

# TRANSACTIONS OF SOCIETY OF ACTUARIES 1975 REPORTS

## II. MORTALITY ON POLICIES FOR LARGE AMOUNTS

### ABSTRACT

This is the latest in a series of quinquennial reports on intercompany mortality experience under Standard Ordinary life insurance policies for large amounts. The data were contributed by sixteen large life insurance companies and are presented in the form of actual and expected deaths together with the numbers of lives terminated by death and the ratios of actual to expected. Expected deaths are based on a twenty-five-year select table constructed for this purpose from the 1968-73 Standard Ordinary intercompany experience on policies for all amounts. To facilitate comparisons, expected deaths and mortality ratios based on the 1965-70 Basic Tables and on the (single) experience table used for the last two large-amount studies are also shown in the major tables of the Appendix.

This study covers the experience between policy anniversaries in 1968 and 1973 in the first twenty-five policy years after issue. In addition to the usual categories of issue age and policy year, the data are subdivided by plan of insurance, sex, the presence or absence of a supplemental term element, classification amount group (defined as the total amount of insurance likely to be in force on the life in all companies including the current application), purpose of the insurance, and insured's annual income. The current study includes, for the first time, experience on paramedical and nonmedical issues, but the volume of business in those underwriting classes was not sufficient to justify separate analysis. An analysis of the deaths by cause is also included.

The mortality experience for large-amount policies was 89 per cent of the corresponding mortality for policies of all sizes combined. Term plan mortality was 90 per cent, as compared with 89 per cent for permanent plans with and without term riders. The mortality ratios were quite high at the lower issue ages, leveling off at ages 50 and above. There was little pattern by policy year. Female mortality, measured on the same basis of expected deaths, was about 68 per cent of male mortality. As the result of a single large claim, female term mortality was considerably higher than male mortality on permanent plans. As in the previous study, male permanent plans having a supplemental term element showed lower mortality than did the corresponding plans without a supplemental term element.

Issues of 1959 and later were categorized by purpose of insurance and annual income of the insured. In the current study, these data constituted 73 per cent of the total exposure and 50 per cent of the total death claim amount. The mortality for business insurance was very favorable, while each of the other categories experienced mortality slightly above the study average. By annual income, the mortality ratios were slightly above average for those earning between \$10,000 and \$49,999 and lower for those with either higher or lower incomes.

## GUIDE TO TABLES

	TABLES IN TEXT*									TABLES IN APPENDIX †						
	1	2	3	4	5	6	7	8	9	B	C	D	E	F	G	H
<b>Table variables:</b>																
Plan.....	1	2	3	4	5		7	8	9	B	C	D			G	H
Sex.....	1	2	3				7	8								
Term element.....	1	2	3													
Age at issue.....	1			4	5		7	8		B	C		E	F	G	
Policy year.....		2					7	8		B		D				H
Classification amount.....			3			6	7	8			C	D		F		
Purpose.....				4									E	F		
Annual income.....					5	6							E			
Historic comparisons.....							7	8								
Cause of death.....									9						G	H
<b>Issue years included:</b>																
1934-72.....							7	8								
1944-72.....	1	2	3						9	B	C	D			G	H
1959-72.....				4	5	6							E	F		
<b>Basis of expected deaths:</b>																
1958-63 Experience.....								8		B	C	D				
1968-73 Experience.....	1	2	3	4	5	6			9	B	C	D	E	F	G	H
1965-70 Basic Table.....										B	C	D				
Contemporaneous experience.....							7									

\* In addition, Table 10 provides historic detail of motor vehicle and aviation deaths.

† In addition, Table A lists the contributing companies and Table J indicates the mortality rates in the 1968-73 Experience Table.

There has been a definite decrease in the mortality ratios from previous study periods, both absolutely and relative to the contemporaneous all-amounts experience. With expected deaths calculated on the 1958-63 Experience Table, which was used in the last two studies, the large-amount mortality ratios for the three latest five-year periods have been 94, 88, and 80 per cent, respectively. Ratios of large-amount mortality to the corresponding Standard Ordinary experience on policies for all amounts for the last three five-year periods have been 94, 92 (estimated), and 89 per cent. On the basis of the 1958-63 Experience Table, mortality ratios decreased from the previous study for all adult issue-age groups, for all policy-year groups, and for all classification amount groups.

Actual claims both for suicides and for accidents and homicide far exceeded expected levels. Claims from malignant neoplasms were also high.

#### INTRODUCTION

**T**HIS report presents the findings of the latest in a series of inter-company studies of the mortality on policies for large amounts. The current study includes the experience on Standard Ordinary issues of 1944-72 from policy anniversaries in 1968 to policy anniversaries in 1973. The previous report (*TS.1, 1970 Reports*, p. 118) covered the experience between 1963 and 1968 anniversaries.

