

**TRANSACTIONS OF SOCIETY OF ACTUARIES
1991-92 REPORTS**

REPORT OF THE
INDIVIDUAL ANNUITY EXPERIENCE COMMITTEE

I. MORTALITY UNDER INDIVIDUAL IMMEDIATE ANNUITIES,
LIFE INCOME SETTLEMENTS, AND MATURED DEFERRED
ANNUITIES BETWEEN 1976 AND 1986 ANNIVERSARIES

This report presents the 1976–86 mortality experience of eight large life insurance companies for contracts issued in the U.S. through 1985 under:

- (1) Individual immediate annuities
- (2) Life income settlements arising out of death claims, subdivided into payee and nonpayee elections
- (3) Life income settlements arising out of maturities and surrenders of life insurance policies
- (4) Matured deferred annuities.

No life insurance company has contributed experience for all 10 years and the range of years submitted varies by company.

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A. INDIVIDUAL IMMEDIATE ANNUITIES

This section of the report examines mortality between 1976 and 1986 contract anniversaries under individual immediate annuities issued during 1931–1985. Previous Society of Actuaries reports on individual immediate annuities are listed below:

- 1946–48 anniversaries: *TSA I*, pp. 606–616
- 1948–53 anniversaries: *TSA 1954 Reports*, pp. 36–61
- 1953–58 anniversaries: *TSA 1959 Reports*, pp. 67–102
- 1958–63 anniversaries: *TSA 1964 Reports*, pp. 80–99
- 1963–67 anniversaries: *TSA 1969 Reports*, pp. 5–62
- 1967–71 anniversaries: *TSA 1973 Reports*, pp. 59–126
- 1971–76 anniversaries: *TSA 1979 Reports*, pp. 63–89

The most recent report covered mortality experience from 1971 to 1976 contract anniversaries. Since that time, the 1983 Individual Annuity Mortality (IAM) Table has been published based on the 1971–1976 experience projected to 1983. This report examines the adequacy of the 1983 IAM Table (1983 Table A).

The ten-year period was chosen for this study to consolidate the information provided through the years and not provided in previous reports. This study includes contributions of only eight companies. The Individual Annuity Experience Committee hopes that the publication of this data will encourage other companies to contribute in the future.

The user of these tables should note that there are significant differences in percentage of exposures from the various companies for different annuity types. Consequently, variations in mortality experience by type of annuity may be a result of different companies submitting the predominant exposure for each type, rather than a reflection of underlying mortality characteristics, or may be due to a change in the relative weights of experience as between earlier and later periods.

In this report, both refund and nonrefund annuities are included. Contracts providing for either a cash or an installment refund payment and annuities with a period certain are classified as refund annuities.

As in previous studies, the following types of annuities were excluded:

- (a) Annuities issued in conjunction with single-premium insurance without evidence of insurability or those providing at all times for the payment of virtually the entire consideration as a death benefit
- (b) Medically impaired lives with special rate concessions

- (c) Temporary annuities
- (d) Joint and survivor annuities (and annuities covering single survivors of contracts originally issued on a joint basis)
- (e) Deferred annuities both before and after the end of the deferred period (matured deferred annuities are covered later in this report)
- (f) Annuities under group annuity contracts, variable annuities, structured settlements (a separate structured settlement mortality study is contained in this report), workers compensation and LTD (long-term disabled) annuities.

This study is based on attained age, which is defined as age at issue plus contract year minus one. Age at issue is taken as the age nearest birthday on the issue date of the contract or some reasonable approximation to that age. Experience is reported by the use of ratios of actual to expected deaths, as based on the 1971 and 1983 IAM Tables. For each of these tables, separate expected death rates are used for males and females. The α -1949 Ultimate Table, without projection, which had been used in previous studies, was not used in this study for the calculation of expected deaths.

Table A of the appendix contains the names of the eight contributing companies and their proportionate contributions to the experience based on amounts of annual income.

This study is based upon exposure of 364,518 contract-years and \$601,942,993 annual income-years. Of these, 18,546 contracts involving \$24,740,186 of annual income were terminated by death.

An analysis of the exposures by sex and type of annuity is given in Table B of the appendix. Refund annuities account for 76 percent of total exposure by amount of annual income, as opposed to 74 percent of total exposure and 63 percent of total exposure in the two previous studies reflecting a definite trend toward refund annuity forms. Annuities issued on females accounted for 51 percent of the total exposure by amount of annual income compared to 60 percent of the total and 63 percent of the total in the two previous studies. The next table represents the amounts of annual income derived from the first contract-year exposures in the six most recent intercompany studies.

Experience	Nonrefund		Refund	
	Male	Female	Male	Female
1953-58	\$ 760	\$ 507	\$ 529	\$ 427
1958-63	903	849	779	659
1963-67	1,403	1,150	1,126	967
1967-71	1,600	1,247	1,278	1,020
1971-76	1,674	1,577	1,593	1,289
1976-86	3,710	2,393	2,621	2,114

Experience by Attained Age

Tables 1 and 2 present attained age mortality ratios for nonrefund and refund annuities separately, based upon the 1971 and the 1983 IAM Tables. The main features of the 1976-86 experience are the following:

1. Mortality ratios based upon the 1971 table are generally less than 100 percent. The only time they exceed 100 percent is in contract-years 11 and over. Based upon the 1983 table, mortality ratios are usually less than 100 percent for contract-years 1-5 and in excess of 100 percent after contract-year 5.
2. In general, the ratios based on contracts are inconclusive by age, while the ratios by amounts show a decrease with increasing age.
3. A comparison of the ratios based upon the 1971 table shows some excess mortality experienced below age 90 for males and below age 80 for females.
4. Ratios under refund annuities are generally lower than ratios under non-refund annuities. This is counter to expectations and prior trends. This can possibly be explained by the marketing emphasis of the companies included in the study. Any pricing advantage derived from higher benefits with nonrefund annuities may be offset by sales training costs or by a reluctance to forfeit the entire annuity premium on early death. The mortality rates for nonrefund annuities are too high to be caused by any one specific item; that is, it may be a general trend towards the intelligent marketplace buying refund annuities and/or lower mortality selection by annuity purchasers or may reflect weighting by period; for example, refund annuities had a preponderance of more recent experience.

Experience by Size of Annuity

Tables 3 and 4 present mortality ratios for nonrefund and refund annuities separately, analyzed by amounts of annual income. In each table, the overall

mortality ratios for annual incomes of \$2,500 and over are lower than the ratios for all income levels combined, although there does not appear to be any significant variation in the ratios by annual income group.

Comparison with Previous Studies

In Tables 5–8, a comparison of experience under individual immediate annuities for successive periods between 1967 and 1986 shows a continuing decrease based upon number of contracts in all contract-years for all groups except for male nonrefund annuities. Compared to the previous report, there has been a significant decrease since 1948 in just about all the mortality categories studied. For most attained age groups, there has been a more rapid decline in the mortality on refund annuities than on nonrefund annuities. Reductions seem to have occurred most in the first five contract-years.

B. LIFE INCOME SETTLEMENTS AND MATURED DEFERRED ANNUITIES

This section of the report covers the intercompany experience under the following three major categories of contracts between 1976 and 1986 anniversaries:

1. Life income settlements arising out of death claims subdivided into (a) payee elections and (b) nonpayee elections. The experience arising from unknown elections has been excluded.
2. Life income settlements arising out of (a) the maturity of endowment or retirement income policies and (b) the cash surrender of insurance or annuity contracts.
3. Maturities of deferred annuity contracts, including maturities at optional retirement dates, with a death benefit prior to maturity and a cash value at maturity substantially equal to the reserve.

Previous studies are listed below.

1945–50 anniversaries: *TSA 1951 Reports*, pp. 19–71

1950–55 anniversaries: *TSA 1956 Reports*, pp. 37–109

1955–60 anniversaries: *TSA 1961 Reports*, pp. 40–82

1960–65 anniversaries: *TSA 1966 Reports*, pp. 191–247 (supplement)

1965–70 anniversaries: *TSA 1972 Reports*, pp. 57–161

1971–76 anniversaries: *TSA 1979 Reports*, pp. 89–219

Categories one and two include settlements that are regarded as supplementary contracts, even though they may have a rate basis applicable to new annuity issues. The studies for anniversaries prior to 1970 only included

single-life settlements arising from the maturity or surrender of the original contract by the person issued, only if the insured had the option of electing a single-sum settlement equal to the full present value of the life income. This has been changed for studies starting with 1971 anniversaries, including the current study, in which the settlement has been included even if the insured did not have such an option, provided that the policy was issued under a pension trust contract. Tables showing refund life settlement mortality ratios by attained age and duration were not produced due to the sparsity of deaths.

Table 9 compares the overall mortality ratios for life income settlements arising from death claims by number of contracts, amount of annual income separately for guaranteed and nonguaranteed period contracts, and payee and nonpayee elections. The table shows little variation for females with or without a guaranteed period or refund provision, where a significant number of deaths are reported.

Table 10 compares mortality ratios for refund life income settlements from maturities and surrenders by attained ages. These mortality ratios are further broken down between pension trust and nonpension trust business. Table 11 shows mortality ratios by duration group. There were not enough deaths to produce a more detailed breakdown. Ratios appear to decline with age but increase with duration.

Table 12 compares the mortality ratios on annuities with refund and without refund provisions. This table shows that contracts without a refund provision are being selected by the healthier annuitants, and vice versa. This selection is intuitive. The mortality ratios are different by a minimum of 20 percent for most cells.

Tables showing ratios by annual income group were not produced because there were minimal data, and the data showed little change in mortality ratios.

Matured Deferred Annuities

Tables 13 and 14 show the mortality ratios for other than pension trust issues on a refund and nonrefund basis, and pension trust issues on a refund basis, based upon the 1971 and 1983 IAM Tables. Again, aggregate results are shown due to the low number of deaths reported.

Table 15 shows the mortality ratios for other than pension trust issues with a guarantee period and without a guarantee period on the 1971 and 1983 IAM Tables.

