-60	451	96	83	102	87	105
61-65	660	83	99	96	116	126
66-70	763	84	107	90	115	149
71-75	965	91	109	97	116	144
76-80	1,210	96	114	103	122	135
81-85	1,182	94	114	98	118	123
86-90	748	92	111	93	113	117
91-95	413	98	118	109	131	114
96-100	88	88	104	92	108	102
31-100	6,864	92	93	99	83	72

^φ Includes deaths among retirees at ages below 50. Note that this means that the total number of actual deaths is greater than the sum of those shown in tables ANN 4.1a and ANN 4.1b.

Table ANN 5.1a. Personal pension policies in deferment, males, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PPMD00 table, together with comparisons of 1999-2002 using the PPMD00 table and 2003-2006, 1999-2002 and 1995-1998 using the ultimate rates from the AM92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using PPMD00)	100A/E 2003-2006 (using AM92)	100A/E 1999-2002 (using PPMD00)	100A/E 1999-2002 (using AM92)	100A/E 1995-1998 (using AM92)
21-25	34	116	92	127	101	91
26-30	101	87	75	97	83	96
31-35	414	108	100	102	95	80
36-40	822	100	97	97	95	95
41-45	1,303	99	98	95	94	102
46-50	1,715	92	89	104	100	101
51-55	2,654	100	90	102	92	91
56-60	3,732	97	79	99	81	87
61-65	2,593	101	73	99	71	75
66-70	581	97	59	95	58	56
71-75	281	109	55	113	57	56
21-75	14,230	98	82	100	84	87

Table ANN 5.1b. Personal pension policies in payment, males, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PPMV00 table, together with comparisons of 1999-2002 using the PPMV00 table and 2003-2006, 1999-2002 and 1995-1998 using the rates for the calendar year 2020 from the RMV92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using PPMV00)	100A/E 2003-2006 (using RMV92C20)	100A/E 1999-2002 (using PPMV00)	100A/E 1999-2002 (using RMV92C20)	100A/E 1995-1998 (using RMV92C20)
51-55	381	80	78	84	82	81
56-60	1,004	99	115	104	121	124
61-65	2,168	94	118	104	130	123
66-70	4,535	98	118	97	116	119
71-75	3,751	97	104	102	110	101
76-80	2,556	102	101	97	96	100
81-85	1,048	109	108	110	109	91
86-90	297	111	118	133	140	-
51-90	15,740	98	109	100	113	112

Table ANN 5.2. Personal pension policies in deferment and in payment combined, males, 2003-2006: actual deaths and ratios of actual deaths to those expected using the rates from the PPMC00 table, together with comparisons of 1999-2002 using the PPMC00 table and 2003-2006, 1999-2002 and 1995-1998 using the rates for the calendar year 2020 from the RMV92 table.

Age group (nearest ages)	Actual deaths ^{\text{\text{\$\text{\$q\$}}}} 2003-2006}	100A/E 2003-2006 (using PPMC00)	100A/E 2003-2006 (using RMV92C20)	100A/E 1999-2002 (using PPMC00)	100A/E 1999-2002 (using RMV92C20)	100A/E 1995-1998 (using RMV92C20)
21-25	34	116	3	127	3	3
26-30	101	87	3	97	3	3
31-35	419	109	4	103	4	3
36-40	830	100	6	98	6	6
41-45	1,325	98	10	95	10	10
46-50	1,754	90	18	102	20	20
51-55	3,035	101	40	101	40	38
56-60	4,736	99	72	100	71	76
61-65	4,761	100	105	101	106	104
66-70	5,116	100	115	97	112	109
71-75	4,032	96	103	100	108	99
76-80	2,561	102	101	97	96	104
81-85	1,048	109	108	110	109)
86-90	297	111	118	133	140	} 112
21-90	30,049	99	36	100	24	17

^φ Includes deaths among retirees at ages below 50. Note that this means that the total number of actual deaths is greater than the sum of those shown in tables ANN 5.1a and ANN 5.1b.

Table ANN 6.1a. Personal pension policies in deferment, females, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PPFD00 table, together with comparisons of 1999-2002 using the PPFD00 table and 2003-2006, 1999-2002 and 1995-1998 using the ultimate rates from the AF92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using PPFD00)	100A/E 2003-2006 (using AF92)	100A/E 1999-2002 (using PPFD00)	100A/E 1999-2002 (using AF92)	100A/E 1995-1998 (using AF92)
21-25	10	158	89	128	72	120
26-30	39	105	76	112	81	74
31-35	157	94	80	99	83	88
36-40	369	98	91	96	90	102
41-45	461	88	85	99	96	104
46-50	659	101	95	103	98	101
51-55	806	95	84	99	88	81
56-60	866	92	74	98	79	91
61-65	296	94	66	102	71	80
66-70	121	106	63	94	56	47
71-75	58	108	52	124	61	63
21-75	3,842	95	80	100	86	90

Table ANN 6.1b. Personal pension policies in payment, females, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PPFV00 table, together with comparisons of 1999-2002 using the PPFV00 table and 2003-2006, 1999-2002 and 1995-1998 using the rates for the calendar year 2020 from the RFV92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using PPFV00)	100A/E 2003-2006 (using RFV92C20)	100A/E 1999-2002 (using PPFV00)	100A/E 1999-2002 (using RFV92C20)	100A/E 1995-1998 (using RFV92C20)
51-55	136	94	89	97	92	122
56-60	310	83	101	107	130	122
61-65	803	83	102	95	117	125
66-70	819	94	99	106	112	101
71-75	687	96	89	94	87	89
76-80	429	93	85	111	101	72
81-85	175	106	105	88	87	75*
86-90	53	94	104	101	111	-
51-90	3,412	91	96	100	108	112

^{*} Ratio based on fewer than 10 actual deaths.

Table ANN 6.2. Personal pension policies in deferment and in payment combined, females, 2003-2006: actual deaths and ratios of actual deaths to those expected using the rates from the PPFC00 table, together with comparisons of 1999-2002 using the PPFC00 table and 2003-2006, 1999-2002 and 1995-1998 using the rates for the calendar year 2020 from the RFV92 table.

Age group (nearest ages)	Actual deaths ^{op} 2003-2006	100A/E 2003-2006 (using PPFC00)	100A/E 2003-2006 (using RFV92C20)	100A/E 1999-2002 (using PPFC00)	100A/E 1999-2002 (using RFV92C20)	100A/E 1995-1998 (using RFV92C20)
21-25	10	158	1	128	1	2
26-30	39	105	2	112	2	2
31-35	158	95	3	99	3	3
36-40	370	98	6	97	6	7
41-45	475	90	11	101	12	13
46-50	684	103	25	104	25	26
51-55	942	100	48	102	49	46
56-60	1,176	92	81	101	88	97
61-65	1,099	85	102	95	114	127
66-70	940	86	100	93	108	94
71-75	745	92	88	91	88	91
76-80	429	93	85	110	101	
81-85	175	106	105	88	87	} 80
86-90	53	94	104	101	111	,
21-90	7,295	92	25	100	16	11

 $^{^{\}phi}$ Includes deaths among retirees at ages below 50. Note that this means that the total number of actual deaths is greater than the sum of those shown in tables ANN 6.1a and ANN 6.1b.

4 THE MORTALITY OF PENSIONERS IN INSURED GROUP PENSION SCHEMES 2003-2006

This report contains commentaries on the experience recorded over 2003-2006 for male and female pensioners, and for widows and widowers of pensioners. The pensioners concerned are those covered by schemes under which the benefits are insured through life offices. The tables supporting the text can be found on pp 54 to 69.

When comparing results for the quadrennium 2003-2006 with those for earlier quadrennia, it should be noted that there have been material changes in the mix of offices contributing to these investigations. For the pensioner investigations, a total of fifteen offices contributed data at some point during the period 1995-2006; of these only five contributed data in all twelve of these years. The corresponding figures for widows/widowers are thirteen and three respectively.

The pensioner experiences are divided into those where the pensioner retired at or after the normal age (referred to for simplicity as 'normal' retirements) and those who retired before the normal age (referred to as 'early' retirements).

4.1 MALE PENSIONERS

Tables PEN 1.1a, PEN 1.2a and PEN 1.3a give the experience for the quadrennium 2003-2006 on the basis of lives for, respectively, normal retirements, early retirements and all retirements combined. Tables PEN 1.1b, PEN 1.2b and PEN 1.3b give the corresponding experience on the basis of amounts.

Each table uses as a comparison basis for 2003-2006 the "00" Series table most appropriate for the experience:

- Males, normal, lives PNML00
- Males, normal, amounts PNMA00
- Males, early, lives PEML00
- Males, early, amounts PEMA00
- Males, combined, lives PCML00
- Males, combined, amounts PCMA00

In addition, each table contains comparisons for 1999-2002 using the same "00" Series tables and for 2003-2006, 1999-2002 and 1995-1998 using the projected rates for 2020 from the PML92 and PMA92 mortality tables for the lives and amounts experiences respectively.

A comparison of the actual experience for normal retirements year by year from 1992, lives and amounts, against the PNML00 and PNMA00 mortality tables respectively, can be found in Tables PEN 1.4a and PEN 1.4b. Tables PEN 1.5a and PEN 1.5b show the size of the experiences together with the average pensions in payment.

From Tables PEN 1.1a and PEN 1.1b it can be seen that the fall in levels of male pensioner mortality, noted over previous quadrennia, has continued. There has been a significant overall improvement between 1999-2002 and 2003-2006, although Table PEN 1.1a shows that, on a lives basis, this is more pronounced at younger ages experience and it actually worsened slightly for the oldest age group. A similar feature appears in Table PEN 1.1b, for the amounts basis, though the worsening was in the 61-65 age group.

A comparison with the relevant "00" Series tables shows that the experience overall has improved by around 10% in the four years since the period underlying those tables, though below age 60 for lives and 65 for amounts mortality is significantly in excess of the relevant tables.

Just how far the experience has improved over the period from 1992 to 2006 can be seen in Tables PEN 1.4a and PEN 1.4b, where the actual deaths year by year (on a lives and an amounts basis respectively) are compared with those expected using the PNML00 or PNMA00 table as appropriate.

Although the ratios do not run smoothly, the overall trend of improving mortality in the experience of pensioners who are normal retirements, both overall and by age group, can be clearly seen in all these tables.

The experience of pensioners who retired before the normal age is shown in Tables PEN 1.2a and PEN 1.2b (lives and amounts respectively). As would be expected, the overall level of mortality is considerably heavier than that of pensioners retiring at or after the normal age, though on the lives basis the differential appears to be narrowing. Interestingly, this is not the case with the amounts experience. Comparing with the relevant "00" Series table, the 2003-2006 lives experience has significantly improved mortality overall and all age groups only four years after the period underlying that table. A lower level of improvement is seen for the amounts experience, and indeed two age groups exhibit heavier mortality than the relevant table.

The ratio of early to normal retirements has fallen overall for lives and increased for amounts compared with 1999-2002, though the pattern by age group is a little mixed.

Tables PEN 1.3a and PEN 1.3b (lives and amounts respectively) give the experience for all pensioners combined. These again show consistent improvements in mortality over the quadrennia considered, and the 2003-2006 experiences are around 10% lighter than the relevant "00" Series combined mortality table.

Tables PEN 1.5a and PEN 1.5b show the size of the data, on a normal retirements and an early retirements basis respectively, together with average pensions per annum. A long-standing feature, which can be seen by comparing across previous *C.M.I.R.*s, is the substantial rise in the amount of average pensions, quadrennium by quadrennium. This feature was evident in the all age normal retirement data for 2003-2006 (though not in age groups below 70 for the exposure and in the 56-60 age group for deaths) and in the early retirement data where the 2003-2006 experience shows higher average amounts for all age groups except 51-55 for the exposure and 56-60 for deaths.

In the previous report it was noted that while average pensions for normal retirees were, in most cases, greater than those for early retirees, there were some age groups for which the converse was true. For the current quadrennium, more age groups are displaying the feature of higher average pensions for early retirees. Consistent with observations in previous quadrennia, for virtually all age groups the average pensions among the exposed to risk were greater than those for pensioners in the same group who had died.

4.2 FEMALE PENSIONERS

Tables PEN 2.1a, PEN 2.2a and PEN 2.3a, respectively, give the experience for the quadrennium 2003-2006 on the basis of lives for normal retirements, early retirements and all retirements combined. Tables PEN 2.1b, PEN 2.2b and PEN 2.3b give the corresponding experience on the basis of amounts.