The experience covered in this report is based on a total exposure of \$232 billion, an increase of more than 59 per cent from the previous study. Actual claims were nearly \$840 million on 10,952 lives. The average claim per life was \$76,668, an increase of less than \$650 from the previous study.

The study is by amounts of insurance on a select policy-year basis. Only policies resulting from one or more applications to a contributing company for a total of at least \$50,000 on one life during a ninety-day period and having a "classification amount" of at least \$50,000 are included in this study. Classification amount is defined as the total amount of insurance considered likely to be in force on the life, including previously issued policies in force in all companies, the amount currently being authorized for issue by the contributing company, and the amount likely to be authorized under any known concurrent applications to other companies. All kinds of individual and group insurance are to be included, where the information is available.

The study is divided between permanent and term plans. In addition, permanent plans are coded to indicate the presence or absence of supplemental term, whether level or decreasing.

For issues of 1959 and subsequent years the study includes information as to the purpose of the insurance and the estimated current annual income of the insured at the time of issue.

Reflecting the impact of inflation on the value of life insurance protec-

tion, the Committee increased the amount of insurance in the definition of a large-amount policy to \$100,000, effective for new issues of 1974 and subsequent calendar years. This change does not affect any policies previously identified as large-amount policies, nor does it have any impact on the results in this report, which covers issues of 1944-72.

In the past, only medically examined business met the relatively large minimum-amount requirement for this study. Recent increases in non-medical limits and the introduction of paramedical underwriting have made it possible to issue large policies under these alternative procedures. Since the method of underwriting potentially has a significant impact on mortality results, the Committee asked contributing companies to report their experience for the current study by underwriting basis. All were able to do so. Since less than 1 per cent of the exposure originated from nonmedical and paramedical issues, the data for that experience are not presented separately in this report. In view of the increase in minimum application size for large-amount issues, nonmedical limits will have to increase considerably before those issues contribute a significant portion of large-amount exposure. However, it is anticipated that paramedical issues will become a more significant category in the future.

The study is limited to the experience in the first twenty-five policy years, since the volume of experience on large-amount policies issued more than twenty-five years before the exposure period is limited, and a size distinction made at issue would have little current underwriting significance.

Three different bases for expected deaths are used in the current study. The primary basis is a twenty-five-year select table constructed from the 1968-73 Standard Ordinary intercompany experience on policies for all amounts for male and female lives combined. This table and a description of its construction appear in the Appendix as Table J. In addition, Tables B, C, and D of the Appendix contain expected deaths and mortality ratios based on the 1965-70 Basic Tables (*T.S.1, 1973 Reports*, p. 199) and on the previous large-amount Experience Table (*T.S.1, 1964 Reports*, pp. 78-79). The latter table was constructed from the 1958-63 intercompany Standard Ordinary experience on policies for all amounts. The data on other bases of expected deaths are included to indicate trends and to provide comparability to other readily available mortality results.

The experience includes ten deaths due to the operations of war. These claims, which totaled \$477,000, represent less than 0.06 per cent of all claims by amount.

The names of the sixteen contributing companies and the proportionate exposures contributed by each are indicated in Table A of the Appendix.

More than 96 per cent of the exposure in the current investigation was submitted by fifteen companies, which also contributed to the annual Standard Ordinary mortality studies, but there are some marked differences in the relative proportions of the experience contributed by these companies to the two investigations. Since the general level of mortality varies among companies, the basis of expected deaths differs from what it would have been if each company's experience on Standard Ordinary medically examined issues for all amounts had been weighted in proportion to its contribution to the study of policies for large amounts.

EXPERIENCE BY AGE AT ISSUE, POLICY YEAR, CLASSIFICATION AMOUNT,  
SEX, AND PLAN OF INSURANCE

The large-amount mortality experience is summarized by age at issue, sex, and plan (permanent, term, or permanent with term rider) in Table 1; by policy year, sex, and plan in Table 2; and by classification amount, sex, and plan in Table 3. The number of lives terminated by death is shown in parentheses after the amount of actual claims; duplications have been eliminated in arriving at the total numbers of deaths shown in these tables.

Section A of each of these tables presents all the data without subdivision by sex or term element. Sections B and C show the experience separately for males and females without regard to the presence of a supplemental term element. In Sections D and E of these tables, the experience on male lives is presented separately for permanent plans without and with a supplemental term element, respectively. Because of the relatively small volume of experience on female lives with a supplemental term element, no corresponding analysis of the female experience is presented.