Comparisons

Tables 16 and 17 compare mortality ratios of other than pension trust issues, with guaranteed period or refund provision, under payee life income settlement options, matured deferred annuities, and immediate annuities. The lowest mortality is for individual immediate annuities; the highest mortality is for matured deferred annuities. Trends in the aggregate ratios based upon number of contracts and amount of annual income are about equal.

Tables 18 and 19 compare the mortality ratios of pension trust issues, with guaranteed period or refund provision under life income settlements arising from maturities and surrenders, matured deferred annuities, and immediate annuities, based upon the 1971 and 1983 IAM Tables. Again, the lowest mortality ratios are for individual immediate annuities.

Analysis of Pension Status

Table 20 compares pension and nonpension trust refund life income settlement and matured deferred annuities. Pension trust business shows significantly greater mortality for all cells based upon number of contracts.

Adequacy of 1983 IAM Table

The committee that developed the 1983 IAM Table, when it was published, asked that the next experience studies verify its adequacy. As the following mortality percentages show, the table is more than adequate for all types of annuities studied, with very few exceptions. Margins average 12 percent by amount of income and 20 percent by number of contracts. This is with a weighted average year of experience of 1983. It is the current Individual Annuity Experience Committee's recommendation that although the 1983 IAM Table is still adequate, continuing study of the experience from a broader industry base is needed.

INDIVIDUAL IMMEDIATE ANNUITIES		
	Number of Contracts	Amounts of Annual Income
Male		
Nonrefund	131	121
Refund	109	104
Female		
Nonrefund	124	120
Refund	107	103

LIFE INCOME SETTLEMENTS
ARISING FROM DEATH CLAIMS

		Number of Contracts	Amounts of Annual Income
Male	Nonrefund	Nonpayee	127
		Payee	134
	Refund	Nonpayee	125
		Payee	89
Female	Nonrefund	Nonpayee	102
		Payee	112
	Refund	Nonpayee	122
		Payee	120

LIFE INCOME SETTLEMENTS
FROM MATURITIES AND SURRENDERS

		Number of Contracts	Amounts of Annual Income
Male	Refund	Nonpension	117
		Pension	137
	Nonrefund	Nonpension	95
		Pension	109
Female	Refund	Nonpension	105
		Pension	129
	Nonrefund	Nonpension	85
		Pension	89

LIFE INCOME SETTLEMENTS
FROM MATURED DEFERRED ANNUITIES

		Number of Contracts	Amounts of Annual Income
Male	Nonrefund	Nonpension	125
		Pension	145
	Refund	Nonpension	120
		Pension	116
Female	Nonrefund	Nonpension	102
		Pension	164
	Refund	Nonpension	125
		Pension	97

TABLE 1
 NONREFUND ANNUITY MORTALITY RATIOS BY ATTAINED AGE,
 CONTRACT-YEAR GROUP, AND SEX, BASED ON 1971 AND 1983 IAM TABLES,
 FOR ISSUES OF 1931-1985, EXPERIENCE BETWEEN 1976 AND 1986 ANNIVERSARIES

Attained Age	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
Based on 1971 Individual Annuity Mortality Table										
Male										
Under 50....	*	*	*	*	*	*	*	*	*	*
50-59	*	*	*	*	199†	*	*	*	*	59†
60-69	101†	97†	118†	142†	111	116†	59†	89†	238†	104
70-79	85†	91	83	155	123	59†	108	76	214	131
80-89	74†	93	89	118	110	57†	98	72	122	100
90 and Over .	*	37†	92	96	93	*	48†	83	85	81
All.....	82	86	89	115	107	66	90	76	121	100
Female										
Under 50....	*	*	*	*	*	*	*	*	*	*
50-59	*	*	*	*	337†	*	*	*	*	248†
60-69	130†	*	142†	281†	149	76†	*	157†	251†	104
70-79	59†	78†	92	135	115	55†	91†	94	173	125
80-89	55†	73	91	97	94	42†	55	86	99	87
90 and Over .	104†	48†	73	94	93	177†	48†	82	90	89
All.....	73	70	88	99	96	64	60	88	101	92
Based on 1983 Individual Annuity Mortality Table										
Male										
Under 50....	*	*	*	*	*	*	*	*	*	*
50-59	*	*	*	*	283†	*	*	*	*	84†
60-69	136†	126†	155†	187†	147	157†	78†	116†	313†	138
70-79	99†	106	97	178	143	68†	126	88	246	151
80-89	84†	106	101	134	126	65†	112	82	139	114
90 and Over .	*	50†	125	135	130	*	63†	113	119	112
All.....	99	102	107	141	131	79	107	91	149	121
Female										
Under 50....	*	*	*	*	*	*	*	*	*	*
50-59	*	*	*	*	461†	*	*	*	*	338†
60-69	164†	*	175†	349†	185	96†	*	197†	313†	131
70-79	73†	98†	115	170	144	68†	114†	118	217	156
80-89	72†	96	119	128	124	55†	72	114	131	115
90 and Over .	137†	64†	96	120	118	234†	62†	108	116	114
All.....	94	91	114	128	124	83	78	115	130	120

*Fewer than 10 contracts terminated by death.
 †10-49 contracts terminated by death.

TABLE 2

REFUND ANNUITY MORTALITY RATIOS BY ATTAINED AGE,
 CONTRACT-YEAR GROUP, AND SEX, BASED ON 1971 AND 1983 IAM TABLES,
 FOR ISSUES OF 1931-1985, EXPERIENCE BETWEEN 1976 AND 1986 ANNIVERSARIES

Attained Age	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
Based on 1971 Individual Annuity Mortality Table										
Male	*	*	*	*	373†	*	*	*	*	442†
Under 50.....	242†	185†	*	*	184†	116†	125†	*	*	112†
50-59.....	71	76	105	124	85	77	75	87	122	80
60-69.....	74	77	89	93	89	81	70	88	92	85
70-79.....	76	78	88	107	98	72	94	77	99	89
80-89.....	*	73†	81	88	84	*	69†	93	94	87
90 and Over.....	77	78	90	99	91	81	80	85	96	87
All.....										
Female	*	*	1,872†	*	815†	*	*	988†	*	370†
Under 50.....	*	*	356†	*	189†	*	*	281†	*	175†
50-59.....	78	79	129	145	105	75	77	150	164	103
60-69.....	54†	71	84	99	89	56†	86	86	89	84
70-79.....	44†	66	71	82	78	53†	62	70	83	75
80-89.....	46†	51†	68	87	82	35†	50†	66	87	74
90 and Over.....	58	68	80	88	83	59	68	81	87	80
All.....										
Based on 1983 Individual Annuity Mortality Table										
Male	*	*	*	*	433†	*	*	*	*	508†
Under 50.....	345†	264†	*	*	263†	164†	177†	*	*	158†
50-59.....	95	98	136	163	111	104	97	112	161	105
60-69.....	87	90	105	107	103	96	82	103	106	99
70-79.....	87	89	100	121	111	81	107	88	113	101
80-89.....	*	98†	109	123	115	*	93†	126	131	119
90 and Over.....	94	95	107	118	109	100	98	101	114	104
All.....										
Female	*	*	2,250†	*	976†	*	*	1,193†	*	442†
Under 50.....	*	*	490†	*	260†	*	*	390†	*	242†
50-59.....	99	97	158	180	130	96	95	186	204	129
60-69.....	67†	89	104	124	111	70†	107	107	112	105
70-79.....	58†	86	93	108	102	70†	81	92	109	98
80-89.....	61†	67†	88	111	106	46†	65†	86	113	96
90 and Over.....	74	87	103	113	107	75	87	104	113	103
All.....										

*Fewer than 10 contracts terminated by death.

†10-49 contracts terminated by death.

TABLE 3

NONREFUND ANNUITY MORTALITY RATIOS BY INCOME GROUP,
 CONTRACT-YEAR GROUP, AND SEX, BASED ON 1971 AND 1983 IAM TABLES,
 FOR ISSUES OF 1931-1985, EXPERIENCE BETWEEN 1976 AND 1986 ANNIVERSARIES

Income Group	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
Based on 1971 Individual Annuity Mortality Table										
Male										
Under \$2,500...	102	84	92	114	109	82	69	86	119	107
\$2,500 and Over	58*	91	83	126	101	63*	96	71	123	95
All	82	86	89	115	107	66	90	76	121	100
Female										
Under \$2,500...	79	73	88	99	97	69	68	87	99	96
\$2,500 and Over	63*	65*	88	96	87	62*	57*	88	104	88
All	73	70	88	99	96	64	60	88	101	92
Based on 1983 Individual Annuity Mortality Table										
Male										
Under \$2,500...	122	100	110	140	133	99	82	104	145	130
2,500 and Over	70*	107	98	155	122	75*	114	85	152	115
All	99	102	107	141	131	79	107	91	149	121
Female										
Under \$2,500...	101	94	114	128	125	89	88	113	128	124
\$2,500 and Over	82*	84*	115	124	113	81*	74*	115	135	115
All	94	91	114	128	124	83	78	115	130	120

*10-49 contracts terminated by death.