Each table uses as a comparison basis for 2003-2006 the "00" Series table most appropriate for the experience:

- Females, normal, lives PNFL00
- Females, normal, amounts PNFA00
- Females, early, lives PEFL00
- Females, early, amounts PEFA00

- Females, combined, lives PCFL00
- Females, combined, amounts PCFA00

In addition, each table contains comparisons for 1999-2002 using the same "00" Series tables and for 2003-2006, 1999-2002 and 1995-1998 using the projected rates for 2020 from the PFL92 and PFA92 mortality tables for the lives and amounts experiences respectively.

Tables PEN 2.4a and PEN 2.4b show, for the lives and amounts normal retirements experiences respectively, year by year comparisons against the PNFL00 or PNFA00 tables. Tables PEN 2.5a and PEN 2.5b show the size of the experiences together with the average pensions in payment.

In Tables PEN 2.1a and PEN 2.1b it can be seen that the improvement in mortality among those retiring at or above the normal age, which was noted over earlier quadrennia, has continued into the current quadrennium, and this is true for virtually all age groups. As was the case with the male experience, it can be seen that in the overall level of mortality in 2003-2006 was lighter than the relevant "00" Series table. The pattern by age group is similar, though the heavier mortality occurs below age 60, rather 65, and for the amounts experience there is a little more volatility.

Tables PEN 2.4a and PEN 2.4b show that, overall, the mortality has improved for both the lives and amounts experiences, though not quite to the same extent as the male experiences. There is also a greater volatility in the level of mortality from one year to the next over the period considered, particularly broken down by age group.

The mortality experience of pensioners retiring before the normal age is shown in Tables PEN 2.2a and PEN 2.2b (lives and amounts respectively). The improvement in mortality for this group, noted over previous quadrennia, has continued. Even so, the mortality level is still considerably higher than that recorded for normal retirees, though the differential does appear to be narrowing. In previous quadrennia it had been noted that, on an age by age basis, the difference was greatest at the younger ages then tailed off as age increased before disappearing altogether at around the mid 70s. In 2003-2006 this feature remains, though the age at which the differential disappears has increased to around 80. For males, the convergence appears at about 10 years older. The experience in 2003-2006 is lighter than the relevant "00" Series early retirements table by about 10%, though the picture by age group is more volatile for the amounts section.

The level of mortality recorded for all pensioners combined is shown in Tables PEN 2.3a and PEN 2.3b (lives and amounts respectively). As with the males, it can be seen that there has been a consistent improvement in the mortality experiences over the quadrennia considered, which in 2003-2006 were lighter than the relevant "00" Series combined tables, with amounts exhibiting greater volatility than lives.

The exposed to risk and deaths, on the basis of both lives and amounts, are shown for normal retirements in Table PEN 2.5a and for early retirements in Table PEN 2.5b, both of which also give average pensions. As was seen in the male experience, average pensions have continued the rise over time that has been noted in earlier quadrennial, and this was the case in virtually every age group. They are, however, lower on average than those payable to their male counterparts. This almost certainly reflects the lower average salaries earned by women and a shorter than average period of qualifying service. Following the established pattern, average pensions paid to the normal and late retirees were, in most cases, age for age greater than those paid to the early retirees. Also, as has previously been reported, average pensions among the exposed to risk were generally greater than those for pensioners who had died.

4.3 WIDOWS OF PENSIONERS

Tables PEN 3.1a and PEN 3.1b show the mortality experience of pensioners' widows over the quadrennium 2003-2006 on the basis of lives, using as comparison bases the WL00 and PNFL00 tables respectively. Tables PEN 3.1c and PEN 3.1d show equivalent amounts experience, using as comparison bases the WA00 and PNFA00 tables respectively. Comparisons are also shown for 1999-2002 using the same "00" Series tables and for 2003-2006, 1999-2002 and 1995-1998 using the projected rates for 2020 from the WL92, PFL92, WA92 and PFA92 tables for these four tables respectively.

As can be seen from the tables, the mortality experienced by this group has worsened overall between 1999-2002 and 2003-2006. The extent of this is a little greater for lives than amounts, and is apparent for most age groups where there are reasonable data volumes. In contrast to the 1999-2002 experience, for all ages combined, on both a lives and an amounts basis, it is once again heavier than that experienced by women drawing pensions in their own right who retired at or after their normal age (see Tables PEN 2.1a and PEN 2.1b). However, the difference is age-related. For ages below 85 for lives and below 80 for amounts the mortality of widows is higher than that for women drawing pensions in their own right, with the opposite being the case above age these ages.

Overall both the respective widows' tables (WL00 and WA00) and pensioners' tables (PNFL00 and PNFA) give a reasonably close match to the 2003-2006 experience, though the widows' tables are a much better fit by age group.

From Table PEN 3.2 it can be seen that average pension amounts have increased since 1999-2002 in virtually all age groups. This is consistent with the observation made earlier in this part of the report about the pensioner experiences.

4.4 WIDOWERS OF PENSIONERS

The 2003-2006 experience for widowers is shown in Tables PEN 4.1a and PEN 4.1b. The PNML00 and PNMA00 mortality rates, as appropriate, are used as a comparison basis. Additionally, comparisons are shown for 1999-2002 using the same "00" Series tables and for 2003-2006, 1999-2002 and 1995-1998 using the projected rates for 2020 from the PML92 and PMA92 tables respectively. The experience is still very limited with only 352 deaths in total. On both the lives and amounts basis there seems to have been significant mortality deterioration in almost all age groups, reversing the large improvements seen in the previous quadrennium. However the experience is still too small to allow firm conclusions to be drawn.

Table PEN 1.1a. Pensioners, males, normal retirements, lives, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PNML00 table, together with comparisons of 1999-2002 using the PNML00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the PML92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using PNML00)	100A/E 2003-2006 (using PML92C20)	100A/E 1999-2002 (using PNML00)	100A/E 1999-2002 (using PML92C20)	100A/E 1995-1998 (using PML92C20)
51-55	11	172	290	272	460	339
56-60	48	141	231	188	308	220
61-65	355	94	139	115	171	166
66-70	2,348	85	108	97	123	139
71-75	4,162	86	102	102	119	140
76-80	6,484	86	99	99	115	126
81-85	8,918	88	99	100	113	121
86-90	8,418	98	106	100	107	116
91-95	5,170	96	102	98	104	114
96-100	1,153	89	94	84	89	107
51-100	37,067	91	102	100	113	124

Table PEN 1.1b. Pensioners, males, normal retirements, amounts, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PNMA0 table, together with comparisons of 1999-2002 using the PNMA00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the PMA92 table.

Age group (nearest ages)	Actual deaths 2003-2006 (£000 pa)	100A/E 2003-2006 (using PNMA00)	100A/E 2003-2006 (using PMA92C20)	100A/E 1999-2002 (using PNMA00)	100A/E 1999-2002 (using PMA92C20)	100A/E 1995-1998 (using PMA92C20)
51-55	19	217	608	225	627	426
56-60	62	104	244	232	553	572
61-65	900	111	206	102	191	182
66-70	5,087	93	132	98	140	166
71-75	9,744	88	105	101	121	144
76-80	17,213	83	95	100	114	133
81-85	24,162	83	94	99	112	117
86-90	16,439	96	107	102	114	117
91-95	5,946	89	98	98	108	110
96-100	1,170	95	102	96	103	116
51-100	80,743	88	101	101	119	132

Table PEN 1.2a. Pensioners, males, early retirements, lives, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PEML00 table, together with comparisons of 1999-2002 using the PEML00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the PML92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using PEML00)	100A/E 2003-2006 (using PML92C20)	100A/E 1999-2002 (using PEML00)	100A/E 1999-2002 (using PML92C20)	100A/E 1995-1998 (using PML92C20)	Ratio Early/ Normal [©]
51-55	142	79	367	85	393	470	1.26
56-60	467	96	261	99	273	287	1.13
61-65	949	87	158	99	178	222	1.14
66-70	1,575	83	123	100	149	183	1.14
71-75	2,232	83	114	99	137	162	1.13
76-80	3,469	84	110	102	133	141	1.11
81-85	4,265	89	108	99	121	127	1.09
86-90	2,676	91	102	100	112	119	0.97
91-95	1,220	94	100	98	105	113	0.99
96-100	214	87	93	94	101	125	0.99
51-100	17,209	87	113	100	132	147	1.11

^φ Ratio of 100A/E for early retirements to 100A/E for normal retirements 2003-2006 using PML92C20 as the comparison basis

Table PEN 1.2b. Pensioners, males, early retirements, amounts, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PEMA00 table, together with comparisons of 1999-2002 using the PEMA00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the PMA92 table.

Age group (nearest ages)	Actual deaths 2003-2006 (£000 pa)	100A/E 2003-2006 (using PEMA00)	100A/E 2003-2006 (using PMA92C20)	100A/E 1999-2002 (using PEMA00)	100A/E 1999-2002 (using PMA92C20)	100A/E 1995-1998 (using PMA92C20)	Ratio Early/ Normal [©]
51-55	187	91	611	90	596	1,090	1.01
56-60	839	95	352	106	399	343	1.44
61-65	2,147	82	188	88	200	252	0.91
66-70	4,801	87	144	102	167	189	1.09
71-75	8,303	93	123	103	137	145	1.17
76-80	13,062	101	121	100	120	137	1.28
81-85	10,367	98	112	96	110	128	1.19
86-90	4,140	92	103	107	120	116	0.96
91-95	1,425	109	121	91	100	106	1.24
96-100	119	87	95	104	113	121	0.93
51-100	45,389	95	123	100	135	152	1.22

 $^{^{\}Phi}$ Ratio of 100A/E for early retirements to 100A/E for normal retirements 2003-2006 using PMA92C20 as the comparison basis.

Table PEN 1.3a. Pensioners, males, normal and early retirements combined, lives, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PCML00 table, together with comparisons of 1999-2002 using the PCML00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the PML92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using PCML00)	100A/E 2003-2006 (using PML92C20)	100A/E 1999-2002 (using PCML00)	100A/E 1999-2002 (using PML92C20)	100A/E 1995-1998 (using PML92C20)
51-55	153	77	360	89	416	447
56-60	515	95	258	104	283	273
61-65	1,304	90	152	104	175	199
66-70	3,923	85	114	97	131	154
71-75	6,394	85	106	101	125	148
76-80	9,953	86	103	100	120	131
81-85	13,183	89	102	100	115	122
86-90	11,094	97	105	100	108	117
91-95	6,390	95	101	98	104	114
96-100	1,367	89	94	85	90	108
51-100	54,276	90	105	100	118	130

Table PEN 1.3b. Pensioners, males, normal and early retirements combined, amounts, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PCMA00 table, together with comparisons of 1999-2002 using the PCMA00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the PMA92 table.

Age group (nearest ages)	Actual deaths 2003-2006 (£000 pa)	100A/E 2003-2006 (using PCMA00)	100A/E 2003-2006 (using PMA92C20)	100A/E 1999-2002 (using PCMA00)	100A/E 1999-2002 (using PMA92C20)	100A/E 1995-1998 (using PMA92C20)
51-55	206	91	611	91	608	915
56-60	900	92	342	121	454	417
61-65	3,046	91	193	92	195	219
66-70	9,889	92	137	100	149	176
71-75	18,047	91	113	101	126	144
76-80	30,275	90	105	100	116	134
81-85	34,529	87	99	98	111	120
86-90	20,579	95	106	103	115	117
91-95	7,371	92	101	97	107	109
96-100	1,289	94	101	96	104	116
51-100	126,132	91	108	100	123	138

Table PEN 1.4a. Pensioners, males, normal retirements, lives, 1992-2006: actual deaths for individual years expressed as a percentage of those expected using the base (2000) rates from the PNML00 table.