*Aggregate Experience*

On the basis of the 1968-73 Experience Table on policies for all amounts the aggregate large-amount mortality ratio was 89 per cent. The 95 per cent confidence interval for this ratio is (87.41 per cent, 90.81 per cent), indicating that, for this period, large-amount mortality was significantly lower than the corresponding mortality on policies for all amounts.

In contrast to the experience of previous large-amount studies, the 90 per cent mortality ratio experienced on term plans was only minimally higher than the 89 per cent ratio for permanent plans. In the last study, the aggregate term mortality ratio was 9 percentage points higher than that for permanent plans. This change may be related to an increase in the relative proportion of term business; in the current study, term plans

TABLE 1

LARGE-AMOUNT ISSUES OF 1944-72  
EXPERIENCE BETWEEN 1968 AND 1973 ANNIVERSARIES  
BY AGE AT ISSUE AND PLAN OF INSURANCE  
Expected Deaths Based on 1968-73 Standard Ordinary Issues Experience  
(Amounts Shown in \$1,000 Units)

ISSUE AGE	PERMANENT PLANS			TERM PLANS			ALL PLANS		
	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E
A. Male and Female Lives, with and without Term Element									
0-9.....	\$ 1,446 (17)	\$ 1,008	<i>143%</i>	\$ 50 (1)	\$ 22	*	\$ 1,496 (18)	\$ 1,030	<i>145%</i>
10-19.....	3,405 (44)	2,878	<i>118</i>	35 (1)	222	*	3,440 (45)	3,100	<i>111</i>
20-29.....	26,305 (434)	23,669	111	7,772 (165)	7,881	99%	34,077 (582)	31,550	108
30-39.....	153,019 (2,232)	153,793	99	45,694 (895)	49,938	92	198,713 (2,984)	203,731	98
40-49.....	251,324 (3,368)	284,773	88	71,420 (1,196)	81,006	88	322,744 (4,401)	365,779	88
50-59.....	178,794 (2,325)	221,338	81	39,446 (629)	42,930	92	218,240 (2,868)	264,268	83
60-69.....	53,636 (668)	63,342	85	3,802 (68)	5,300	72	57,438 (730)	68,648	84
70 and over.....	3,440 (53)	3,990	86	78 (2)	187	*	3,518 (54)	4,177	84
All.....	\$671,369 (8,603)	\$754,791	89%	\$168,297 (2,899)	\$187,492	90%	\$839,666 (10,952)	\$942,283	89%

\* Fewer than 10 lives terminated by death.

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

TABLE 1 *Continued*

ISSUE AGE	PERMANENT PLANS			TERM PLANS			ALL PLANS		
	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E
<b>B. Male Lives, with and without Term Element</b>									
0-9.....	\$ 1,296 (14)	\$ 709	183%	\$ 50 (1)	\$ 16	*	\$ 1,346 (15)	\$ 725	186%
10-19.....	2,994 (39)	2,242	134	0 (0)	203	*	2,994 (39)	2,445	122
20-29.....	24,896 (415)	22,402	111	7,652 (162)	7,665	100%	32,548 (560)	30,067	108
30-39.....	145,200 (2,133)	146,707	99	44,451 (874)	48,493	92	189,651 (2,866)	195,200	97
40-49.....	238,403 (3,195)	263,968	90	70,097 (1,169)	77,543	90	308,500 (4,202)	341,511	90
50-59.....	167,536 (2,154)	196,133	85	35,629 (600)	40,026	89	203,165 (2,671)	236,159	86
60-69.....	48,081 (598)	51,993	92	3,434 (57)	4,855	71	51,515 (649)	56,848	91
70 and over.....	2,120 (37)	2,817	75	78 (2)	173	*	2,198 (38)	2,990	74
All.....	\$630,526 (8,068)	\$686,971	92%	\$161,391 (2,807)	\$178,974	90%	\$791,917 (10,332)	\$865,945	91%
<b>C. Female Lives, with and without Term Element</b>									
0-9.....	\$ 150 (3)	\$ 299	*	\$ 0 (0)	\$ 6	*	\$ 150 (3)	\$ 305	*
10-19.....	411 (5)	636	*	35 (1)	19	*	446 (6)	655	*
20-29.....	1,409 (19)	1,267	111%	120 (3)	216	*	1,529 (22)	1,483	103%
30-39.....	7,819 (99)	7,086	110	1,243 (21)	1,445	86%	9,062 (118)	8,531	106
40-49.....	12,921 (173)	20,805	62	1,323 (27)	3,463	38	14,244 (199)	24,268	59
50-59.....	11,258 (171)	25,205	45	3,817 (29)	2,904	131	15,075 (197)	28,109	54
60-69.....	5,555 (70)	11,349	49	368 (11)	451	82	5,923 (81)	11,800	50
70 and over.....	1,320 (16)	1,173	113	0 (0)	14	*	1,320 (16)	1,187	111
All.....	\$ 40,843 (535)	\$ 67,820	60%	\$ 6,906 (92)	\$ 8,518	81%	\$47,749 (620)	\$ 76,338	63%