TABLE 4
REFUND ANNUITY MORTALITY RATIOS BY INCOME GROUP,
CONTRACT-YEAR GROUP, AND SEX, BASED ON 1971 AND 1983 IAM TABLES,
FOR ISSUES OF 1931-1985, EXPERIENCE BETWEEN 1976 AND 1986 ANNIVERSARIES

Income Group	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
Based on 1971 Individual Annuity Mortality Table										
Male										
Under \$2,500...	73	74	91	100	92	77	79	91	96	90
\$2,500 and Over	83	89	84	93	87	83	81	81	96	85
All	77	78	90	99	91	81	80	85	96	87
Female										
Under \$2,500...	54	67	80	88	84	58	67	80	86	82
\$2,500 and Over	64	74	84	87	80	59	69	83	89	77
All	58	68	80	88	83	59	68	81	87	80
Based on 1983 Individual Annuity Mortality Table										
Male										
Under \$2,500...	90	90	108	118	110	95	96	108	114	108
\$2,500 and Over	102	107	100	111	105	102	98	96	114	102
All	94	95	107	118	109	100	98	101	114	104
Female										
Under \$2,500...	69	85	102	113	107	74	85	102	112	105
\$2,500 and Over	82	95	108	112	103	76	89	106	115	99
All	74	87	103	113	107	75	87	104	113	103

TABLE 5
NONREFUND ANNUITY MORTALITY RATIOS FOR MALE LIVES
BY ATTAINED AGE AND CONTRACT-YEAR GROUP,
BASED ON 1971 AND 1983 IAM TABLES

Attained Age	1971 IAM			1983 IAM
	1967-71	1971-76	1976-86	1976-86
Based on Number of Contracts				
Contract Years 1-5				
Under 60	*	*	*	*
60-69	110	105	99	131
70-79	109	111	89	103
80 and Over	96	89	77	90
All Ages	103	101	85	101
Contract Years 6 and Over				
Under 60	*	296	*	*
60-69	154	140	132	173
70-79	140	122	133	154
80 and Over	115	99	106	131
All Ages	121	106	111	135
All Contract Years				
Under 60	N.A.	232	174	242
60-69	128	121	111	147
70-79	130	119	123	143
80 and Over	112	98	103	127
All Ages	117	105	107	131
Based on Amounts of Annual Income				
Contract Years 1-5				
Under 60	*	*	*	*
60-69	117	119	92	123
70-79	129	115	84	98
80 and Over	87	70	77	90
All Ages	104	93	80	95
Contract Years 6 and Over				
Under 60	*	116	*	*
60-69	153	147	144	189
70-79	145	125	158	182
80 and Over	103	96	98	121
All Ages	111	104	108	132
All Contract Years				
Under 60	N.A.	88	52	72
60-69	126	129	104	138
70-79	136	121	131	151
80 and Over	97	91	93	113
All Ages	108	101	100	121

*Fewer than 10 contracts terminated by death.
N.A.—Not available.

TABLE 6
NONREFUND ANNUITY MORTALITY RATIOS FOR FEMALE LIVES
BY ATTAINED AGE AND CONTRACT-YEAR GROUP,
BASED ON 1971 AND 1983 IAM TABLES

Attained Age	1971 IAM			1983 IAM
	1967-71	1971-76	1976-86	1976-86
Based on Number of Contracts				
Contract Years 1-5				
Under 60	N.A.	*	*	*
60-69	118	97	93	116
70-79	86	77	71	88
80 and Over	80	65	67	87
All Ages	86	72	72	92
Contract Years 6 and Over				
Under 60	N.A.	642	*	*
60-69	175	277	218	268
70-79	137	131	123	155
80 and Over	113	96	95	123
All Ages	116	103	98	126
All Contract Years				
Under 60	N.A.	487	377	509
60-69	143	184	149	185
70-79	121	116	115	144
80 and Over	110	94	93	121
All Ages	113	100	96	124
Based on Amounts of Annual Income				
Contract Years 1-5				
Under 60	N.A.	*	*	*
60-69	102	86	55	69
70-79	65	72	77	96
80 and Over	82	63	57	75
All Ages	77	67	61	80
Contract Years 6 and Over				
Under 60	N.A.	613	*	*
60-69	160	163	194	242
70-79	131	122	144	181
80 and Over	112	93	92	120
All Ages	115	99	98	127
All Contract Years				
Under 60	N.A.	337	284	383
60-69	121	118	104	131
70-79	98	102	125	156
80 and Over	106	87	88	115
All Ages	105	92	92	120

*Fewer than 10 contracts terminated by death.
N.A.—Not available.

TABLE 7
 REFUND ANNUITY MORTALITY RATIOS FOR MALE LIVES
 BY ATTAINED AGE AND CONTRACT-YEAR GROUP,
 BASED ON 1971 AND 1983 IAM TABLES

Attained Age	1971 IAM			1983 IAM
	1967-71	1971-76	1976-86	1976-86
Based on Number of Contracts				
Contract Years 1-5				
Under 60	N.A.	155	243	336
60-69	126	107	74	97
70-79	121	106	76	89
80 and Over	101	91	75	88
All Ages	118	103	78	95
Contract Years 6 and Over				
Under 60	N.A.	244	157	219
60-69	142	140	109	142
70-79	136	131	91	106
80 and Over	117	109	97	116
All Ages	123	118	95	113
All Contract Years				
Under 60	N.A.	198	208	288
60-69	131	116	85	111
70-79	131	123	89	103
80 and Over	114	106	94	112
All Ages	122	114	91	109
Based on Amounts of Annual Income				
Contract Years 1-5				
Under 60	N.A.	138	195	264
60-69	130	99	76	100
70-79	122	109	75	88
80 and Over	97	103	80	94
All Ages	117	105	81	99
Contract Years 6 and Over				
Under 60	N.A.	274	88	120
60-69	132	153	93	121
70-79	142	122	89	104
80 and Over	130	109	91	109
All Ages	134	117	90	107
All Contract Years				
Under 60	N.A.	176	177	240
60-69	131	110	80	105
70-79	132	116	85	99
80 and Over	117	107	88	105
All Ages	125	111	87	104

N.A. — Not available.

TABLE 8
REFUND ANNUITY MORTALITY RATIOS FOR FEMALE LIVES
BY ATTAINED AGE AND CONTRACT-YEAR GROUP,
BASED ON 1971 AND 1983 IAM TABLES

Attained Age	1971 IAM			1983 IAM
	1967-71	1971-76	1976-86	1976-86
Based on Number of Contracts				
Contract Years 1-5				
Under 60	N.A.	191	159	216
60-69	108	116	78	98
70-79	108	102	66	82
80 and Over	83	79	57	74
All Ages	99	94	65	83
Contract Years 6 and Over				
Under 60	236	238	343	465
60-69	128	132	134	166
70-79	123	121	93	116
80 and Over	108	108	81	106
All Ages	112	110	86	110
All Contract Years				
Under 60	222	217	250	340
60-69	117	123	105	130
70-79	118	116	89	111
80 and Over	106	105	79	103
All Ages	109	108	83	107
Based on Amounts of Annual Income				
Contract Years 1-5				
Under 60	N.A.	235	154	207
60-69	118	141	76	95
70-79	108	102	74	91
80 and Over	79	88	54	70
All Ages	96	101	64	82
Contract Years 6 and Over				
Under 60	247	257	338	458
60-69	109	142	155	191
70-79	122	110	88	109
80 and Over	101	101	80	104
All Ages	106	105	85	109
All Contract Years				
Under 60	199	244	207	279
60-69	115	141	103	129
70-79	115	107	84	105
80 and Over	95	98	74	97
All Ages	103	104	80	103

N.A.—Not available.

TABLE 9

MORTALITY RATIOS OF REFUND AND NONREFUND LIFE INCOME SETTLEMENTS
 FROM DEATH CLAIMS, NONPAYEE AND PAYEE ELECTIONS, BY SEX
 BASED ON 1971 AND 1983 IAM TABLES,
 EXPERIENCE BETWEEN 1976 AND 1986 ANNIVERSARIES

	By Number of Contracts				By Amount of Annual Income	
	Males		Females		Males	Females
Based on 1971 Individual Annuity Mortality Table						
With a Guaranteed Period or Refund Provision						
Nonpayee Elections.....	102	(65)	94	(2,370)	84	95
Payee Elections.....	72	(22)	93	(1,150)	64	96
Without a Guaranteed Period or Refund Provision						
Nonpayee Elections.....	108	(6)	79	(173)	319	74
Payee Elections.....	109	(5)	86	(156)	126	81
Based on 1983 Individual Annuity Mortality Table						
With a Guaranteed Period or Refund Provision						
Nonpayee Elections.....	125	(65)	122	(2,370)	103	123
Payee Elections.....	89	(22)	120	(1,150)	80	124
Without a Guaranteed Period or Refund Provision						
Nonpayee Elections.....	127	(6)	102	(173)	369	96
Payee Elections.....	134	(5)	112	(156)	152	106

Note: Number of contracts terminated by death shown in parentheses.

TABLE 10
MORTALITY RATIOS OF REFUND LIFE INCOME SETTLEMENTS
FROM MATURITIES AND SURRENDERS, OTHER THAN PENSION TRUST
AND PENSION TRUST ISSUES, FOR MALE AND FEMALE LIVES BY ATTAINED AGE,
BASED ON 1971 AND 1983 IAM TABLES,
EXPERIENCE BETWEEN 1976 AND 1986 ANNIVERSARIES

Attained Age	Based on Number of Contracts				Based on Amounts of Annual Income			
	1971 IAM Table		1983 IAM Table		1971 IAM Table		1983 IAM Table	
	Male	Female	Male	Female	Male	Female	Male	Female
Other than Pension Trust Issues								
Under 50	*	1,257	*	1,523	*	1,564	*	1,891
50-59	58	111	84	155	73	73	105	103
60-69	94	91	122	112	94	88	123	110
70-79	102	93	119	115	100	98	117	121
80-89	102	79	116	104	104	80	118	105
90 and Over	84	71	115	92	86	69	117	90
All	99	82	117	105	99	84	118	108
Pension Trust Issues								
Under 50	*	*	*	*	*	*	*	*
50-59	*	*	*	*	*	*	*	*
60-69	129	131	167	161	113	101	146	125
70-79	119	110	138	137	109	92	127	115
80-89	115	86	130	113	126	78	143	102
90 and Over	112	112	151	147	107	92	142	120
All	117	101	137	129	116	88	136	112

*Fewer than 10 contracts terminated by death.