Age group (nearest ages)	1992	1993	1994	1995	1996	1997	1998	1999
61-65	136	140	148	124	113	101	112	116
66-70	144	137	128	117	114	100	110	103
71-75	143	136	133	131	119	110	115	109
76-80	126	126	121	116	113	102	106	103
81-85	124	122	114	112	107	105	107	107
86-90	119	119	112	114	112	103	105	100
91-95	110	111	114	113	106	106	105	104
96-100	82	88	96	125	81	93	106	94
61-100	126	125	119	117	111	104	107	105

Age group (nearest ages)	2000	2001	2002	2003	2004	2005	2006
61-65	120	98	111	94	112	80	89
66-70	94	95	94	90	88	80	82
71-75	97	102	98	95	87	83	76
76-80	95	102	96	89	92	82	77
81-85	95	103	95	93	92	83	82
86-90	101	102	95	102	101	95	93
91-95	93	100	94	99	95	94	94
96-100	77	89	77	95	88	89	82
61-100	96	101	95	95	94	87	85

Table PEN 1.4b. Pensioners, males, normal retirements, amounts, 1992-2006: actual deaths for individual years expressed as a percentage of those expected using the base (2000) rates from the PNMA00 table.

Age group (nearest ages)	1992	1993	1994	1995	1996	1997	1998	1999
61-65	118	126	123	113	99	93	68	105
66-70	132	120	115	124	118	119	100	106
71-75	139	128	139	142	115	109	113	95
76-80	121	122	109	125	117	107	118	94
81-85	116	113	110	105	110	102	102	105
86-90	140	124	109	122	103	98	102	110
91-95	133	98	103	109	108	107	86	95
96-100	94	69	95	145	79	112	101	103
61-100	128	121	117	123	112	106	106	101

Age group (nearest ages)	2000	2001	2002	2003	2004	2005	2006
61-65	102	93	99	113	132	111	85
66-70	93	94	100	91	90	98	97
71-75	107	104	96	86	94	89	85
76-80	91	109	108	82	90	80	80
81-85	100	102	89	83	90	74	87
86-90	96	103	101	102	93	97	93
91-95	105	98	95	107	87	87	79
96-100	111	76	95	80	142	106	57
61-100	98	103	98	88	92	84	86

Table PEN 1.5a. Pensioners, males, normal retirements, 2003-2006: exposed to risk, deaths and average pensions.

		Exposed to risk		Deaths			
Age group (nearest ages)	Lives	Amounts (£000 pa)	Average Pension (£pa)	Lives	Amounts (£000 pa)	Average Pension (£pa)	
51-55	2,395	3,739	1,561	11	19	1,758	
56-60	6,528	13,278	2,034	48	62	1,285	
61-65	36,686	96,599	2,633	355	900	2,534	
66-70	162,608	400,326	2,462	2,348	5,087	2,167	
71-75	158,184	455,604	2,880	4,162	9,744	2,341	
76-80	138,232	451,935	3,269	6,484	17,213	2,655	
81-85	113,802	365,438	3,211	8,918	24,162	2,709	
86-90	63,643	132,926	2,089	8,418	16,439	1,953	
91-95	28,106	35,237	1,254	5,170	5,946	1,150	
96-100	4,921	4,703	956	1,153	1,170	1,015	
51-100	715,102	1,959,785	2,741	37,067	80,743	2,178	

Table PEN 1.5b. Pensioners, males, early retirements, 2003-2006: exposed to risk, deaths and average pensions.

		Exposed to risk		Deaths			
Age group (nearest ages)	Lives	Amounts (£000 pa)	Average Pension (£pa)	Lives	Amounts (£000 pa)	Average Pension (£pa)	
51-55	23,930	35,040	1,464	142	187	1,316	
56-60	58,532	130,955	2,237	467	839	1,796	
61-65	93,316	270,139	2,895	949	2,147	2,262	
66-70	97,721	355,128	3,634	1,575	4,801	3,048	
71-75	75,339	331,892	4,405	2,232	8,303	3,720	
76-80	67,223	275,530	4,099	3,469	13,062	3,765	
81-85	50,009	133,768	2,675	4,265	10,367	2,431	
86-90	21,237	35,339	1,664	2,676	4,140	1,547	
91-95	6,750	6,889	1,021	1,220	1,425	1,168	
96-100	929	513	552	214	119	554	
51-100	494,985	1,575,193	3,182	17,209	45,389	2,638	

Table PEN 2.1a. Pensioners, females, normal retirements, lives, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PNFL00 table, together with comparisons of 1999-2002 using the PNFL00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the PFL92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using PNFL00)	100A/E 2003-2006 (using PFL92C20)	100A/E 1999-2002 (using PNFL00)	100A/E 1999-2002 (using PFL92C20)	100A/E 1995-1998 (using PFL92C20)
51-55	6	163*	349*	214	456	337*
56-60	42	109	198	149	276	194
61-65	345	80	120	93	140	145
66-70	601	84	107	99	126	160
71-75	922	86	103	103	123	130
76-80	1,720	90	105	101	118	129
81-85	2,771	90	105	97	112	124
86-90	2,583	97	113	100	117	124
91-95	1,771	95	113	104	124	119
96-100	728	95	116	87	106	108
51-100	11,489	92	109	100	120	127

^{*} Ratio based on fewer than 10 actual deaths.

Table PEN 2.1b. Pensioners, females, normal retirements, amounts, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PNFA00 table, together with comparisons of 1999-2002 using the PNFA00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the PFA92 table.

Age group (nearest ages)	Actual deaths 2003-2006 (£000 pa)	100A/E 2003-2006 (using PNFA00)	100A/E 2003-2006 (using PFA92C20)	100A/E 1999-2002 (using PNFA00)	100A/E 1999-2002 (using PFA92C20)	100A/E 1995-1998 (using PFA92C20)
51-55	2	42*	100*	187	447	106*
56-60	58	138	270	157	312	325
61-65	405	86	133	91	140	142
66-70	867	88	113	93	120	157
71-75	1,427	84	101	102	123	116
76-80	2,789	85	101	106	126	138
81-85	3,933	97	116	99	118	121
86-90	2,398	101	125	87	107	146
91-95	1,241	110	142	113	146	136
96-100	322	92	127	96	133	94
51-100	13,443	93	115	100	124	133

^{*} Ratio based on fewer than 10 actual deaths.

Table PEN 2.2a. Pensioners, females, early retirements, lives, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PEFL00 table, together with comparisons of 1999-2002 using the PEFL00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the PFL92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using PEFL00)	100A/E 2003-2006 (using PFL92C20)	100A/E 1999-2002 (using PEFL00)	100A/E 1999-2002 (using PFL92C20)	100A/E 1995-1998 (using PFL92C20)	Ratio Early/ Normal [©]
51-55	55	85	445	105	539	484	1.28
56-60	177	93	242	93	243	332	1.22
61-65	329	99	179	106	193	202	1.49
66-70	355	81	126	92	143	193	1.18
71-75	442	81	117	104	149	172	1.14
76-80	750	96	129	99	133	129	1.23
81-85	737	86	109	102	129	125	1.04
86-90	446	94	114	97	117	124	1.01
91-95	226	91	108	104	124	119	0.95
96-100	55	79	97	74	90	92	0.83
51-100	3,572	89	125	100	143	153	1.15

Patio of 100A/E for early retirements to 100A/E for normal retirements 2003-2006 using PFL92C20 as the comparison basis

Table PEN 2.2b. Pensioners, females, early retirements, amounts, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PEFA00 table, together with comparisons of 1999-2002 using the PEFA00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the PFA92 table.

Age group (nearest ages)	Actual deaths 2003-2006 (£000 pa)	100A/E 2003-2006 (using PEFA00)	100A/E 2003-2006 (using PFA92C20)	100A/E 1999-2002 (using PEFA00)	100A/E 1999-2002 (using PFA92C20)	100A/E 1995-1998 (using PFA92C20)	Ratio Early/ Normal ^o
51-55	52	89	512	129	739	672	5.10
56-60	199	100	284	95	270	256	1.05
61-65	404	102	196	93	179	520	1.47
66-70	497	83	129	101	157	175	1.15
71-75	733	95	137	107	154	163	1.35
76-80	768	87	120	95	130	130	1.19
81-85	531	85	113	103	138	110	0.98
86-90	235	111	150	94	127	127	1.20
91-95	64	94	128	125	172	234	0.90
96-100	7	51	72	59	84	110	0.57
51-100	3,489	91	138	101	158	200	1.20

PRatio of 100A/E for early retirements to 100A/E for normal retirements 2003-2006 using PFA92C20 as the comparison basis.

Table PEN 2.3a. Pensioners, females, normal and early retirements combined, lives, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PCFL00 table, together with comparisons of 1999-2002 using the PCFL00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the PFL92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using PCFL00)	100A/E 2003-2006 (using PFL92C20)	100A/E 1999-2002 (using PCFL00)	100A/E 1999-2002 (using PFL92C20)	100A/E 1995-1998 (using PFL92C20)
51-55	61	92	433	107	503	450
56-60	219	96	232	105	257	287
61-65	674	88	143	97	156	165
66-70	956	84	113	97	130	170
71-75	1,364	85	107	104	130	141
76-80	2,470	92	111	101	121	129
81-85	3,508	89	105	97	115	124
86-90	3,029	96	113	100	117	124
91-95	1,997	95	113	104	124	119
96-100	783	94	115	86	105	107
51-100	15,061	91	113	100	124	131

Table PEN 2.3b. Pensioners, females, normal and early retirements combined, amounts, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PCFA00 table, together with comparisons of 1999-2002 using the PCFA00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the PFA92 table.

Age group (nearest ages)	Actual deaths 2003-2006 (£000 pa)	100A/E 2003-2006 (using PCFA00)	100A/E 2003-2006 (using PFA92C20)	100A/E 1999-2002 (using PCFA00)	100A/E 1999-2002 (using PFA92C20)	100A/E 1995-1998 (using PFA92C20)
51-55	54	90	443	122	599	480
56-60	257	108	280	111	290	282
61-65	809	97	158	93	152	273
66-70	1,364	89	118	97	129	162
71-75	2,160	89	111	103	129	124
76-80	3,557	85	104	104	126	137
81-85	4,464	94	115	98	120	120
86-90	2,634	102	127	87	109	145
91-95	1,305	109	141	114	148	141
96-100	329	91	125	96	132	95
51-100	16,932	93	119	100	129	144

Table PEN 2.4a. Pensioners, females, normal retirements, lives, 1992-2006: actual deaths for individual years expressed as a percentage of those expected using the base (2000) rates from the PNFL00 table.

age group (nearest ages)	1992	1993	1994	1995	1996	1997	1998	1999
61-65	202	126	136	108	95	73	126	99
66-70	155	134	142	115	124	137	141	104
71-75	145	123	115	122	103	91	125	109
76-80	125	112	115	124	109	106	105	102
81-85	127	109	108	112	109	105	100	106
86-90	113	103	96	107	111	98	111	105
91-95	110	101	99	107	98	90	107	111
96-100	92	94	94	94	78	98	86	90
61-100	128	111	109	113	106	101	109	105

Age group (nearest ages)	2000	2001	2002	2003	2004	2005	2006
61-65	102	94	63	92	79	69	72
66-70	94	98	102	91	75	82	84
71-75	95	111	98	90	80	86	85
76-80	105	96	102	92	86	89	91
81-85	95	95	90	95	92	87	85
86-90	97	101	98	104	99	93	91
91-95	100	104	101	106	89	88	96
96-100	88	84	87	96	92	95	97
61-100	98	99	96	97	90	88	89

Table PEN 2.4b. Pensioners, females, normal retirements, amounts, 1992-2006: actual deaths for individual years expressed as a percentage of those expected using the base (2000) rates from the PNFA00 table.

Age group (nearest ages)	1992	1993	1994	1995	1996	1997	1998	1999
61-65	178	137	186	97	106	61	143	87
66-70	183	104	104	95	120	135	157	81
71-75	156	143	141	116	96	75	103	93
76-80	94	102	102	126	118	100	132	115
81-85	114	84	125	105	100	91	110	99
86-90	115	98	92	98	144	126	104	84
91-95	112	114	100	131	97	92	105	98
96-100	122	70	73	86	81	78	45	85
61-100	137	111	120	110	111	98	117	97

Age group (nearest ages)	2000	2001	2002	2003	2004	2005	2006
61-65	93	100	79	124	61	71	59
66-70	70	112	129	100	64	97	80
71-75	85	113	124	86	80	82	89
76-80	98	112	101	80	83	84	95
81-85	93	101	103	105	99	102	82
86-90	79	95	88	97	126	89	96
91-95	104	136	109	111	103	99	123
96-100	99	79	122	65	106	101	94
61-100	89	108	105	95	94	92	91

Table PEN 2.5a. Pensioners, females, normal retirements, 2003-2006: exposed to risk, deaths and average pensions.