TABLE 11

MORTALITY RATIOS OF REFUND LIFE INCOME SETTLEMENTS
 FROM MATURITIES AND SURRENDERS, OTHER THAN PENSION TRUST
 AND PENSION TRUST ISSUES, FOR MALE AND FEMALE LIVES BY DURATION GROUP,
 BASED ON 1971 AND 1983 IAM TABLES,
 EXPERIENCE BETWEEN 1976 AND 1986 ANNIVERSARIES

All Ages	Based on Number of Contracts					Based on Amounts of Annual Income				
	Duration					Durations				
	1-2	3-5	6-10	11 and Over	All Dura- tions	1-2	3-5	6-10	11 and Over	All Dura- tions
Male 1971 IAM Table										
Other than Pension Trust Issues	92	91	97	101	99	88	91	100	101	99
Pension Trust Issues	77	129	113	118	117	50	121	115	120	116
Male 1983 IAM Table										
Other than Pension Trust Issues	121	114	116	118	117	114	113	119	119	118
Pension Trust Issues	100	160	134	137	137	63	148	135	139	136
Female 1971 IAM Table										
Other than Pension Trust Issues	69	88	89	81	82	78	84	87	84	84
Pension Trust Issues	167	81	123	96	101	77	74	114	83	88
Female 1983 IAM Table										
Other than Pension Trust Issues	88	110	111	104	105	99	104	109	109	108
Pension Trust Issues	209	99	152	124	129	97	90	141	106	112

TABLE 12

MORTALITY RATIOS OF REFUND AND NONREFUND LIFE INCOME SETTLEMENTS
FROM MATURITIES AND SURRENDERS, OTHER THAN PENSION TRUST
AND PENSION TRUST ISSUES, BY SEX, BASED ON 1971 AND 1983 IAM TABLES,
EXPERIENCE BETWEEN 1976 AND 1986 ANNIVERSARIES

	By Number of Contracts				By Amount of Annual Income	
	Males		Females		Males	Females
Based on 1971 Individual Annuity Mortality Table						
With a Guaranteed Period of Refund Provision						
Other than Pension Trust	99	(7,786)	82	(5,189)	99	84
Pension Trust	117	(1,682)	101	(542)	116	88
Without a Guaranteed Period of Refund Provision						
Other than Pension Trust	79	(1,524)	66	(3,669)	76	66
Pension Trust	85	(216)	69	(101)	94	70
Based on 1983 Individual Annuity Mortality Table						
With a Guaranteed Period of Refund Provision						
Other than Pension Trust	117	(7,786)	105	(5,189)	118	108
Pension Trust	137	(1,682)	129	(542)	136	112
Without a Guaranteed Period of Refund Provision						
Other than Pension Trust	95	(1,524)	85	(3,669)	92	86
Pension Trust	109	(216)	89	(101)	119	90

Note: Number of contracts terminated by death shown in parentheses.

TABLE 13

MORTALITY RATIOS OF MATURED DEFERRED ANNUITIES, OTHER THAN PENSION TRUST REFUND AND NONREFUND ISSUES, AND PENSION TRUST REFUND ISSUES, FOR MALE AND FEMALE LIVES BY ATTAINED AGE, BASED ON 1971 AND 1983 IAM TABLES, FOR ISSUES OF 1931-85, EXPERIENCE BETWEEN 1976 AND 1986 ANNIVERSARIES

Attained Age	Based on Number of Contracts				Based on Amounts of Annual Income			
	1971 IAM Table		1983 IAM Table		1971 IAM Table		1983 IAM Table	
	Male	Female	Male	Female	Male	Female	Male	Female
Other than Pension Trust Issues—Refund								
Under 50	*	*	*	*	*	*	*	*
50-59	*	835†	*	1,122†	*	283†	*	389†
60-69	106	112	136	135	104	106	134	129
70-79	96	98	113	122	84	93	99	115
80-89	104	92	119	121	112	94	128	123
90 and Over	93	100	128	128	92	101	126	130
All	100	97	120	125	100	97	119	124
Other than Pension Trust Issues—Nonrefund								
Under 50	*	*	*	*	*	*	*	*
50-59	*	*	*	*	*	*	*	*
60-69	126†	*	163†	*	84†	*	109†	*
70-79	130	106	150	132	145	101	167	127
80-89	104	71	119	93	109	80	124	105
90 and Over	86	82	118	105	79	86	107	110
All	102	79	125	102	105	84	126	109
Pension Trust Issues—Refund								
Under 50	*	*	*	*	*	*	*	*
50-59	*	*	*	*	*	*	*	*
60-69	139	99†	180	120†	96	119†	125	146†
70-79	92	95	107	118	71	75	83	94
80-89	97	92	110	120	104	60	118	78
90 and Over	69†	118†	93†	154†	35†	101†	48†	130†
All	98	95	116	121	82	79	97	100

*Fewer than 10 contracts terminated by death.

†10-49 contracts terminated by death.

TABLE 14

MORTALITY RATIOS OF MATURED DEFERRED ANNUITIES, OTHER THAN PENSION TRUST REFUND AND NONREFUND ISSUES, AND PENSION TRUST REFUND ISSUES, FOR MALE AND FEMALE LIVES BY DURATION GROUP, BASED ON 1971 AND 1983 IAM TABLES, FOR ISSUES OF 1931-85, EXPERIENCE BETWEEN 1976 AND 1986 ANNIVERSARIES

All Ages	Based on Number of Contracts					Based on Amounts of Annual Income				
	Duration					Duration				
	1-2	3-5	6-10	11 and Over	All Durations	1-2	3-5	6-10	11 and Over	All Durations
Male 1971 IAM Table										
Other than Pension Trust Issues—Refund	95	97	100	102	100	86	89	89	107	100
Other than Pension Trust Issues—Nonrefund	*	*	97†	103	102	*	*	76†	110	105
Pension Trust Issues—Refund	142†	101	103	91	98	83†	103	66	80	82
Male 1983 IAM Table										
Other than Pension Trust Issues—Refund	121	119	117	121	120	109	109	105	128	119
Other than Pension Trust Issues—Nonrefund	*	*	114†	125	125	*	*	89†	133	126
Pension Trust Issues—Refund	181†	124	120	106	116	103†	124	77	94	97
Female 1971 IAM Table										
Other than Pension Trust Issues—Refund	94	87	81	99	97	98	83	74	101	97
Other than Pension Trust Issues—Nonrefund	*	*	91†	78	79	*	*	70†	85	84
Pension Trust Issues—Refund	102†	71†	94	99	95	86†	56†	71	94	79
Female 1983 IAM Table										
Other than Pension Trust Issues—Refund	116	106	100	128	125	121	102	92	131	124
Other than Pension Trust Issues—Nonrefund	*	*	113†	101	102	*	*	88†	111	109
Pension Trust Issues—Refund	128†	87†	116	127	121	109†	69†	89	120	100

*Fewer than 10 contracts terminated by death.

†10-49 contracts terminated by death.

TABLE 15

MORTALITY RATIOS OF REFUND AND NONREFUND MATURED DEFERRED ANNUITIES,
 OTHER THAN PENSION AND PENSION TRUST ISSUES, BY SEX,
 BASED ON 1971 AND 1983 IAM TABLES,
 EXPERIENCE BETWEEN 1976 AND 1986 ANNIVERSARIES

	By Number of Contracts				By Amount of Annual Income	
	Males		Females		Males	Females
Based on 1971 IAM Table						
With a Guaranteed Period or Refund Provision						
Other than Pension Trust	100	(1,997)	97	(4,474)	100	97
Pension Trust	98	(496)	95	(283)	82	79
Without a Guaranteed Period or Refund Provision						
Other than Pension Trust	102	(476)	79	(1,047)	105	84
Pension Trust	122	(71)	126	(111)	156	146
Based on 1983 IAM Table						
With a Guaranteed Period or Refund Provision						
Other than Pension Trust	120	(1,997)	125	(4,474)	119	124
Pension Trust	116	(496)	121	(283)	97	100
Without a Guaranteed Period or Refund Provision						
Other than Pension Trust	125	(476)	102	(1,047)	126	109
Pension Trust	145	(71)	164	(111)	183	189

Note: Number of contracts terminated by death shown in parentheses.

TABLE 16

COMPARISON OF MORTALITY RATIOS OF CONTRACTS OF OTHER THAN PENSION TRUST ISSUES
WITH GUARANTEED PERIOD OR REFUND PROVISION BY ATTAINED AGE, DURATION GROUP, AND SEX,
BASED ON 1971 IAM TABLE, EXPERIENCE BETWEEN 1976 AND 1986 ANNIVERSARIES

Attained Age	Based on Number of Contracts								Based on Amounts of Annual Income								
	Male				Female				Male				Female				
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	
Durations 1-5	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Under 50	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
50-59	*	*	*	202†	*	*	*	*	*	*	*	123†	*	*	*	*	
60-69	*	96	102	65	*	85	98	72	*	98	95	71	*	86	95	73	
70-79	*	76	81	70	*	85	81	63	*	79	68	65	*	98	88	62	
80-89	*	81†	*	76	*	59†	*	59	*	71†	*	81	*	36†	*	60	
90 and Over	*	*	*	64†	*	*	*	50	*	*	*	60†	*	*	*	44	
All	*	91	96	72	103†	83	89	61	*	90	88	78	93†	82	88	59	
Durations 6-10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Under 50	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
50-59	*	*	*	*	*	*	*	348†	*	*	*	*	*	*	*	310†	
60-69	*	89	165†	103	*	110	167†	134	*	87	145†	111	*	100	128†	139	
70-79	*	97	95	90	97†	85	80	84	*	98	83	92	80†	87	78	89	
80-89	*	125	115†	89	92†	85	*	72	*	133	108†	80	85†	78	*	71	
90 and Over	*	81†	*	81	*	81†	*	68	*	92†	*	94	*	71†	*	66	
All	*	97	100	90	98†	89	81	80	*	100	89	90	93†	87	74	80	
Durations 1-10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Under 50	*	*	*	520†	*	*	*	*	*	*	*	526†	*	*	*	*	
50-59	*	*	*	206†	*	104†	*	223†	*	*	*	119†	*	78†	*	182†	
60-69	*	94	107	76	152†	93	106	99	*	96	99	80	143†	89	98	96	
70-79	*	94	91	85	88†	85	80	78	*	93	77	83	61†	90	81	78	
80-89	*	111	114†	84	98†	76	33†	68	*	113	108†	80	121†	61	39†	66	
90 and Over	*	70†	*	76	*	75†	*	63	*	72†	*	81	*	56†	*	55	
All	*	95	98	84	99	87	84	74	*	96	89	84	93	85	81	70	

Key: A = payee election life income settlements arising from death claims
 B = life income settlements arising from maturities and surrenders other than pension trust issues
 C = matured deferred annuities other than pension trust issues
 D = individual immediate refund annuities other than pension trust issues.