		Exposed to risk		Deaths			
Age group (nearest ages)	Lives	Amounts (£000 pa)	Average Pension (£pa)	Lives	Amounts (£000 pa)	Average Pension (£pa)	
51-55	1,786	2,564	1,436	6	2	342	
56-60	10,364	12,619	1,218	42	58	1,388	
61-65	75,533	92,380	1,223	345	405	1,174	
66-70	70,365	108,863	1,547	601	867	1,442	
71-75	54,897	97,541	1,777	922	1,427	1,548	
76-80	53,059	102,046	1,923	1,720	2,789	1,621	
81-85	48,733	72,762	1,493	2,771	3,933	1,419	
86-90	25,543	24,947	977	2,583	2,398	928	
91-95	11,138	7,282	654	1,771	1,241	700	
96-100	3,044	1,455	478	728	322	443	
51-100	354,459	522,460	1,474	11,489	13,443	1,170	

Table PEN 2.5b. Pensioners, females, early retirements, 2003-2006: exposed to risk, deaths and average pensions.

		Exposed to risk		Deaths			
Age group (nearest ages)	Lives	Amounts (£000 pa)	Average Pension (£pa)	Lives	Amounts (£000 pa)	Average Pension (£pa)	
51-55	12,636	12,598	997	55	52	949	
56-60	39,743	44,774	1,127	177	199	1,122	
61-65	49,237	63,708	1,294	329	404	1,228	
66-70	35,493	55,381	1,560	355	497	1,401	
71-75	23,446	37,854	1,615	442	733	1,657	
76-80	18,942	24,252	1,280	750	768	1,024	
81-85	12,772	10,293	806	737	531	720	
86-90	4,432	2,069	467	446	235	528	
91-95	1,512	417	276	226	64	284	
96-100	277	53	193	55	7	120	
51-100	198,488	251,399	1,267	3,572	3,489	977	

Table PEN 3.1a. Widows, lives, 2003-2006: actual deaths and ratios of actual deaths to those expected using the WL00 table, together with comparisons of 1999-2002 using the WL00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the WL92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using WL00)	100A/E 2003-2006 (using WL92C20)	100A/E 1999-2002 (using WL00)	100A/E 1999-2002 (using WL92C20)	100A/E 1995-1998 (using WL92C20)
41-50	10	56	207	93	346	161
51-55	17	65	166	115	295	199
56-60	85	123	258	100	209	201
61-65	193	129	221	97	165	142
66-70	363	99	141	93	133	173
71-75	849	93	119	103	132	140
76-80	1,984	101	121	100	120	137
81-85	3,297	105	123	99	116	131
86-90	2,871	107	125	100	117	129
91-95	1,604	103	125	102	123	133
96-100	359	88	113	55	72	103
41-100	11,632	103	125	98	120	136

Table PEN 3.1b. Widows, lives, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PNFL00 table, together with comparisons of 1999-2002 using the PNFL00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the PFL92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using PNFL00)	100A/E 2003-2006 (using PFL92C20)	100A/E 1999-2002 (using PNFL00)	100A/E 1999-2002 (using PFL92C20)	100A/E 1995-1998 (using PFL92C20)
41-50	10	260	671	436	1,127	518
51-55	17	187	400	332	710	485
56-60	85	262	489	213	397	381
61-65	193	226	336	169	249	215
66-70	363	141	178	133	167	217
71-75	849	108	129	120	143	152
76-80	1,984	101	118	100	117	134
81-85	3,297	97	112	91	106	120
86-90	2,871	95	111	89	104	115
91-95	1,604	94	112	93	110	119
96-100	359	86	105	55	67	95
41-100	11,632	100	117	97	114	133

Table PEN 3.1c. Widows, amounts, 2003-2006: actual deaths and ratios of actual deaths to those expected using the WA00 table, together with comparisons of 1999-2002 using the WA00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the WA92 table.

Age group (nearest ages)	Actual deaths 2003-2006 (£000 pa)	100A/E 2003-2006 (using WA00)	100A/E 2003-2006 (using WA92C20)	100A/E 1999-2002 (using WA00)	100A/E 1999-2002 (using WA92C20)	100A/E 1995-1998 (using WA92C20)
41-50	25	74	254	84	295	147
51-55	37	82	193	119	277	140
56-60	169	131	248	98	186	120
61-65	405	144	221	97	149	167
66-70	733	104	135	96	124	148
71-75	1,608	85	101	96	115	129
76-80	3,665	89	104	101	117	137
81-85	6,372	101	120	105	124	138
86-90	5,115	104	127	94	115	156
91-95	2,803	110	141	104	134	137
96-100	417	83	113	50	68	87
41-100	21,349	99	121	98	119	140

Table PEN 3.1d. Widows, amounts, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PNFA00 table, together with comparisons of 1999-2002 using the PNFA00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the PFA92 table.

Age group (nearest ages)	Actual deaths 2003-2006 (£000 pa)	100A/E 2003-2006 (using PNFA00)	100A/E 2003-2006 (using PFA92C20)	100A/E 1999-2002 (using PNFA00)	100A/E 1999-2002 (using PFA92C20)	100A/E 1995-1998 (using PFA92C20)
41-50	25	281	850	328	1,000	493
51-55	37	199	477	287	685	351
56-60	169	238	476	179	360	231
61-65	405	221	339	149	228	257
66-70	733	134	171	123	157	189
71-75	1,608	93	112	105	127	142
76-80	3,665	88	104	99	117	137
81-85	6,372	95	114	99	118	131
86-90	5,115	97	120	88	108	147
91-95	2,803	106	137	100	130	132
96-100	417	85	116	52	72	89
41-100	21,349	98	120	98	120	144

Table PEN 3.2. Widows, 2003-2006: exposed to risk, deaths and average pensions.

		Exposed to risk			Deaths	ns
Age group (nearest ages)	Lives	Amounts (£000 pa)	Average Pension (£pa)	Lives	Amounts (£000 pa)	Average Pension (£pa)
41-50	3,540	8,764	2,476	10	25	2,518
51-55	4,463	10,016	2,245	17	37	2,203
56-60	9,481	22,878	2,413	85	169	1,989
61-65	14,709	35,756	2,431	193	405	2,097
66-70	24,337	58,817	2,417	363	733	2,021
71-75	39,214	97,159	2,478	849	1,608	1,893
76-80	53,729	129,271	2,406	1,984	3,665	1,847
81-85	53,970	117,761	2,182	3,297	6,372	1,933
86-90	28,914	54,969	1,901	2,871	5,115	1,782
91-95	10,446	17,235	1,650	1,604	2,803	1,747
96-100	1,683	2,070	1,230	359	417	1,160
41-100	244,483	554,698	2,269	11,632	21,349	1,835

Table PEN 4.1a. Widowers, lives, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PNML00 table, together with comparisons of 1999-2002 using the PNML00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the PML92 table.

Age group (nearest ages)	Actual deaths 2003-2006	100A/E 2003-2006 (using PNML00)	100A/E 2003-2006 (using PML92C20)	100A/E 1999-2002 (using PNML00)	100A/E 1999-2002 (using PML92C20)	100A/E 1995-1998 (using PML92C20)
61-65	18	232	348	178	267	307*
66-70	30	151	191	118	149	165
71-75	45	101	119	106	124	170
76-80	98	117	135	85	99	108
81-85	105	96	108	62	70	44
86-90	56	73	79	34	37	80
61-90	352	103	117	74	85	110

^{*} Ratio based on fewer than 10 actual deaths.

Table PEN 4.1b. Widowers, amounts, 2003-2006: actual deaths and ratios of actual deaths to those expected using the PNMA00 table, together with comparisons of 1999-2002 using the PNMA00 table and 2003-2006, 1999-2002 and 1995-1998 using the projected rates for calendar year 2020 from the PMA92 table.

Age group (nearest ages)	Actual deaths 2003-2006 (£000 pa)	100A/E 2003-2006 (using PNMA00)	100A/E 2003-2006 (using PMA92C20)	100A/E 1999-2002 (using PNMA00)	100A/E 1999-2002 (using PMA92C20)	100A/E 1995-1998 (using PMA92C20)
61-65	14	142	272	143	272	600*
66-70	27	135	190	126	177	196
71-75	103	205	244	83	99	236
76-80	174	180	206	99	113	170
81-85	131	89	101	149	169	75
86-90	96	82	92	72	80	132
61-90	544	124	143	105	122	159

^{*} Ratio based on fewer than 10 actual deaths.

Table PEN 4.2. Widowers, 2003-2006: exposed to risk, deaths and average pensions.

Age group (nearest ages)	Exposed to risk			Deaths			
	Lives	Amounts (£000 pa)	Average Pension (£pa)	Lives	Amounts (£000 pa)	Average Pension (£pa)	
51-65	1,575	2,581	1,639	24	18	767	
66-70	1,159	1,463	1,263	30	27	895	
71-75	1,446	2,032	1,405	45	103	2,293	
76-80	1,536	2,147	1,398	98	174	1,776	
81-85	1,235	1,847	1,496	105	131	1,244	
86-90	575	864	1,502	56	96	1,709	
91-100	200	448	2,248	30	115	3,848	
51-100	7,724	11,383	1,474	388	664	1,712	

5 THE MORTALITY OF SMOKERS AND NON-SMOKERS 2003-2006

The investigation by the CMI into the comparative mortality of smokers and non-smokers was started on 1 January 1988 and a report on the experience for 1988-1990 was published in *C.M.I.R.*14. Since then, full quadrennial reports have been published alongside the usual analyses of the mortality experience of assured lives, annuitants and pensioners for each subsequent quadrennium. This report covers the experience for 2003-2006.

The offices that contribute data split by smoking status form a subset of all the contributing offices. The number of offices contributing smoker-differentiated data to the various investigations since it was first collected is shown in the table below. The proportion of offices that have been able to provide smoker differentiated data has been steadily increasing, though the actual number of offices that have been able to do so has fallen back in the most recent quadrennium. Of course the changing mix of offices does mean that results should be treated with care.

	Investigation					
Number of offices contributing in period ^φ	Permanent Assurances	Temporary Assurances	Joint Life Assurances	Linked Assurances		
Smoker						
differentiated data						
2003-2006	12(8)	18(12)	5(4)	10(5)		
1999-2002	15(9)	19(12)	7(3)	11(6)		
1995-1998	10(6)	17(9)	5(3)			
1991-1994	9(6)	17(9)	5(3)			
All data						
2003-2006	24(14)	23(14)	8(6)	17(9)		
1999-2002	31(19)	27(16)	13(5)	21(10)		
1995-1998	31(20)	28(18)	11(8)	` ,		
1991-1994	39(31)	35(28)	10(9)			

⁹ For each period the number in brackets is the number of offices that contributed data throughout that period.

Table SMOK 0.1 shows the recent development of the exposed to risk in each of the investigation. This table also demonstrates the increasing proportion of smoker-differentiated data that is being provided by the contributing offices.

The categorisation of the data into 'smoker' and 'non-smoker' is linked primarily to the terms upon which the policies were issued. One possibility is that 'non-smokers' are those where preferential terms have been offered on account of their non-smoking status. This may be a monetary or percentage reduction against the standard premium or the use of an age deduction when determining the premium rate. 'Smokers' are those whose smoking habits do not conform to the criteria for non-smoking terms. Alternatively, 'smokers' may be those for whom a loading is applied to the standard premium that is offered to 'non-smokers'.

The definition of 'non-smoker' may vary from office to office and may have changed over time but it is likely that the majority of this business was written on the basis that the proposer has not smoked cigarettes for at least twelve months prior to the date of the proposal. At the shorter durations a stricter definition may be in use by many offices. For 'smokers' there is no information on the number of cigarettes smoked but very heavy smokers may have been rated or declined, and so potentially fall outside this investigation.

The report includes sections, for both males and females, on the experience of holders of permanent (whole life and endowment) assurances, temporary assurances on single lives, joint life first death assurances and linked assurances.

5.1 Assurances On Male Lives

5.1.1 Permanent assurances

The exposed to risk over the quadrennium was 263,560 in the smoker category and 1,050,781 in the non-smoker category, a ratio of 4.0 to 1 in favour of non-smokers compared with ratios of 3.6 and 3.3 to 1 in 1999-2002 and 1995-1998 respectively. The experience for 2003-2006 using the AMC00 table as a comparison basis is shown in Table SMOK 1.1a. Tables SMOK 1.1b, SMOK 1.1c and SMOK 1.1d show the experiences for, respectively, 2003-2006, 1999-2002 and 1995-1998 using the AM92 table as the comparison basis.

At duration 0 and at duration 1 data volumes have fallen to very low levels and so it is not possible to draw conclusions.

For durations 2 and over the mortality experience has improved slightly since 1999-2002 for non-smokers but is little changed for smokers, leading to an increase in the Excess Mortality Index. Most, but not all, age groups in the non-smoker section have seen improvements in mortality experience since 1999-2002, but the picture is more mixed for smokers. Overall, Table SMOK 1.1.a shows that the mortality of smokers is approximately double that of non-smokers, though the pattern does vary by age, with the 61-75 age group experiencing the greatest differential and those at the youngest and highest ages experiencing the least.

A further feature that should be noted is the underlying change in the amount of exposed to risk between 1999-2002 and 2003-2006. Table ASS 0.1 shows a reduction of 52% in the exposed to risk of the main males assured lives investigation whilst SMOK 0.1 shows the equivalent smoker and non-smoker experience exposed to risk decreasing by a little less than this at 50% and 43% respectively. The lower reduction in non-smoker exposure may be due to the increased proportion of offices that are able to submit smoker differentiated data (as noted earlier) and the way in which smokers' behaviour is influenced by the higher rates. For example, if a policyholder is a non-smoker when they effect their cover they will remain a non-smoker throughout the course of their policy. In contrast, if a policyholder is a smoker at outset and ceases smoking (for at least twelve months) then some companies may re-categorise them as a non-smoker, or the policyholder may lapse and effect new cover as a non-smoker.

5.1.2 Temporary assurances

The exposed to risk for smokers was 670,449 and for non-smokers was 2,519,059, a ratio of 3.8 to 1 compared to 3.9 and 4.4 to 1 in 1999-2002 and 1995-1998 respectively. The results for 2003-2006 are shown in Table SMOK 1.2a using the TMC00 table as the comparison basis. The results for 2003-2006, 1999-2002 and 1995-1998 are shown in Tables SMOK 1.2b, SMOK 1.2c and SMOK 1.2d respectively using the TM92 table as the comparison basis.

At all durations the levels of mortality seen in 2003-2006 in both the smoker and non-smoker experiences have improved over the levels observed in the previous quadrennium, both overall and at most age groups. This feature has been observed in previous reports. At duration 0 and at durations 5 and over the mortality differential between smokers and non-smokers, as measured by the Excess Mortality Index, is higher in 2003-2006 than in 1999-2002. At durations 1 to 4 the reverse is true with the Excess Mortality Index being lower in 2003-2006.

5.1.3 Joint life first death assurances

This investigation comprises joint-life-first-death whole life, endowment assurance and temporary assurance policies issued upon one male and one female life. Contributing offices are asked to categorise each life separately according to its own declared smoking habits. In theory, therefore, the male and female combined experience should contain the same amount of in force, while smoker and non-smoker volumes may vary between the sexes – and this is borne out in practice with only very small differences being observed between the male and female combined exposures.

The exposed to risk for smokers was 198,821 and for non-smokers was 621,249, a ratio of 3.1 to 1 compared to 3.0 and 3.3 to 1 in 1999-2002 and 1995-1998 respectively. The experience for 2003-2006 is shown in Table SMOK 1.3a using the AMC00 table as the comparison basis. Tables SMOK 1.3b, SMOK 1.3c and SMOK 1.3d show the experience for 2003-2006, 1999-2002 and 1995-1998, respectively, using the AM92 table as the comparison basis.

At durations 2 and over there has been little change between 1999-2002 and 2003-2006 in both the overall level of mortality for smokers and non-smokers and in the Excess Mortality Index, though the pattern by age group is mixed. As with the permanent assurance experience, the mortality of smokers overall is approximately double that of non-smokers.

At duration 0 and at duration 1 the experience is too small to draw firm conclusions.

5.1.4 Linked assurances

The exposed to risk for smokers was 128,673 and for non-smokers was 537,766, a ratio of 4.2 to 1 compared to 3.8 to 1 in 1999-2002. The experience for 2003-2006 using the AMC00 table as the comparison basis is shown in Table SMOK 1.4a. The experience for 2003-2006 and 1999-2002 using the AN92 table as the comparison basis are shown in Tables SMOK 1.4b and SMOK 1.4c respectively.

At durations 2 and over the mortality of smokers has worsened overall and that of non-smokers has improved overall since 1999-2002, widening the differential between smokers and non-smokers to a level similar to that observed in the permanent and joint life experiences. However, the pattern by age group, particularly for smokers, is somewhat mixed. At duration 0 and at duration 1 the experience is small and little can be said.

5.1.5 Combined experience

Table SMOK 1.5a shows the aggregated experience of 2003-2006 for the four investigations described in 1.1 to 1.4. The comparison basis is the AMC00 table. Tables SMOK 1.5b and SMOK 1.5c show the equivalent information for 2003-2006 and 1999-2002, but use the AM92 table as the comparison basis. Clearly care should be taken in interpreting these tables since they are comprised of differing underlying datasets, however the committee felt that it would be useful to maximise the data available to produce "composite" Excess Mortality Indexes.

5.2 ASSURANCES ON FEMALE LIVES

5.2.1 Permanent assurances

The exposed to risk for smokers was 209,938 and for non-smokers was 917,009. The ratio of exposed to risk of the non-smoker category to the smoker category is 4.4 to 1 in favour of non-smokers. The corresponding ratio was 4.1 to 1 in 1999-2002 and 3.9 to 1 in 1985-1998. The experience for 2003-2006 is shown in Table SMOK 2.1a using the AFC00 table as the comparison basis. Tables SMOK 2.1b, SMOK 2.1c and SMOK 2.1d respectively show the experience for 2003-2006, 1999-2002 and 1995-1998 using the AF92 table as the comparison basis.

When comparing the experience at durations 2 and over it can be seen that, overall, the mortality of non-smokers has remained relatively stable while that of smokers has gradually worsened over the three quadrennia considered, though the pattern by age group is mixed. The Excess Mortality Index has consequently increased in each of the last two quadrennia and is now significantly higher than the equivalent male experience, which is also true for virtually all age groups. The 2003-2006 mortality experience is relatively higher for females (compared to AFC00) than for males (compared to AMC00) for smokers, but the relative levels are similar for non-smokers.

At durations 0 and 1 data volumes are too low to draw conclusions.

5.2.2 Temporary assurances

The exposed to risk for smokers was 554,505 and for non-smokers was 2,229,773, a ratio of 4.0 to 1 compared to 4.0 to 1 in 1999-2002 and 4.3 to 1 in 1995-1998. The results are shown in Table SMOK 2.2a for 2003-2006 using the TFC00 table as the comparison basis. Tables SMOK 2.2b, SMOK 2.2c and SMOK 2.2d show the results for 2003-2006, 1999-2002 and 1995-1998 respectively using the TF92 table as the comparison basis.

Significant improvements in mortality in 2003-2006 have arisen at all durations for non-smokers when compared with 1999-2002. For smokers, however, there has been an improvement only at duration 0 and durations 1 to 4, with durations 5 and over experiencing deteriorating mortality. The Excess Mortality Index at durations 5 and over has increased significantly since the last quadrennium, and shows that the mortality of smokers was, overall, a little over double that of non-smokers. For duration 0 and durations 1 to 4 the differential is even greater though, particularly at duration 0, this is based on less data.

In contrast to the permanent assurances, the ultimate duration Excess Mortality Index for females is below that for the equivalent male experience.

5.2.3 Joint life first death assurances

The exposed to risk for smokers was 151,310 and for non-smokers was 669,199, a ratio of 4.4 to 1 compared to 4.4 to 1 in 1999-2002 and 4.7 to 1 in 1995-1998. The results for 2003-2006 are shown in Table SMOK 2.3a. The comparison basis is the AFC00 table. The results for 2003-2006, 1999-2002 and 1995-1998 using the AF92 table as a comparison basis are shown in Tables SMOK 2.3b, SMOK 2.3c and SMOK 2.3d respectively.

At durations 2 and over, the 2003-2006 mortality experience is broadly similar to that of the previous two quadrennial, though the Excess Mortality Index has gradually widened such that the overall mortality experience of smokers is now a little over double that of non-smokers. At duration 0 and at duration 1 the experience is too small to draw conclusions.

5.2.4 Linked assurances

The exposed to risk for smokers was 102,234 and for non-smokers was 441,185, a ratio of 4.3 to 1 compared to 3.9 to 1 in 1999-2002. The experience for 2003-2006 is shown in Table SMOK 2.4a. The comparison basis is the AFC00 table. The experiences for 2003-2006 and 1999-2002 are shown in Tables SMOK 2.4b and SMOK 2.4c respectively, with the comparison basis being the AF92 table.

The experience at durations 2 and over has generally worsened since 1999-2002 for both smokers and non-smokers, though remains lighter than that observed for the permanent assurances. The Excess Mortality Index has narrowed a little, though the mortality of smokers remains about twice that of non-smokers overall with the greatest differentials occurring in the 56-80 range. However, data volumes are relatively small, particularly at duration 0 and at duration 1 where the results should be treated with caution.

5.2.5 Combined experience

As with the males, the four investigations described in 2.1 to 2.4 have been aggregated, and the results for 2003-2006 are shown in Table SMOK 2.5a. The comparison basis is the AFC00 table. Also shown, in Tables SMOK 2.5b and SMOK 2.5c, are the results for 2003-2006 and 1999-2002 respectively using the AF92 table as the comparison basis.

As was the case with the male experience, care is needed in interpreting these tables due to the differences in the underlying datasets.

5.3 CONCLUSION

Table SMOK 3.1a shows summary results for the 2003-2006 quadrennium using both the relevant "00" and "92" Series tables as comparison bases. Table SMOK 3.1b shows equivalent summaries for 1999-2002 and 1995-1998 (where available) but using only the relevant "92" Series tables as comparison bases. These results are based on the whole age range of data and so in some instances values differ from the totals shown in the separate tables.

The eight experiences making up this investigation are each large enough to provide statistically meaningful results. When examining these experiences and comparing them with the undifferentiated experiences, the different mix of offices and any differences in the average duration of the policies in force must be borne in mind. The conclusion to the 1988-1990 report in *C.M.I.R.* **14** which has been repeated in subsequent quadrennial analyses "that, for this data pool at least, smoking as an indicator is linked to a very serious additional mortality risk" remains inescapable.

SMOK 0.1. Amounts of exposed to risk for the periods 2003-2006, 1999-2002 and 1995-1998 for smokers and non-smokers.

			Exposed to Ri	sk			
Investigation	2003-2006		1999-2002	1999-2002		1995-1998	
Males, smokers		%		%		%	
Permanent, single life assurances	263,560	6.7	522,757	6.3	591,936	5.2	
Temporary assurances	670,449	18.8	491,497	14.9	307,271	9.9	
Joint life assurances	198,821	16.3	315,017	13.6	275,078	9.1	
Linked assurances	128,673	9.8	158,586	9.0			
Females, smokers				%		%	
Permanent, single life assurances	209,938	10.3	414,474	9.4	467,765	9.0	
Temporary assurances	554,505	18.3	409,862	16.0	245,957	12.5	
Joint life assurances	151,310	12.6	236,886	10.3	209,134	7.0	
Linked assurances	102,234	11.4	121,716	9.6			
Males, non-smokers				%		%	
Permanent, single life assurances	1,050,781	26.6	1,855,825	22.3	1,969,309	17.3	
Temporary assurances	2,519,059	70.6	1,918,613	58.3	1,351,892	43.6	
Joint life assurances	621,249	51.0	957,718	41.2	908,053	30.1	
Linked assurances	537,766	41.0	597,908	33.9	,		
Females, non-smokers				%		%	
Permanent, single life assurances	917,009	45.0	1,688,693	38.4	1,823,148	35.0	
Temporary assurances	2,229,773	73.7	1,623,528	63.5	1,063,271	54.0	
Joint life assurances	669,199	55.6	1,036,651	45.0	975,791	32.6	
Linked assurances	441,185	49.2	477,249	37.8	,		

The figures labelled "%" are percentages of the total exposed to risk for the relevant section of the data. The total includes data with no smoker categorisation, so the smoker and non-smoker percentages will sum to less than 100%. The difference reflects the amount of data for which the smoker status is unknown.