*Fewer than 10 contracts terminated by death.

†10-49 contracts terminated by death.

TABLE 16—Continued

Attained Age	Based on Number of Contracts								Based on Amounts of Annual Income							
	Male				Female				Male				Female			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Durations 11 and Over	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Under 50	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
50-59	*	*	*	*	*	*	1,629†	*	*	*	*	*	*	*	886†	*
60-69	*	81	*	118†	179†	77†	198†	148	*	65	*	112†	183†	77†	273†	177
70-79	*	107	106	96	97	97	113	100	*	106	102	92	119	106	109	89
80-89	*	102	104	108	87	80	93	83	*	103	113	103	87	82	97	85
90 and Over	*	84	93	88	95	71	100	87	*	86	92	98	98	70	102	88
All	76†	101	102	100	92	81	99	88	78†	101	107	99	96	84	101	88
Durations 6 and Over	*	*	*	*	*	*	*	1,149†	*	*	*	*	*	*	*	807†
Under 50	*	*	*	*	*	*	*	1,149†	*	*	*	*	*	*	*	807†
50-59	*	*	*	165†	*	*	1,255†	228†	*	*	*	85†	*	*	611†	291†
60-69	*	87	141†	107	172†	100	178	139	*	83	193†	112	187†	95	178	152
70-79	*	104	100	93	97	93	100	94	*	103	90	92	112	98	94	89
80-89	*	102	104	102	87	80	92	80	*	105	112	93	87	82	94	80
90 and Over	*	84	93	86	95	71	100	85	*	86	92	96	98	70	101	82
All	76†	100	101	96	92	82	97	86	74†	101	103	94	96	85	98	85
All Durations	*	*	*	442†	*	1,257†	*	681†	*	*	*	513†	*	1,564†	*	331†
Under 50	*	*	*	442†	*	1,257†	*	681†	*	*	*	513†	*	1,564†	*	331†
50-59	*	58†	*	184†	*	111†	835†	190†	*	73†	*	116†	*	73†	283†	191†
60-69	*	94	106	80	169†	91	112	110	*	94	104	82	160†	88	106	109
70-79	*	102	96	90	95	93	98	90	*	100	84	85	105	98	93	83
80-89	*	102	104	98	87	79	92	78	*	104	112	90	89	80	94	76
90 and Over	*	84	93	84	95	71	100	83	*	86	92	89	98	69	101	74
All	72†	99	100	91	93	82	97	83	64†	99	100	89	96	84	97	79

Key: A = payee election life income settlements arising from death claims
 B = life income settlements arising from maturities and surrenders other than pension trust issues
 C = matured deferred annuities other than pension trust issues
 D = individual immediate refund annuities other than pension trust issues.

*Fewer than 10 contracts terminated by death.

†10-49 contracts terminated by death.

TABLE 17

COMPARISON OF MORTALITY RATIOS OF CONTRACTS OF OTHER THAN PENSION TRUST ISSUES
WITH GUARANTEED PERIOD OR REFUND PROVISION BY ATTAINED AGE, DURATION GROUP, AND SEX,
BASED ON 1983 IAM TABLE, EXPERIENCE BETWEEN 1976 AND 1986 ANNIVERSARIES

Attained Age	Based on Number of Contracts								Based on Amounts of Annual Income							
	Male				Female				Male				Female			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Durations 1-5																
Under 50	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
50-59	*	*	*	288†	*	*	*	*	*	*	*	174†	*	*	*	*
60-69	*	126	131	85	*	106	118	89	*	128	123	94	*	107	115	92
70-79	*	91	96	82	*	104	99	78	*	93	80	76	*	120	109	78
80-89	*	92†	*	87	*	78†	*	77	*	81†	*	93	*	47†	*	79
90 and Over	*	*	*	86†	*	*	*	65	*	*	*	81†	*	*	*	57
All	*	116	120	88	131†	104	109	79	*	113	109	95	119†	103	108	77
Durations 6-10																
Under 50	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
50-59	*	*	*	*	*	*	*	479†	*	*	*	*	*	*	*	431†
60-69	*	115	212†	133	*	134	203†	165	*	113	186†	145	*	123	157†	173
70-79	*	114	112	105	121†	104	99	105	*	115	97	108	100†	107	96	110
80-89	*	141	130†	101	120†	111	*	94	*	151	122†	91	111†	102	*	93
90 and Over	*	110†	*	110	*	106†	*	89	*	123†	*	127	*	92†	*	86
All	*	116	117	107	125†	111	100	103	*	119	105	107	119†	109	92	103
Durations 1-10																
Under 50	*	*	*	595†	*	*	*	*	*	*	*	604†	*	*	*	*
50-59	*	*	*	295†	*	146†	*	308†	*	*	*	169†	*	109†	*	251†
60-69	*	123	137	99	193†	115	128	123	*	125	127	106	182†	111	119	120
70-79	*	111	107	100	110†	104	99	97	*	110	91	97	76†	110	100	97
80-89	*	125	129†	96	128†	99	43†	89	*	128	123†	92	157†	79	51†	87
90 and Over	*	96†	*	103	*	99†	*	82	*	97†	*	109	*	73†	*	72
All	*	116	118	100	126	108	104	95	*	117	107	101	119	106	100	91

Key: A = payee election life income settlements arising from death claims

B = life income settlements arising from maturities and surrenders other than pension trust issues

C = matured deferred annuities other than pension trust issues

D = individual immediate refund annuities other than pension trust issues.

*Fewer than 10 contracts terminated by death.

†10-49 contracts terminated by death.

TABLE 17—Continued

Attained Age	Based on Number of Contracts								Based on Amounts of Annual Income							
	Male				Female				Male				Female			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Durations 11 and Over	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Under 50	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
50-59	*	*	*	*	*	*	2,125†	*	*	*	*	*	*	*	1,159†	*
60-69	*	105	*	156†	223†	95†	242†	184	*	84	*	148†	227†	95†	338†	220
70-79	*	124	121	111	121	121	141	125	*	123	118	105	149	132	137	112
80-89	*	115	118	123	114	104	122	109	*	117	128	118	115	108	127	111
90 and Over	*	115	128	123	124	92	129	112	*	118	126	136	127	91	131	113
All	93†	118	121	119	120	104	128	114	94†	119	128	118	125	109	131	114
Durations 6 and Over	*	*	*	*	*	*	*	1,380†	*	*	*	*	*	*	*	975†
Under 50	*	*	*	*	*	*	*	1,380†	*	*	*	*	*	*	*	975†
50-59	*	*	*	235†	*	*	1,661†	314†	*	*	*	121†	*	*	814†	402†
60-69	*	113	182†	139	214†	122	218	172	*	108	250†	145	233†	116	218	189
70-79	*	120	116	108	121	116	125	117	*	119	105	107	140	122	117	111
80-89	*	116	119	116	114	104	121	105	*	119	128	106	115	108	124	105
90 and Over	*	115	128	119	123	92	128	109	*	118	126	132	127	91	131	106
All	93†	118	121	114	120	105	126	111	91†	119	122	112	124	109	126	110
All Durations	*	*	*	511†	*	1,523†	*	815†	*	*	*	589†	*	1,891†	*	396†
Under 50	*	*	*	511†	*	1,523†	*	815†	*	*	*	589†	*	1,891†	*	396†
50-59	*	84†	*	263†	*	155†	1,122†	261†	*	105†	*	164†	*	103†	389†	263†
60-69	*	122	136	104	211†	112	135	136	*	123	134	108	201†	110	129	136
70-79	*	119	113	104	119	115	122	112	*	117	99	99	131	121	115	104
80-89	*	116	119	111	115	104	121	102	*	118	128	102	117	105	123	99
90 and Over	*	115	128	115	123	92	128	106	*	117	126	122	127	90	130	96
All	89†	117	120	109	120	105	125	108	80†	118	119	107	124	108	124	102

Key: A = payee election life income settlements arising from death claims
 B = life income settlements arising from maturities and surrenders other than pension trust issues
 C = matured deferred annuities other than pension trust issues
 D = individual immediate refund annuities other than pension trust issues.

*Fewer than 10 contracts terminated by death.

†10-49 contracts terminated by death.

TABLE 18

COMPARISON OF MORTALITY RATIOS OF PENSION TRUST ISSUES WITH GUARANTEED PERIOD
OR REFUND PROVISION BY ATTAINED AGE, DURATION GROUP, AND SEX,
BASED ON 1971 IAM TABLE, EXPERIENCE BETWEEN 1976 AND 1986 ANNIVERSARIES

Attained Age	Based on Number of Contracts						Based on Amounts of Annual Income					
	Male			Female			Male			Female		
	A	B	C	A	B	C	A	B	C	A	B	C
Durations 1-5	*	*	*	*	*	*	*	*	*	*	*	*
Under 50	*	*	*	*	*	*	*	*	*	*	*	*
50-59	*	*	250†	*	*	*	*	*	109†	*	*	*
60-69	121	123	93	122†	89†	89	106	83	81	99†	117†	79
70-79	105†	106†	87	75†	78†	79†	86†	89†	86	40†	36†	108†
80-89	*	*	95†	*	*	*	*	*	105†	*	*	*
90 and Over	*	*	*	*	*	*	*	*	*	*	*	*
All	115	114	93	104†	81†	88	100	95	86	75†	67†	88
Durations 6-10	*	*	*	*	*	*	*	*	*	*	*	*
Under 50	*	*	*	*	*	*	*	*	*	*	*	*
50-59	*	*	*	*	*	*	*	*	*	*	*	*
60-69	141†	198†	114†	123†	*	101†	122†	51†	52†	83†	*	183†
70-79	110	95	88	124	99	82	99	64	79	117	80	76
80-89	108†	113†	78†	*	*	*	146†	72†	61†	*	*	*
90 and Over	*	*	*	*	*	*	*	*	*	*	*	*
All	113	103	89	123	94	83	115	66	72	114	71	93
Durations 1-10	*	*	*	*	*	*	*	*	*	*	*	*
Under 50	*	*	*	*	*	*	*	*	*	*	*	*
50-59	*	*	216†	*	*	*	*	*	102†	*	*	*
60-69	126	130	96	122†	93†	92	110	82	76	95†	116†	95
70-79	109	98	87	114	94	81	96	74	82	98	66	91
80-89	106†	104†	85	*	*	*	146†	110†	84	*	*	*
90 and Over	*	*	*	*	*	*	*	*	*	*	*	*
All	114	108	91	116	89	85	110	83	80	98	69	90

Key: A = payee election life income settlements arising from death claims

B = life income settlements arising from maturities and surrenders other than pension trust issues

C = matured deferred annuities other than pension trust issues.