SMOK 1.1a. Permanent assurances (non-linked), males, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AMC00 table.

Age group (nearest ages)	Smok	ers	Non-smokers		Excess Mortality	
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)	
Duration 0						
21-80	2	230*	5	134*	72	
Duration 1						
21-80	0	0*	7	87*	-	
Durations 2+						
21-30	5	158*	19	100	58	
31-35	16	174	40	85	105	
36-40	18	75	74	65	15	
41-45	63	156	142	80	95	
46-50	84	146	169	73	100	
51-55	156	160	283	82	95	
56-60	280	157	457	80	96	
61-65	333	172	386	68	153	
66-70	302	177	442	75	136	
71-75	414	182	625	75	143	
76-80	330	171	717	83	106	
81-85	171	145	714	93	56	
86-90	65	159	328	96	66	
21-90	2,237	165	4,396	80	106	

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

SMOK 1.1b. Permanent assurances (non-linked), males, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AM92 table.

Age group (nearest	Smok	ters	Non-smo	Non-smokers		
ages)	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)	
Duration 0						
21-80	2	179*	5	105*	70	
Duration 1						
21-80	0	0*	7	69*	-	
Durations 2+						
21-30	5	139*	19	87	60	
31-35	16	158	40	77	105	
36-40	18	67	74	58	16	
41-45	63	132	142	68	94	
46-50	84	117	169	58	102	
51-55	156	123	283	63	95	
56-60	280	119	457	61	95	
61-65	333	130	386	51	155	
66-70	302	137	442	58	136	
71-75	414	144	625	59	144	
76-80	330	140	717	68	106	
81-85	171	122	714	78	56	
86-90	65	139	328	85	64	
21-90	2,237	131	4,396	64	105	

^φ The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

^{*} Ratio based on fewer than 10 actual deaths.

^{*} Ratio based on fewer than 10 actual deaths.

SMOK 1.1c. Permanent assurances (non-linked), males, full underwriting, 1999-2002: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AM92 table.

Age group (nearest ages)	Smok	ers	Non-sme	Non-smokers	
	Actual deaths	100A/E	Actual deaths	100A/E	$\frac{\text{Index}^{\Phi}}{\text{(per cent)}}$
Duration 0					
21-80	42	145	62	62	134
Duration 1					
21-80	82	145	131	68	113
Durations 2+					
21-30	27	159	71	78	104
31-35	46	141	106	75	88
36-40	58	111	163	76	46
41-45	90	123	206	74	66
46-50	178	143	271	66	117
51-55	341	133	432	57	133
56-60	521	138	634	64	116
61-65	515	120	704	60	100
66-70	465	132	686	60	120
71-75	485	137	839	64	114
76-80	326	139	813	73	90
81-85	154	136	508	84	62
86-90	55	92	256	94	-2
21-90	3,261	132	5,689	67	97

^φ The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

SMOK 1.1d. Permanent assurances (non-linked), males, full underwriting, 1995-1998: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AM92 table.

Age group (nearest ages)	Smok	ers	Non-sm	Non-smokers		
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)	
Duration 0						
21-80	128	180	189	90	100	
Duration 1						
21-80	170	167	278	83	101	
Durations 2+						
21-30	31	100	135	87	15	
31-35	47	125	144	94	33	
36-40	71	150	134	75	100	
41-45	97	133	170	71	87	
46-50	206	135	312	72	88	
51-55	376	146	478	74	97	
56-60	494	137	592	65	111	
61-65	522	132	704	67	97	
66-70	434	147	658	69	113	
71-75	335	142	691	73	95	
76-80	181	142	451	75	89	
81-85	102	118	312	93	27	
86-90	47	120	95	82	46	
21-90	2,943	138	4,876	73	89	

^φ The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

SMOK 1.2a. Temporary assurances, males, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the TMC00 table.

Age group (nearest ages)	Smok	ters	Non-sm	nokers	Excess Mortality
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)
Duration 0					
26-40	25	111	41	68	63
41-55	42	116	76	55	111
56-70	29	215	38	40	438
26-70	96	133	155	53	151
Durations 1-4					
26-35	34	92	75	73	26
36-40	40	96	97	72	33
41-45	65	128	117	61	110
46-50	77	142	126	57	149
51-55	93	159	165	62	156
56-60	62	122	184	56	118
61-65	46	175	116	54	224
66-70	28	214	88	59	263
71-75	15	216	76	72	200
26-75	460	136	1,044	61	123
Durations 5+					
26-35	11	106	26	86	23
36-40	20	92	41	54	70
41-45	36	111	106	77	44
46-50	85	193	150	70	176
51-55	107	173	216	69	151
56-60	127	146	336	69	112
61-65	95	142	266	69	106
66-70	35	125	129	60	108
71-75	30	173	80	47	268
26-75	546	148	1,350	67	121

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

SMOK 1.2b. Temporary assurances, males, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the TM92 table.

Age group (nearest ages)	Smok	ters	Non-sm	okers	Excess Mortality
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)
Duration 0					
26-40	25	59	41	36	64
41-55	42	66	76	31	113
56-70	29	110	38	20	450
26-70	96	72	155	29	148
Durations 1-4					
26-35	34	56	75	45	24
36-40	40	67	97	51	31
41-45	65	89	117	42	112
46-50	77	96	126	39	146
51-55	93	104	165	41	154
56-60	62	80	184	37	116
61-65	46	115	116	35	229
66-70	28	140	88	39	259
71-75	15	149	76	50	198
26-75	460	90	1,044	41	120
Durations 5+					
26-35	11	94	26	76	24
36-40	20	85	41	50	70
41-45	36	99	106	68	46
46-50	85	160	150	58	176
51-55	107	137	216	54	154
56-60	127	114	336	54	111
61-65	95	112	266	55	104
66-70	35	100	129	48	108
71-75	30	140	80	38	268
26-75	546	120	1,350	54	122

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

SMOK 1.2c. Temporary assurances, males, full underwriting, 1999-2002: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the TM92 table.

Age group (nearest ages)	Smok	ters	Non-sm	okers	Excess Mortality
	Actual deaths	100A/E	Actual deaths	100A/E	Index $^{\varphi}$ (per cent)
Duration 0					
26-40	23	78	34	40	95
41-55	37	82	93	53	55
56-70	13	63	53	37	70
26-70	73	77	180	45	71
Durations 1-4					
26-35	32	81	71	66	23
36-40	29	94	65	60	57
41-45	34	101	83	60	68
46-50	53	129	91	51	153
51-55	83	150	152	54	178
56-60	72	148	160	57	160
61-65	45	147	115	50	194
66-70	27	158	87	52	204
71-75	14	155	61	65	138
26-75	389	127	885	56	127
Durations 5+					
26-35	13	84	41	76	11
36-40	33	139	65	70	99
41-45	49	125	113	68	84
46-50	92	143	177	63	127
51-55	146	141	325	66	114
56-60	153	135	348	65	108
61-65	113	132	313	71	86
66-70	51	137	117	53	158
71-75	27	133	75	59	125
26-75	677	135	1,574	65	108

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

SMOK 1.2d. Temporary assurances, males, full underwriting, 1995-1998: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the TM92 table.

Age group (nearest ages)	Smol	kers	Non-sm	okers	Excess Mortality
	Actual deaths	100A/E	Actual deaths	100A/E	Index $^{\phi}$ (per cent)
Duration 0					
26-40	12	80	33	67	19
41-55	21	93	53	48	94
56-70	13	105	57	73	44
26-70	46	92	143	60	53
Durations 1-4					
26-35	27	108	46	54	100
36-40	14	81	48	67	21
41-45	32	146	61	61	139
46-50	72	222	96	57	289
51-55	58	159	129	63	152
56-60	54	176	115	61	189
61-65	28	131	109	77	70
66-70	35	267	53	63	324
71-75	13	218	39	91	140
26-75	333	163	696	64	155
Durations 5+					
26-35	16	158	24	64	147
36-40	25	158	52	80	98
41-45	29	106	86	73	45
46-50	59	124	158	67	85
51-55	102	165	216	69	139
56-60	83	137	234	70	96
61-65	71	146	187	65	125
66-70	33	141	99	75	88
71-75	15	171	53	79	116
26-75	433	142	1,109	70	103

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

SMOK 1.3a. Joint life first death assurances, males, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AMC00 table.

Age group (nearest ages)	Smol	cers	Non-smo	okers	Excess Mortality	
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)	
Duration 0						
21-70	9	111*	8	34*	226	
Duration 1						
21-70	17	160	12	39	310	
Durations 2+						
31-35	5	88*	8	50*	76	
36-40	26	171	34	69	148	
41-45	46	141	104	88	60	
46-50	81	145	162	84	73	
51-55	121	145	171	68	113	
56-60	162	145	217	70	107	
61-65	177	179	183	75	139	
66-70	78	121	120	70	73	
71-75	55	176	65	72	144	
31-75	751	150	1,064	74	103	

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

SMOK 1.3b. Joint life first death assurances, males, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AM92 table.

Age group (nearest ages)	Smol	Smokers		Non-smokers		
	Actual deaths	100A/E	Actual deaths	100A/E	Index^φ(per cent)	
Duration 0						
21-70	9	86*	8	26*	231	
Duration 1						
21-70	17	133	12	33	303	
Durations 2+						
31-35	5	80*	8	46*	74	
36-40	26	152	34	61	149	
41-45	46	119	104	74	61	
46-50	81	116	162	67	73	
51-55	121	112	171	52	115	
56-60	162	110	217	53	108	
61-65	177	135	183	57	137	
66-70	78	93	120	54	72	
71-75	55	139	65	57	144	
31-75	751	117	1,064	58	102	

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

^{*} Ratio based on fewer than 10 actual deaths.

^{*} Ratio based on fewer than 10 actual deaths.

SMOK 1.3c. Joint life first death assurances, males, full underwriting, 1999-2002: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AM92 table.

Age group (nearest ages)	Smok	ers	Non-sm	Non-smokers		
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)	
Duration 0						
21-70	15	63	35	45	40	
Duration 1						
21-70	26	78	65	60	30	
Durations 2+						
31-35	13	90	31	70	29	
36-40	18	53	87	72	-26	
41-45	60	99	127	60	65	
46-50	125	132	174	59	124	
51-55	201	138	263	64	116	
56-60	207	125	196	48	160	
61-65	213	105	283	57	84	
66-70	147	124	178	63	97	
71-75	49	136	59	58	134	
31-75	1,033	118	1,398	59	100	

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

SMOK 1.3d. Joint life first death assurances, males, full underwriting, 1995-1998: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AM92 table.

Age group (nearest ages)	Smol	kers	Non-sm	Non-smokers	
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)
Duration 0					
21-70	23	82	44	53	55
Duration 1					
21-70	43	115	71	60	92
Durations 2+					
31-35	12	74	36	59	25
36-40	35	114	79	67	70
41-45	70	149	99	58	157
46-50	85	117	166	66	77
51-55	124	143	178	66	117
56-60	167	134	245	75	79
61-65	226	139	261	68	104
66-70	93	133	105	66	102
71-75	18	125	31	59	112
31-75	830	133	1,200	67	99

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

SMOK 1.4a. Linked assurances, males, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AMC00 table.

Age group (nearest ages)	Smol	cers	Non-sm	okers	Excess Mortality
	Actual deaths	100A/E	Actual deaths	100A/E	— Index ^φ (per cent)
Duration 0					
21-75	11	91	43	92	-1
Duration 1					
21-75	27	157	41	61	157
Durations 2+					
31-35	7	120*	23	102	18
36-40	13	98	30	57	72
41-45	24	124	47	54	130
46-50	40	150	92	76	97
51-55	67	180	122	71	154
56-60	93	173	196	77	125
61-65	63	125	169	75	67
66-70	73	173	148	78	122
71-75	63	153	125	78	96
76-80	32	105	84	87	21
31-80	475	148	1,036	75	97

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

SMOK 1.4b. Linked assurances, males, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AM92 table.

Age group (nearest ages)	Smol	cers	Non-sm	okers	Excess Mortality
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)
Duration 0					
21-75	11	70	43	72	-3
Duration 1					
21-75	27	126	41	49	157
Durations 2+					
31-35	7	109*	23	93	17
36-40	13	88	30	51	73
41-45	24	105	47	46	128
46-50	40	120	92	61	97
51-55	67	138	122	55	151
56-60	93	131	196	59	122
61-65	63	95	169	57	67
66-70	73	134	148	60	123
71-75	63	121	125	61	98
76-80	32	85	84	71	20
31-80	475	117	1,036	59	98

^φ The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

^{*} Ratio based on fewer than 10 actual deaths.