*Fewer than 10 contracts terminated by death.

†10-49 contracts terminated by death.

TABLE 18—Continued

Attained Age	Based on Number of Contracts						Based on Amounts of Annual Income					
	Male			Female			Male			Female		
	A	B	C	A	B	C	A	B	C	A	B	C
Durations 11 and Over												
Under 50	*	*	*	*	*	*	*	*	*	*	*	*
50-59	*	*	*	*	*	*	*	*	*	*	*	*
60-69	*	208†	*	*	*	*	*	263†	*	*	*	*
70-79	126	83	79	106	96	83	125	62	92	86	91	86
80-89	115	97	98	86	96	62†	124	100	80	77	89	56†
90 and Over	113	68†	88†	112	128†	*	83	31†	65†	92	124†	*
All	118	91	90	96	99	68	120	80	86	83	94	69
Durations 6 and Over												
Under 50	*	*	*	*	*	*	*	*	*	*	*	*
50-59	*	*	*	*	*	*	*	*	*	*	*	*
60-69	150†	204†	122†	152†	124†	100†	133†	180†	61†	111†	127†	163†
70-79	120	89	84	113	97	83	112	63	84	100	85	80
80-89	115	98	94	87	93	59	125	94	74	79	74	56
90 and Over	112	69†	86†	112	120†	*	107	35†	62†	92	104†	*
All	117	94	90	101	98	75	119	74	78	91	84	81
All Durations												
Under 50	*	*	*	*	*	*	*	*	*	*	*	*
50-59	*	*	185†	*	*	*	*	*	98†	*	*	*
60-69	129	139	98	131	99†	92	113	96	77	101	119†	94
70-79	119	92	85	110	95	82	109	71	84	92	75	90
80-89	115	97	94	86	92	59	126	104	82	78	60	47
90 and Over	112	69†	84†	112	118†	*	107	35†	61†	92	101†	*
All	117	98	91	101	95	78	116	82	82	88	79	84

Key: A = payee election life income settlements arising from death claims

B = life income settlements arising from maturities and surrenders other than pension trust issues

C = matured deferred annuities other than pension trust issues.

*Fewer than 10 contracts terminated by death.

†10-49 contracts terminated by death.

TABLE 19

COMPARISON OF MORTALITY RATIOS OF PENSION TRUST ISSUES
WITH GUARANTEED PERIOD OR REFUND PROVISION
BY ATTAINED AGE, DURATION GROUP, AND SEX, BASED ON 1983 IAM TABLE,
EXPERIENCE BETWEEN 1976 AND 1986 ANNIVERSARIES

Attained Age	Based on Number of Contracts						Based on Amounts of Annual Income					
	Male			Female			Male			Female		
	A	B	C	A	B	C	A	B	C	A	B	C
Durations 1-5	*	*	*	*	*	*	*	*	*	*	*	*
Under 50	*	*	357†	*	*	*	*	*	155†	*	*	*
50-59	157	159	122	150†	109†	111	138	108	107	122†	144†	99
60-69	124†	126†	102	93†	97†	97†	101†	105†	101	50†	45†	133†
70-79	*	*	107†	*	*	*	*	*	119†	*	*	*
80-89	*	*	*	*	*	*	*	*	*	*	*	*
90 and Over	*	*	*	*	*	*	*	*	*	*	*	*
All	144	142	115	129†	100†	109	123	116	106	92†	84†	111
Durations 6-10	*	*	*	*	*	*	*	*	*	*	*	*
Under 50	*	*	*	*	*	*	*	*	*	*	*	*
50-59	180†	252†	147†	150†	*	124†	155†	65†	67†	100†	*	224†
60-69	130	111	103	153	122	102	117	75	93	145	99	94
70-79	123†	128†	89†	*	*	*	166†	81†	69†	*	*	*
80-89	*	*	*	*	*	*	*	*	*	*	*	*
90 and Over	*	*	*	*	*	*	*	*	*	*	*	*
All	134	120	105	152	116	103	135	77	85	141	89	116
Durations 1-10	*	*	*	*	*	*	*	*	*	*	*	*
Under 50	*	*	309†	*	*	*	*	*	146†	*	*	*
50-59	162	168	126	150†	114†	114	142	106	100	117†	143†	119
60-69	129	115	102	141	117	100	113	87	97	121	82	113
70-79	120†	117†	96	*	*	*	165†	125†	95	*	*	*
80-89	*	*	*	*	*	*	*	*	*	*	*	*
90 and Over	*	*	*	*	*	*	*	*	*	*	*	*
All	137	130	110	144	110	106	131	99	98	121	86	113

Key: A = payee election life income settlements arising from death claims

B = life income settlements arising from maturities and surrenders other than pension trust issues

C = matured deferred annuities other than pension trust issues.

*Fewer than 10 contracts terminated by death.

†10-49 contracts terminated by death.

TABLE 19—Continued

Attained Age	Based on Number of Contracts						Based on Amounts of Annual Income					
	Male			Female			Male			Female		
	A	B	C	A	B	C	A	B	C	A	B	C
Durations 11 and over												
Under 50	*	*	*	*	*	*	*	*	*	*	*	*
50-59	*	*	*	*	*	*	*	*	*	*	*	*
60-69	*	266†	*	*	*	*	*	335†	*	*	*	*
70-79	145	95	91	133	120	105	143	72	106	108	114	108
80-89	131	110	112	113	125	81†	140	113	91	101	116	72†
90 and Over	152	92†	118†	147	167†	*	111	42†	87†	120	161†	*
All	137	106	105	124	127	87	139	94	100	106	120	87
Durations 6 and Over												
Under 50	*	*	*	*	*	*	*	*	*	*	*	*
50-59	*	*	*	*	*	*	*	*	*	*	*	*
60-69	192†	260†	157†	184†	150†	122†	169†	230†	78†	134†	155†	200†
70-79	139	104	98	141	121	103	130	74	97	124	106	100
80-89	131	111	107	113	122	77	142	107	84	102	97	73
90 and Over	151	93†	115†	147	156†	*	142	48†	83†	120	134†	*
All	137	110	105	129	124	94	138	87	92	116	106	102
All Durations												
Under 50	*	*	*	*	*	*	*	*	*	*	*	*
50-59	*	*	263†	*	*	*	*	*	140†	*	*	*
60-69	167	180	129	161	120†	114	146	125	101	125	146†	117
70-79	138	107	99	137	118	102	127	83	99	115	94	111
80-89	130	110	107	113	120	77	143	118	93	102	78	61
90 and Over	151	93†	112†	147	154†	*	142	48†	82†	120	130†	*
All	137	116	108	129	121	99	136	97	98	112	100	106

Key: A = payee election life income settlements arising from death claims

B = life income settlements arising from maturities and surrenders other than pension trust issues

C = matured deferred annuities other than pension trust issues.

*Fewer than 10 contracts terminated by death.

†10-49 contracts terminated by death.

TABLE 20
 COMPARISON OF MORTALITY RATIOS OF PENSION TRUST
 AND NONPENSION TRUST ANNUITIES BY SEX, FOR CONTRACT YEARS 1-10,
 BASED ON 1971 AND 1983 IAM TABLES,
 EXPERIENCE BETWEEN 1976 AND 1986 ANNIVERSARIES

	Pension Trust Issues		Nonpension Trust Issues	
	Based on Number of Contracts	Based on Amounts of Annual Income	Based on Number of Contracts	Based on Amounts of Annual Income
<i>Based on 1971 IAM Table</i>				
Refund Life Income Settlements Arising from Maturities and Surrenders				
Male Lives	114	110	95	96
Female Lives	116	98	87	85
Refund Matured Deferred Annuities				
Males Lives	108	83	98	89
Female Lives	89	69	84	81
<i>Based on 1983 IAM Table</i>				
Refund Life Income Settlements Arising from Maturities and Surrenders				
Male Lives	137	131	116	117
Female Lives	144	121	108	106
Refund Matured Deferred Annuities				
Males Lives	130	99	118	107
Female Lives	110	86	104	100

TABLE B
EXPOSURES OF TYPE OF ANNUITY AND SEX, FOR ISSUES OF 1931-1986,
EXPERIENCE BETWEEN 1976 AND 1986 ANNIVERSARIES

All Contract Years	Exposures			
	Nonrefund Annuities		Refund Annuities	
	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income
Immediate Annuities				
Male	32,840	63,010,885	110,679	233,650,585
Female	61,310	79,810,054	159,689	225,471,469
Life Income Settlements				
Male	25,751	14,225,760	196,042	163,198,620
Female	80,547	46,620,821	261,108	174,258,660
Deferred Annuities				
Male	5,817	5,875,682	49,092	54,290,073
Female	16,301	8,662,180	90,246	59,133,158

TABLE C-1
DISTRIBUTION OF COMPANIES' AGGREGATE MORTALITY RATIOS
BY NUMBER OF CONTRACTS BASED ON 1971 IAM TABLE

	All Companies Mortality Ratio*	Percentage Points below All Companies Ratio				Percentage Points above All Companies Ratio			
		Over 20	11-20	6-10	0-5	0-5	6-10	11-20	Over 20
Refund Immediate Annuities—Male Lives									
Other Than Pension Trust Issues									
Number of Companies	92%	0	2	0	1	0	1	3	1
Proportion of Contracts Terminated by Death . . .	(3,930)	0	46.13	0	5.52	0	4.96	11.70	31.68
Pension Trust Issues									
Number of Companies	91%	2	0	0	1	0	1	1	3
Proportion of Contracts Terminated by Death . . .	(778)	21.85	0	0	7.46	0	31.88	17.74	21.08
Refund Immediate Annuities—Female Lives									
Other Than Pension Trust Issues									
Number of Companies	84%	1	0	3	0	0	1	3	0
Proportion of Contracts Terminated by Death . . .	(5,813)	4.46	0	46.67	0	0	1.27	47.60	0
Pension Trust Issues									
Number of Companies	79%	2	1	1	0	0	0	0	3
Proportion of Contracts Terminated by Death . . .	(316)	4.43	23.73	22.78	0	0	0	0	49.05

*Number of contracts terminated by death shown in parentheses.