^{*} Ratio based on fewer than 10 actual deaths.

SMOK 1.4c. Linked assurances, males, full underwriting, 1999-2002: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AM92 table.

Age group (nearest ages)	Smok	ters	Non-sm	okers	Excess Mortality	
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)	
Duration 0						
21-75	26	121	70	87	39	
Duration 1						
21-75	29	109	76	67	63	
Durations 2+						
31-35	14	117	26	65	80	
36-40	18	96	47	68	41	
41-45	29	116	62	64	81	
46-50	40	114	129	93	23	
51-55	51	97	129	58	67	
56-60	60	105	144	59	78	
61-65	65	126	135	59	114	
66-70	51	121	126	68	78	
71-75	30	85	71	56	52	
76-80	22	117	44	66	77	
31-80	380	109	913	64	70	

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

SMOK 1.5a. All investigations combined, males, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AMC00 table.

Age group (nearest	Smok	ers	Non-sme	okers	Excess Mortality
ages)	Actual deaths	100A/E	Actual deaths	100A/E	- Index ^φ (per cent)
Duration 0					
31-40	27	86	45	52	65
41-50	26	58	59	38	53
51-60	41	107	64	33	224
61-70	21	156	30	30	420
31-70	115	90	198	37	143
Duration 1					
31-40	33	86	58	53	62
41-50	53	94	66	33	185
51-60	55	100	113	41	144
61-70	20	94	57	36	161
31-70	161	94	294	40	135
Durations 2+					
26-30	9	55*	37	67	-18
31-35	56	104	127	70	49
36-40	101	91	243	59	54
41-45	215	127	489	70	81
46-50	342	147	670	69	113
51-55	521	155	908	68	128
56-60	710	147	1,348	69	113
61-65	710	161	1,100	66	144
66-70	505	157	910	68	131
71-75	572	176	963	69	155
76-80	397	163	938	79	106
81-85	203	146	838	90	62
86-90	71	159	372	97	64
26-90	4,412	151	8,943	71	113

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

^{*} Ratio based on fewer than 10 actual deaths.

SMOK 1.5b. All investigations combined, males, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AM92 table.

Age group (nearest	Smok	ers	Non-smo	Non-smokers	
ages)	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)
Duration 0					
31-40	27	65	45	40	63
41-50	26	46	59	30	53
51-60	41	83	64	26	219
61-70	21	119	30	23	417
31-70	115	70	198	29	141
Duration 1					
31-40	33	77	58	48	60
41-50	53	81	66	28	189
51-60	55	78	113	32	144
61-70	20	70	57	27	159
31-70	161	77	294	32	141
Durations 2+					
26-30	9	49*	37	59	-17
31-35	56	95	127	64	48
36-40	101	81	243	53	53
41-45	215	108	489	60	80
46-50	342	118	670	56	111
51-55	521	119	908	52	129
56-60	710	111	1,348	52	113
61-65	710	122	1,100	50	144
66-70	505	121	910	52	133
71-75	572	139	963	54	157
76-80	397	133	938	65	105
81-85	203	123	838	76	62
86-90	71	140	372	85	65
26-90	4,412	120	8,943	57	111

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

^{*} Ratio based on fewer than 10 actual deaths.

SMOK 1.5c. All investigations combined, males, full underwriting, 1999-2002: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AM92 table.

Age group (nearest ages)	Smok	ters	Non-sme	okers	Excess Mortality
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)
Duration 0					
31-40	30	83	42	39	113
41-50	37	79	82	50	58
51-60	46	85	115	50	70
61-70	25	92	69	43	114
31-70	138	84	308	46	83
Duration 1					
31-40	26	77	60	57	35
41-50	43	92	95	54	70
51-60	78	111	136	45	147
61-70	47	101	129	49	106
31-70	194	98	420	49	100
Durations 2+					
26-30	32	99	81	65	52
31-35	104	116	232	73	59
36-40	150	99	405	70	41
41-45	252	113	567	66	71
46-50	473	135	820	64	111
51-55	801	132	1,267	59	124
56-60	999	131	1,446	59	122
61-65	942	117	1,526	59	98
66-70	735	129	1,170	58	122
71-75	603	132	1,090	62	113
76-80	364	135	950	72	88
81-85	167	136	555	81	68
86-90	57	93	270	92	1
26-90	5,679	126	10,379	63	100

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

SMOK 2.1a. Permanent assurances (non-linked), females, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AFC00 table.

Age group (nearest ages)	Smok	ters	Non-sm	Non-smokers	
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)
Duration 0					
21-80	1	196*	0	0*	-
Duration 1					
21-80	4	374*	4	69*	442
Durations 2+					
31-35	5	108*	16	69	57
36-40	16	134	50	85	58
41-45	44	202	92	86	135
46-50	72	207	141	91	127
51-55	118	189	228	93	103
56-60	206	182	284	70	160
61-65	194	183	240	65	182
66-70	244	200	314	66	203
71-75	284	204	403	70	191
76-80	239	186	511	82	127
81-85	163	177	509	86	106
86-90	71	166	366	97	71
31-90	1,656	188	3,154	79	138

^φ The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

SMOK 2.1b. Permanent assurances (non-linked), females, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AF92 table.

Age group (nearest ages)	Smok	ers	Non-smo	Non-smokers	
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)
Duration 0					
21-80	1	169*	0	0*	-
Duration 1					
21-80	4	412*	4	77*	435
Durations 2+					
31-35	5	91*	16	58	57
36-40	16	110	50	69	59
41-45	44	163	92	70	133
46-50	72	169	141	74	128
51-55	118	158	228	77	105
56-60	206	157	284	61	157
61-65	194	163	240	58	181
66-70	244	186	314	62	200
71-75	284	198	403	68	191
76-80	239	188	511	83	127
81-85	163	187	509	91	105
86-90	71	183	366	107	71
31-90	1,656	176	3,154	75	135

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

Ratio based on fewer than 10 actual deaths.

^{*} Ratio based on fewer than 10 actual deaths.

SMOK 2.1c. Permanent assurances (non-linked), females, full underwriting, 1999-2002: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AF92 table.

Age group (nearest ages)	Smok	ers	Non-smo	Non-smokers	
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)
Duration 0					
21-80	32	234	41	74	216
Duration 1					
21-80	70	257	103	97	165
Durations 2+					
31-35	11	67	61	84	-20
36-40	43	146	82	62	135
41-45	54	118	150	76	55
46-50	113	145	237	79	84
51-55	205	139	377	71	96
56-60	310	162	433	67	142
61-65	330	183	418	63	190
66-70	307	172	473	65	165
71-75	333	200	579	81	147
76-80	235	200	527	83	141
81-85	93	163	375	92	77
86-90	55	163	336	111	47
31-90	2,089	168	4,048	76	121

^φ The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

SMOK 2.1d. Permanent assurances (non-linked), females, full underwriting, 1995-1998: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AF92 table.

Age group (nearest ages)	Smok	ters	Non-smo	okers	Excess Mortality
	Actual deaths	100A/E	Actual deaths	100A/E	— Index ^φ (per cent)
Duration 0					
21-80	87	241	141	115	110
Duration 1					
21-80	125	229	205	103	122
Durations 2+					
31-35	26	139	59	73	90
36-40	33	114	89	73	56
41-45	63	132	137	75	76
46-50	154	167	265	80	109
51-55	196	138	342	72	92
56-60	254	156	411	72	117
61-65	251	170	392	70	143
66-70	221	166	337	63	163
71-75	184	183	341	75	144
76-80	102	181	263	83	118
81-85	72	180	248	92	96
86-90	22	127	156	117	9
31-90	1,578	160	3,040	75	113

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

SMOK 2.2a. Temporary assurances, females, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the TFC00 table.

Age group (nearest ages)	Smok	ters	Non-sm	okers	Excess Mortality
-	Actual deaths	100A/E	Actual deaths	100A/E	— Index ^φ (per cent)
Duration 0					
21-65	38	119	53	43	177
Durations 1-4					
31-35	11	115	27	82	40
36-40	20	113	43	61	85
41-45	33	131	54	50	162
46-50	46	158	63	52	204
51-55	37	122	64	51	139
56-60	39	163	57	54	202
61-65	22	201	29	50	302
66-70	11	210	22	61	244
31-70	219	144	359	55	162
Durations 5+					
31-35	4	65*	15	66	-2
36-40	20	120	43	59	103
41-45	41	151	116	84	80
46-50	63	182	139	77	136
51-55	59	159	134	70	127
56-60	47	126	134	76	66
61-65	34	162	62	68	138
66-70	24	211	37	68	210
31-70	292	153	680	73	110

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

^{*} Ratio based on fewer than 10 actual deaths.

SMOK 2.2b. Temporary assurances, females, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the TF92 table.

Age group (nearest ages)	Smol	cers	Non-sm	okers	Excess Mortality
-	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)
Duration 0					
21-65	38	91	53	34	168
Durations 1-4					
31-35	11	52	27	37	41
36-40	20	58	43	31	87
41-45	33	76	54	30	153
46-50	46	103	63	34	203
51-55	37	87	64	37	135
56-60	39	126	57	42	200
61-65	22	157	29	39	303
66-70	11	155	22	45	244
31-70	219	92	359	36	156
Durations 5+					
31-35	4	52*	15	53	-2
36-40	20	98	43	49	100
41-45	41	126	116	70	80
46-50	63	157	139	66	138
51-55	59	140	134	62	126
56-60	47	114	134	69	65
61-65	34	150	62	63	138
66-70	24	201	37	65	209
31-70	292	134	680	64	109

^φ The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

^{*} Ratio based on fewer than 10 actual deaths.

SMOK 2.2c. Temporary assurances, females, full underwriting, 1999-2002: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the TF92 table.

Age group (nearest ages)	Smol	kers	Non-smokers		Excess Mortality
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)
Duration 0					
21-65	27	99	56	58	71
Durations 1-4					
31-35	7	52*	22	48	8
36-40	14	79	32	47	68
41-45	14	71	43	55	29
46-50	28	134	49	58	131
51-55	31	142	50	58	145
56-60	25	164	37	61	169
61-65	11	128	39	101	27
66-70	9	187*	17	66	183
31-70	139	114	289	59	93
Durations 5+					
31-35	11	105	21	47	123
36-40	22	99	82	77	29
41-45	43	127	128	78	63
46-50	54	128	153	78	64
51-55	60	124	144	67	85
56-60	52	136	116	77	77
61-65	35	151	64	71	113
66-70	27	193	42	77	151
31-70	304	131	750	73	79

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

^{*} Ratio based on fewer than 10 actual deaths.

SMOK 2.2d. Temporary assurances, females, full underwriting, 1995-1998: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the TF92 table.

Age group (nearest ages)	Smol	kers	Non-sm	nokers	Excess Mortality
	Actual deaths	100A/E	Actual deaths	100A/E	Index $^{\phi}$ (per cent)
Duration 0					
21-65	22	169	43	84	101
Durations 1-4					
31-35	6	67*	21	53	26
36-40	16	143	29	56	155
41-45	15	115	36	60	92
46-50	24	144	58	81	78
51-55	20	127	49	79	61
56-60	17	153	32	71	115
61-65	11	147	27	86	71
66-70	11	223	18	78	186
31-70	120	134	270	70	91
Durations 5+					
31-35	10	157	20	68	131
36-40	17	136	51	87	56
41-45	26	147	56	66	123
46-50	37	169	100	92	84
51-55	37	182	68	76	139
56-60	28	174	51	77	126
61-65	26	233	33	78	199
66-70	13	209	19	75	179
31-70	194	173	398	79	119

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

^{*} Ratio based on fewer than 10 actual deaths.

SMOK 2.3a. Joint life first death assurances, females, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AFC00 table.

Age group (nearest ages)	Smol	cers	Non-smokers		Excess Mortality
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)
Duration 0					
21-65	7	288*	9	101*	185
Duration 1					
21-65	3	71*	11	71	0
Durations 2+					
31-40	15	110	43	69	59
41-45	32	148	90	81	83
46-50	66	199	145	92	116
51-55	60	139	115	63	121
56-60	75	150	134	69	117
61-65	42	129	79	65	98
66-75	50	181	77	69	162
31-75	340	153	683	73	110

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers - 1).