TABLE C-1—Continued

	All Companies Mortality Ratio*	Percentage Points below All Companies Ratio				Percentage Points above All Companies Ratio			
		Over 20	11-20	6-10	0-5	0-5	6-10	11-20	Over 20
Nonrefund Immediate Annuities—Male Lives									
Other Than Pension Trust Issues									
Number of Companies	102%	2	1	0	1	1	1	0	2
Proportion of Contracts Terminated by Death . . .	(2,277)	15.81	11.24	0	17.57	14.14	9.57	0	31.66
Pension Trust Issues									
Number of Companies	141%	3	1	1	1	0	0	0	1
Proportion of Contracts Terminated by Death . . .	(531)	7.72	5.65	9.04	5.84	0	0	0	71.75
Nonrefund Immediate Annuities—Female Lives									
Other Than Pension Trust Issues									
Number of Companies	96%	0	2	2	1	1	0	1	1
Proportion of Contracts Terminated by Death . . .	(4,629)	0	23.35	20.16	12.85	11.49	0	5.40	26.74
Pension Trust Issues									
Number of Companies	112%	3	1	0	0	0	0	2	2
Proportion of Contracts Terminated by Death . . .	(272)	23.90	11.03	0	0	0	0	12.13	52.94

*Number of contracts terminated by death shown in parentheses.

TABLE C-1—Continued

	All Companies Mortality Ratio*	Percentage Points below All Companies Ratio				Percentage Points above All Companies Ratio			
		Over 20	11-20	6-10	0-5	0-5	6-10	11-20	Over 20
Refund Life Income Settlements Arising from Death Claims—Male Lives									
Payee Elections									
Number of Companies	73%	0	2	1	0	0	0	0	1
Proportion of Contracts Terminated by Death . . .	(22)	0	27.27	45.45	0	0	0	0	27.27
Nonpayee Elections									
Number of Companies	103%	0	1	1	0	0	1	1	0
Proportion of Contracts Terminated by Death . . .	(65)	0	20	18.46	0	0	46.15	15.38	0
Refund Life Income Settlements Arising from Death Claims—Female Lives									
Payee Elections									
Number of Companies	93%	1	0	0	0	2	1	0	0
Proportion of Contracts Terminated by Death . . .	(1,150)	7.57	0	0	0	89.22	3.22	0	0
Nonpayee Elections									
Number of Companies	95%	0	0	1	1	2	0	0	0
Proportion of Contracts Terminated by Death . . .	(2,370)	0	0	10.89	34.89	54.22	0	0	0

*Number of contracts terminated by death shown in parentheses.

TABLE C-1—Continued

	All Companies Mortality Ratio*	Percentage Points below All Companies Ratio				Percentage Points above All Companies Ratio			
		Over 20	11-20	6-10	0-5	0-5	6-10	11-20	Over 20
Nonrefund Life Income Settlements Arising from Death Claims—Male Lives									
Payee Elections									
Number of Companies	110%	0	0	0	0	0	0	0	1
Proportion of Contracts Terminated by Death . . .	(5)	0	0	0	0	0	0	0	100
Nonpayee Elections									
Number of Companies	109%	0	1	0	0	0	0	0	1
Proportion of Contracts Terminated by Death . . .	(6)	0	50	0	0	0	0	0	50
Nonrefund Life Income Settlements Arising from Death Claims—Female Lives									
Payee Elections									
Number of Companies	86%	0	0	1	1	0	0	0	2
Proportion of Contracts Terminated by Death . . .	(156)	0	0	67.95	8.97	0	0	0	23.08
Nonpayee Elections									
Number of Companies	80%	0	0	1	0	1	0	0	1
Proportion of Contracts Terminated by Death . . .	(173)	0	0	50.29	0	41.62	0	0	8.09

*Number of contracts terminated by death shown in parentheses.

TABLE C-1—Continued

	All Companies Mortality Ratio*	Percentage Points below All Companies Ratio				Percentage Points above All Companies Ratio			
		Over 20	11-20	6-10	0-5	0-5	6-10	11-20	Over 20
Refund Life Income Settlements Arising from Maturities and Surrenders—Male Lives									
Other Than Pension Trust Issues									
Number of Companies	100%	1	1	1	0	2	1	0	0
Proportion of Contracts Terminated by Death . . .	(7,786)	5.07	7.89	6.22	0	42.77	38.06	0	0
Pension Trust Issues									
Number of Companies	118%	2	0	0	2	1	0	0	1
Proportion of Contracts Terminated by Death . . .	(1,682)	0.71	0	0	45.90	52.97	0	0	0.42
Refund Life Income Settlements Arising from Maturities and Surrenders—Female Lives									
Other Than Pension Trust Issues									
Number of Companies	82%	1	1	0	0	0	2	2	0
Proportion of Contracts Terminated by Death . . .	(5,189)	4.84	22.35	0	0	0	36.31	36.50	0
Pension Trust Issues									
Number of Companies	101%	0	1	1	1	0	0	1	1
Proportion of Contracts Terminated by Death . . .	(542)	0	34.13	0.37	0.37	0	0	60.70	4.43

*Number of contracts terminated by death shown in parentheses.

TABLE C-1—Continued

	All Companies Mortality Ratio*	Percentage Points below All Companies Ratio				Percentage Points above All Companies Ratio			
		Over 20	11-20	6-10	0-5	0-5	6-10	11-20	Over 20
Nonrefund Life Income Settlements Arising from Maturities and Surrenders—Male Lives									
Other Than Pension Trust Issues									
Number of Companies	79%	1	0	1	1	0	0	0	3
Proportion of Contracts Terminated by Death . . .	(1,524)	0.20	0	67.52	13.25	0	0	0	19.03
Pension Trust Issues									
Number of Companies	86%	0	0	1	0	0	0	0	2
Proportion of Contracts Terminated by Death . . .	(216)	0	0	69.91	0	0	0	0	30.09
Nonrefund Life Income Settlements Arising from Maturities and Surrenders—Female Lives									
Other Than Pension Trust Issues									
Number of Companies	66%	0	0	1	1	0	0	1	3
Proportion of Contracts Terminated by Death . . .	(3,669)	0	0	0.22	82.91	0	0	9.59	7.28
Pension Trust Issues									
Number of Companies	69%	1	0	0	1	0	0	0	1
Proportion of Contracts Terminated by Death . . .	(101)	2.97	0	0	76.24	0	0	0	20.79

*Number of contracts terminated by death shown in parentheses.

TABLE C-1—Continued

	All Companies Mortality Ratio*	Percentage Points below All Companies Ratio				Percentage Points above All Companies Ratio			
		Over 20	11-20	6-10	0-5	0-5	6-10	11-20	Over 20
Refund Matured Deferred Annuities—Male Lives									
Other Than Pension Trust Issues									
Number of Companies	101%	1	2	1	1	0	1	2	0
Proportion of Contracts Terminated by Death . . .	(1,997)	3.15	19.78	5.06	18.03	0	9.61	44.37	0
Pension Trust Issues									
Number of Companies	99%	2	1	0	0	1	1	1	2
Proportion of Contracts Terminated by Death . . .	(496)	8.87	21.17	0	0	9.27	14.11	36.69	9.88
Refund Matured Deferred Annuities—Female Lives									
Other Than Pension Trust Issues									
Number of Companies	98%	1	4	1	1	0	0	0	1
Proportion of Contracts Terminated by Death . . .	(4,474)	0.78	34.44	30.71	10.86	0	0	0	23.20
Pension Trust Issues									
Number of Companies	96%	3	0	0	1	0	1	0	2
Proportion of Contracts Terminated by Death . . .	(283)	25.09	0	0	1.41	0	44.88	0	28.62

*Number of contracts terminated by death shown in parentheses.

TABLE C-1—Continued

	All Companies Mortality Ratio*	Percentage Points below All Companies Ratio				Percentage Points above All Companies Ratio			
		Over 20	11-20	6-10	0-5	0-5	6-10	11-20	Over 20
Nonrefund Matured Deferred Annuities—Male Lives									
Other Than Pension Trust Issues									
Number of Companies	103%	3	1	0	0	0	1	1	2
Proportion of Contracts Terminated by Death . . .	(476)	43.70	3.57	0	0	0	2.73	15.76	34.24
Pension Trust Issues									
Number of Companies	122%	2	1	0	0	0	0	0	2
Proportion of Contracts Terminated by Death . . .	(71)	23.94	7.04	0	0	0	0	0	69.01
Nonrefund Matured Deferred Annuities—Female Lives									
Other Than Pension Trust Issues									
Number of Companies	79%	1	0	1	0	3	0	2	1
Proportion of Contracts Terminated by Death . . .	(1,047)	0.19	0	50.53	0	25.79	0	8.40	15.09
Pension Trust Issues									
Number of Companies	127%	2	0	0	1	0	0	0	2
Proportion of Contracts Terminated by Death . . .	(111)	54.05	0	0	0.90	0	0	0	45.05

*Number of contracts terminated by death shown in parentheses.

TABLE C-2
 DISTRIBUTION OF COMPANIES' AGGREGATE MORTALITY RATIOS
 BY NUMBER OF CONTRACTS, BASED ON 1983 IAM TABLE

	All Companies Mortality Ratio*	Percentage Points below All Companies Ratio				Percentage Points above All Companies Ratio			
		Over 20	11-20	6-10	0-5	0-5	6-10	11-20	Over 20
Refund Immediate Annuities—Male Lives									
Other Than Pension Trust Issues									
Number of Companies	110%	0	2	1	0	0	1	1	3
Proportion of Contracts Terminated by Death . . .	(3,930)	0	46.13	5.52	0	0	4.96	4.86	38.52
Pension Trust Issues									
Number of Companies	109%	2	0	0	1	0	1	0	4
Proportion of Contracts Terminated by Death . . .	(778)	21.85	0	0	7.46	0	31.88	0	38.82
Refund Immediate Annuities—Female Lives									
Other Than Pension Trust Issues									
Number of Companies	108%	1	1	2	0	0	1	2	1
Proportion of Contracts Terminated by Death . . .	(5,813)	4.46	37.42	9.26	0	0	1.27	37.98	9.62
Pension Trust Issues									
Number of Companies	99%	3	0	1	0	0	0	0	3
Proportion of Contracts Terminated by Death . . .	(316)	28.16	0	22.78	0	0	0	0	49.05

*Number of contracts terminated by death shown in parentheses.

TABLE C-2—Continued

	All Companies Mortality Ratio*	Percentage Points below All Companies Ratio				Percentage Points above All Companies Ratio			
		Over 20	11-20	6-10	0-5	0-5	6-10	11-20	Over 20
Nonrefund Immediate Annuities—Male Lives									
Other Than Pension Trust Issues									
Number of Companies	125%	2	1	0	2	0	1	0	2
Proportion of Contracts Terminated by Death	(2,277)	15.81	11.24	0	31.71	0	9.57	0	31.66
Pension Trust Issues									
Number of Companies	169%	4	1	1	0	0	0	0	1
Proportion of Contracts Terminated by Death	(531)	13.37	9.04	5.84	0	0	0	0	71.75
Nonrefund Immediate Annuities—Female Lives									
Other Than Pension Trust Issues									
Number of Companies	124%	0	4	0	1	0	1	1	1
Proportion of Contracts Terminated by Death	(4,629)	0	43.51	0	12.85	0	11.49	5.40	26.74
Pension Trust Issues									
Number of Companies	144%	3	1	0	0	0	0	1	3
Proportion of Contracts Terminated by Death	(272)	23.90	11.03	0	0	0	0	9.93	55.15

*Number of contracts terminated by death shown in parentheses.

TABLE C-2—Continued

	All Companies Mortality Ratio*	Percentage Points below All Companies Ratio				Percentage Points above All Companies Ratio			
		Over 20	11-20	6-10	0-5	0-5	6-10	11-20	Over 20
Refund Life Income Settlements Arising from Death Claims—Male Lives									
Payee Elections									
Number of Companies	89%	0	3	0	0	0	0	0	1
Proportion of Contracts Terminated by Death . . .	(22)	0	72.73	0	0	0	0	0	27.27
Nonpayee Elections									
Number of Companies	125%	0	2	0	0	0	1	1	0
Proportion of Contracts Terminated by Death . . .	(65)	0	38.46	0	0	0	46.15	15.38	0
Refund Life Income Settlements Arising from Death Claims—Female Lives									
Payee Elections									
Number of Companies	121%	1	0	0	0	1	1	1	0
Proportion of Contracts Terminated by Death . . .	(1,150)	7.57	0	0	0	19.57	69.65	3.22	0
Nonpayee Elections									
Number of Companies	122%	0	1	0	1	2	0	0	0
Proportion of Contracts Terminated by Death . . .	(2,370)	0	10.89	0	34.89	54.22	0	0	0

*Number of contracts terminated by death shown in parentheses.

TABLE C-2--Continued

	All Companies Mortality Ratio*	Percentage Points below All Companies Ratio				Percentage Points above All Companies Ratio			
		Over 20	11-20	6-10	0-5	0-5	6-10	11-20	Over 20
Nonrefund Life Income Settlements Arising from Death Claims--Male Lives									
Payee Elections									
Number of Companies	134%	0	0	0	0	0	0	0	1
Proportion of Contracts Terminated by Death . . .	(5)	0	0	0	0	0	0	0	100
Nonpayee Elections									
Number of Companies	127%	1	0	0	0	0	0	0	1
Proportion of Contracts Terminated by Death . . .	(6)	50	0	0	0	0	0	0	50
Nonrefund Life Income Settlements Arising from Death Claims--Female Lives									
Payee Elections									
Number of Companies	112%	0	1	0	1	0	0	0	2
Proportion of Contracts Terminated by Death . . .	(156)	0	67.95	0	8.97	0	0	0	23.08
Nonpayee Elections									
Number of Companies	103%	0	0	1	0	0	1	0	1
Proportion of Contracts Terminated by Death . . .	(173)	0	0	50.29	0	0	41.62	0	8.09

*Number of contracts terminated by death shown in parentheses.

TABLE C-2—Continued

	All Companies Mortality Ratio*	Percentage Points below All Companies Ratio				Percentage Points above All Companies Ratio			
		Over 20	11-20	6-10	0-5	0-5	6-10	11-20	Over 20
Refund Life Income Settlements Arising from Maturities and Surrenders—Male Lives									
Other Than Pension Trust Issues									
Number of Companies	118%	2	0	1	0	2	0	1	0
Proportion of Contracts Terminated by Death . . .	(7,786)	12.96	0	6.22	0	42.77	0	38.06	0
Pension Trust Issues									
Number of Companies	138%	2	0	1	1	0	1	0	1
Proportion of Contracts Terminated by Death . . .	(1,682)	0.71	0	41.26	4.64	0	52.97	0	0.42
Refund Life Income Settlements Arising from Maturities and Surrenders—Female Lives									
Other Than Pension Trust Issues									
Number of Companies	106%	2	0	0	0	0	1	3	0
Proportion of Contracts Terminated by Death . . .	(5,189)	27.19	0	0	0	0	31.03	41.78	0
Pension Trust Issues									
Number of Companies	130%	1	1	1	0	0	0	1	1
Proportion of Contracts Terminated by Death . . .	(542)	34.13	0.37	0.37	0	0	0	60.70	4.43

*Number of contracts terminated by death shown in parentheses.

TABLE C-2—Continued

	All Companies Mortality Ratio*	Percentage Points below All Companies Ratio				Percentage Points above All Companies Ratio			
		Over 20	11-20	6-10	0-5	0-5	6-10	11-20	Over 20
Nonrefund Life Income Settlements Arising from Maturities and Surrenders—Male Lives									
Other Than Pension Trust Issues									
Number of Companies	95%	1	0	1	0	1	0	0	3
Proportion of Contracts Terminated by Death . . .	(1,524)	0.20	0	67.52	0	13.25	0	0	19.03
Pension Trust Issues									
Number of Companies	110%	0	0	1	0	0	0	1	1
Proportion of Contracts Terminated by Death . . .	(216)	0	0	69.91	0	0	0	25	5.09
Nonrefund Life Income Settlements Arising from Maturities and Surrenders—Female Lives									
Other Than Pension Trust Issues									
Number of Companies	86%	0	0	1	1	0	0	0	4
Proportion of Contracts Terminated by Death . . .	(3,669)	0	0	0.22	82.91	0	0	0	16.87
Pension Trust Issues									
Number of Companies	90%	1	0	0	1	0	0	0	1
Proportion of Contracts Terminated by Death . . .	(101)	2.97	0	0	76.24	0	0	0	20.79

*Number of contracts terminated by death shown in parentheses.

TABLE C-2—Continued

	All Companies Mortality Ratio*	Percentage Points below All Companies Ratio				Percentage Points above All Companies Ratio			
		Over 20	11-20	6-10	0-5	0-5	6-10	11-20	Over 20
Refund Matured Deferred Annuities—Male Lives									
Other Than Pension Trust Issues									
Number of Companies	121%	1	3	0	1	1	0	2	0
Proportion of Contracts Terminated by Death . . .	(1,997)	3.15	24.84	0	18.03	9.61	0	44.37	0
Pension Trust Issues									
Number of Companies	117%	2	1	0	0	1	1	1	2
Proportion of Contracts Terminated by Death . . .	(496)	8.87	21.17	0	0	9.27	14.11	36.69	9.88
Refund Matured Deferred Annuities—Female Lives									
Other Than Pension Trust Issues									
Number of Companies	125%	4	1	1	1	0	0	0	1
Proportion of Contracts Terminated by Death . . .	(4,474)	33.57	1.65	30.71	10.86	0	0	0	23.20
Pension Trust Issues									
Number of Companies	121%	3	0	1	0	0	0	1	2
Proportion of Contracts Terminated by Death . . .	(283)	25.09	0	1.41	0	0	0	44.88	28.62

*Number of contracts terminated by death shown in parentheses.

TABLE C-2—Continued

	All Companies Mortality Ratio*	Percentage Points below All Companies Ratio				Percentage Points above All Companies Ratio			
		Over 20	11-20	6-10	0-5	0-5	6-10	11-20	Over 20
Nonrefund Matured Deferred Annuities—Male Lives									
Other Than Pension Trust Issues									
Number of Companies	125%	3	1	0	0	0	1	0	3
Proportion of Contracts Terminated by Death . . .	(476)	43.70	3.57	0	0	0	2.73	0	50
Pension Trust Issues									
Number of Companies	145%	3	0	0	0	0	0	0	2
Proportion of Contracts Terminated by Death . . .	(71)	30.99	0	0	0	0	0	0	69.01
Nonrefund Matured Deferred Annuities—Female Lives									
Other Than Pension Trust Issues									
Number of Companies	102%	1	1	0	0	3	0	0	3
Proportion of Contracts Terminated by Death . . .	(1,047)	0.19	50.53	0	0	25.79	0	0	23.50
Pension Trust Issues									
Number of Companies	165%	2	1	0	0	0	0	0	2
Proportion of Contracts Terminated by Death . . .	(111)	54.05	0.90	0	0	0	0	0	45.05

*Number of contracts terminated by death shown in parentheses.