SMOK 2.3b. Joint life first death assurances, females, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AF92 table.

Age group (nearest ages)	Smok	ters	Non-sm	okers	Excess Mortality
	Actual deaths	100A/E	Actual deaths	100A/E	- Index ^φ (per cent)
Duration 0					
21-65	7	186*	9	66*	182
Duration 1					
21-65	3	61*	11	61	0
Durations 2+					
31-40	15	91	43	56	63
41-45	32	119	90	66	80
46-50	66	162	145	75	116
51-55	60	116	115	52	123
56-60	75	129	134	60	115
61-65	42	115	79	58	98
66-75	50	170	77	65	162
31-75	340	131	683	62	111

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers - 1).

Ratio based on fewer than 10 actual deaths.

Ratio based on fewer than 10 actual deaths.

SMOK 2.3c. Joint life first death assurances, females, full underwriting, 1999-2002: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AF92 table.

Age group (nearest ages)	Smol	kers	Non-sm	nokers	Excess Mortality
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)
Duration 0					
21-65	3	38*	18	55	-31
Duration 1					
21-65	11	95	21	44	116
Durations 2+					
31-40	24	74	108	67	10
41-45	40	106	102	55	93
46-50	75	146	136	60	143
51-55	84	121	185	68	78
56-60	74	113	128	54	109
61-65	86	156	132	66	136
66-75	38	124	86	68	82
31-75	421	123	877	62	98

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

SMOK 2.3d. Joint life first death assurances, females, full underwriting, 1995-1998: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AF92 table.

Age group (nearest ages)	Smok	cers	Non-sm	okers	Excess Mortality	
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)	
Duration 0						
21-65	12	132	17	48	175	
Duration 1						
21-65	24	178	49	91	96	
Durations 2+						
31-40	42	140	114	69	103	
41-45	30	107	111	77	39	
46-50	46	117	118	64	83	
51-55	65	147	130	72	104	
56-60	52	104	109	59	76	
61-65	67	165	93	65	154	
66-75	25	150	55	81	85	
31-75	327	132	730	68	94	

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. $100 \times (100 \text{A/E Smokers} / 100 \text{A/E Non-smokers} - 1)$.

^{*} Ratio based on fewer than 10 actual deaths.

SMOK 2.4a. Linked assurances, females, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AFC00 table.

Age group (nearest ages)	Smol	kers	Non-sm	Non-smokers	
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)
Duration 0					
31-85	6	116*	31	129	-10
Duration 1					
31-85	10	104	53	122	-15
Durations 2+					
31-40	12	116	32	66	76
41-45	15	126	45	74	70
46-50	16	98	54	68	44
51-55	28	125	87	93	34
56-60	47	166	82	77	116
61-65	43	180	75	87	107
66-70	42	183	59	67	173
71-75	41	177	69	72	146
76-80	31	139	54	56	148
81-85	21	113	92	91	24
31-85	296	148	649	76	95

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

SMOK 2.4b. Linked assurances, females, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AF92 table.

Age group (nearest ages)	Smol	kers	Non-sm	nokers	Excess Mortality
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)
Duration 0					
31-85	6	91*	31	111	-18
Duration 1					
31-85	10	105	53	135	-22
Durations 2+					
31-40	12	95	32	54	76
41-45	15	102	45	60	70
46-50	16	80	54	55	45
51-55	28	104	87	78	33
56-60	47	143	82	66	117
61-65	43	161	75	78	106
66-70	42	170	59	62	174
71-75	41	173	69	70	147
76-80	31	141	54	56	152
81-85	21	120	92	96	25
31-85	296	133	649	68	96

^φ The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

^{*} Ratio based on fewer than 10 actual deaths.

^{*} Ratio based on fewer than 10 actual deaths.

SMOK 2.4c. Linked assurances, females, full underwriting, 1999-2002: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AF92 table.

Age group (nearest ages)	Smol	cers	Non-sm	okers	Excess Mortalit
	Actual deaths	100A/E	Actual deaths	100A/E	Index $^{\phi}$ (per cent)
Duration 0					
31-85	10	126	28	85	48
Duration 1					
31-85	13	117	38	84	39
Durations 2+					
31-40	8	45*	42	56	-20
41-45	17	109	46	68	60
46-50	23	116	50	63	84
51-55	38	144	62	65	122
56-60	32	129	55	64	102
61-65	23	114	40	53	115
66-70	21	112	33	42	167
71-75	32	187	46	66	183
76-80	19	133	32	54	146
81-85	12	181	27	62	192
31-85	225	124	433	59	110

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers - 1).

^{*} Ratio based on fewer than 10 actual deaths.

SMOK 2.5a. All investigations combined, females, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AFC00 table.

Age group (nearest ages)	Smok	ters	Non-sm	okers	Excess Mortality
	Actual deaths	100A/E	Actual deaths	100A/E	$\frac{-}{(\text{per cent})}$
Duration 0					
31-50	31	127	41	47	170
51-70	20	115	28	37	211
31-70	51	122	69	42	190
Duration 1					
31-50	39	95	55	36	164
51-70	33	106	66	49	116
31-70	72	100	121	42	138
Durations 2+					
26-30	5	58*	6	19*	205
31-35	22	73	69	58	26
36-40	72	107	183	61	75
41-45	156	143	382	72	99
46-50	245	167	528	76	120
51-55	292	151	611	74	104
56-60	404	161	678	70	130
61-65	332	171	479	66	159
66-70	351	193	481	66	192
71-75	355	196	539	70	180
76-80	281	177	613	78	127
81-85	188	166	634	84	98
86-90	82	163	469	100	63
26-90	2,785	165	5,672	74	123

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

^{*} Ratio based on fewer than 10 actual deaths.

SMOK 2.5b. All investigations combined, females, full underwriting, 2003-2006: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AF92 table.

Age group (nearest ages)	Smok	ers	Non-sm	okers	Excess Mortality
	Actual deaths	100A/E	Actual deaths	100A/E	Index $^{\varphi}$ (per cent)
Duration 0					
31-50	31	78	41	29	169
51-70	20	97	28	31	213
31-70	51	85	69	30	183
Duration 1					
31-50	39	77	55	29	166
51-70	33	110	66	52	112
31-70	72	89	121	38	134
Durations 2+					
26-30	5	52*	6	17*	206
31-35	22	61	69	49	24
36-40	72	87	183	50	74
41-45	156	115	382	58	98
46-50	245	136	528	62	119
51-55	292	126	611	61	107
56-60	404	139	678	60	132
61-65	332	153	479	59	159
66-70	351	180	481	61	195
71-75	355	191	539	68	181
76-80	281	180	613	79	128
81-85	188	175	634	89	97
86-90	82	179	469	110	63
26-90	2,785	149	5,672	67	122

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

^{*} Ratio based on fewer than 10 actual deaths.

SMOK 2.5c. All investigations combined, females, full underwriting, 1999-2002: actual deaths for smokers and non-smokers and ratios of actual deaths to those expected using the AF92 table.

Age group (nearest ages)	Smokers		Non-sm	Excess Mortality	
	Actual deaths	100A/E	Actual deaths	100A/E	Index ^φ (per cent)
Duration 0					
31-50	24	73	57	50	46
51-70	39	158	66	65	143
31-70	63	109	123	57	91
Duration 1					
31-50	25	68	70	53	28
51-70	74	203	103	71	186
31-70	99	135	173	62	118
Durations 2+					
26-30	11	64	47	68	-6
31-35	37	70	137	62	13
36-40	100	100	299	65	54
41-45	162	108	459	67	61
46-50	287	136	614	69	97
51-55	408	131	812	68	93
56-60	492	147	763	65	126
61-65	483	168	683	64	163
66-70	392	163	628	64	155
71-75	396	197	683	78	153
76-80	262	191	579	77	148
81-85	111	168	420	87	93
86-90	63	165	363	107	54
26-90	3,204	149	6,487	71	110

The percentage by which the Standardised Mortality Ratio for smokers exceeds the corresponding ratio for non-smokers, i.e. 100 x (100A/E Smokers / 100A/E Non-smokers – 1).

^{*} Ratio based on fewer than 10 actual deaths.

SMOK 3.1a. Values of the Excess Mortality Index and ratios of actual deaths to those expected using the relevant "00" or "92" Series tables for the quadrennium 2003-2006.

	Smokers 1	100A/E	Non-smokers 100A/E		Excess Mortality Index	
-	2003-2006 "00" "92"		2003-2006 "00" "92"		2003-2006	
	Series	Series	Series	Series	Series	Series
Permanent assurances, males, all ages ¹						
Duration 0	218*	171*	130*	102*	68	68
Duration 1	0*	0*	83*	67*	-	-
Durations 2 and over	165	131	81	65	104	102
Permanent assurances, females, all ages						
Duration 0	354*	319*	0*	0*	-	-
Duration 1	349*	393*	60*	70*	482	461
Durations 2 and over	186	175	80	77	133	127
Temporary assurances, males, all ages ³						
Duration 0	131	71	53	29	147	145
Durations 1-4	138	92	61	41	126	124
Durations 5 and over	149	121	68	55	119	120
Temporary assurances, females, all ages	s^4					
Duration 0	118	90	42	33	181	173
Durations 1-4	146	92	57	37	156	149
Durations 5 and over	151	133	74	66	104	102
Joint life first death, males, all ages ¹						
Duration 0	111*	86*	38*	29*	192	197
Duration 1	160	133	39	32	310	316
Durations 2 and over	151	117	73	57	107	105
Joint life first death, females, all ages ²						
Duration 0	288*	186*	101*	65*	185	186
Duration 1	71*	61*	71	61	0	0
Durations 2 and over	153	131	72	62	113	111
Linked assurances, males, all ages ¹						
Duration 0	89	69	100	79	-11	-13
Duration 1	163	131	68	55	140	138
Durations 2 and over	147	116	77	61	91	90
Linked assurances, females, all ages ²						
Duration 0	112*	87*	162	145	-31	-40
Duration 1	110	112	133	155	-17	-28
Durations 2 and over	146	133	81	75	80	77

^{*} Ratio based on fewer than 10 actual deaths.

¹ Expected deaths based on the AMC00/AM92 tables.

² Expected deaths based on the AFC00/AF92 tables.

Expected deaths based on the TMC00/TM92 tables.

Expected deaths based on the TFC00/TF92 tables.

SMOK 3.1b. Values of the Excess Mortality Index and ratios of actual deaths to those expected using the relevant "92" Series tables for the quadrennia 1999-2002 and 1995-1998.

	Smokers 100A/E		Non-smokers 100A/E		Excess Mortality Index	
	1999-2002	1995-1998	1999-2002	1995-1998	1999-2002	1995-1998
Permanent assurances, males, all ag	ges ¹					
Duration 0	143	180	61	90	134	100
Duration 1	143	166	68	83	110	100
Durations 2 and over	131	137	67	73	96	88
Permanent assurances, females, all	ages ²					
Duration 0	232	240	77	117	201	105
Duration 1	255	226	98	102	160	122
Durations 2 and over	167	159	77	76	117	109
Temporary assurances, males, all a	ges ³					
Duration 0	81	90	45	60	80	50
Durations 1-4	126	162	56	64	125	153
Durations 5 and over	135	142	66	70	105	103
Temporary assurances, females, all	ages ⁴					
Duration 0	98	157	58	76	69	107
Durations 1-4	109	131	56	69	95	90
Durations 5 and over	136	175	73	78	86	124
Joint life first death, males, all ages	1					
Duration 0	63	82	44	54	43	52
Duration 1	80	114	61	59	31	93
Durations 2 and over	118	132	59	68	100	94
Joint life first death, females, all ago	es ²					
Duration 0	37*	141	53	50	-30	182
Duration 1	94	182	42	88	124	107
Durations 2 and over	123	132	62	69	98	91
Linked assurances, males, all ages ¹						
Duration 0	123	-	90	-	37	-
Duration 1	109	-	68	-	60	-
Durations 2 and over	109	-	64	-	70	-
Linked assurances, females, all ages	s^2					
Duration 0	130	-	102	-	27	-
Duration 1	111	-	93	-	19	-
Durations 2 and over	125	-	61	-	105	-

^{*} Ratio based on fewer than 10 actual deaths.

Expected deaths based on the AM92 table.

² Expected deaths based on the AF92 table.

Expected deaths based on the TM92 table.

⁴ Expected deaths based on the TF92 table.