TABLE 1—Continued

ISSUE AGE	PERMANENT PLANS					
	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E
	D. Male Lives without Term Element			E. Male Lives with Term Element		
0-9.....	\$ 1,296 (14)	\$ 667	<i>194%</i>	\$ 0 (0)	\$ 42	*
10-19.....	2,929 (38)	2,041	<i>144</i>	65 (1)	201	*
20-29.....	17,125 (262)	14,796	116	7,771 (158)	7,606	102%
30-39.....	102,874 (1,436)	99,790	103	42,326 (785)	46,917	90
40-49.....	194,345 (2,561)	211,258	<i>92</i>	44,058 (734)	52,710	84
50-59.....	149,426 (1,909)	173,281	86	18,110 (267)	22,852	79
60-69.....	45,256 (554)	47,901	94	2,825 (46)	4,092	<i>69</i>
70 and over.....	1,995 (35)	2,653	75	125 (2)	164	*
All.....	\$515,246 (6,407)	\$552,387	93%	\$15,280 (1,946)	\$134,584	86%

\* Fewer than 10 lives terminated by death.

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.



TABLE 2  
 LARGE-AMOUNT ISSUES OF 1944-72  
 EXPERIENCE BETWEEN 1968 AND 1973 ANNIVERSARIES  
 BY POLICY-YEAR GROUP AND PLAN OF INSURANCE  
 Expected Deaths Based on 1968-73 Standard Ordinary Issues Experience  
 (Amounts Shown in \$1,000 Units)

POLICY YEARS	PERMANENT PLANS			TERM PLANS			ALL PLANS		
	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E
A. Male and Female Lives, with and without Term Element									
1-2 . . . . .	\$ 64,866 (797)	\$ 73,651	88%	\$ 28,965 (381)	\$ 30,291	96%	\$ 93,831 (1,155)	\$103,942	90%
3-5 . . . . .	103,235 (1,300)	120,979	85	33,903 (477)	37,463	90	137,138 (1,729)	158,442	87
6-10 . . . . .	178,619 (2,312)	187,202	95	32,116 (535)	38,806	83	210,735 (2,786)	226,008	93
11-15 . . . . .	164,465 (2,476)	185,363	89	28,062 (552)	30,183	93	192,527 (2,948)	215,546	89
16-20 . . . . .	105,816 (1,714)	126,308	84	29,323 (666)	32,665	90	135,139 (2,297)	158,973	85
21-25 . . . . .	54,368 (920)	61,288	89	15,928 (385)	18,084	88	70,296 (1,262)	79,372	89
All . . . . .	\$671,369 (8,603)	\$754,791	89%	\$168,297 (2,899)	\$187,492	90%	\$839,666 (10,952)	\$942,283	89%

NOTE:--Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

TABLE 2 —Continued

POLICY YEARS	PERMANENT PLANS			TERM PLANS			ALL PLANS		
	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E
B. Male Lives, with and without Term Element									
1-2.....	\$ 60,954 (748)	\$ 67,443	90%	\$ 25,254 (357)	\$ 29,016	87%	\$ 86,208 (1,082)	\$ 96,459	89%
3-5.....	96,221 (1,214)	110,172	87	32,804 (459)	35,832	92	129,025 (1,625)	146,004	88
6-10.....	167,174 (2,152)	169,233	99	31,485 (522)	37,175	85	198,659 (2,614)	206,408	96
11-15.....	154,986 (2,338)	168,953	92	27,572 (543)	29,008	95	182,558 (2,802)	197,961	92
16-20.....	99,866 (1,628)	114,660	87	28,761 (646)	30,930	93	128,627 (2,192)	145,590	88
21-25.....	51,325 (876)	56,510	91	15,515 (376)	17,013	91	66,840 (1,211)	73,523	91
All.....	\$630,526 (8,068)	\$686,971	92%	\$161,391 (2,807)	\$178,974	90%	\$791,917 (10,332)	\$865,945	91%
C. Female Lives, with and without Term Element									
1-2.....	\$ 3,912 (49)	\$ 6,208	63%	\$ 3,711 (24)	\$ 1,275	291%	\$ 7,623 (73)	\$ 7,483	102%
3-5.....	7,014 (86)	10,807	65	1,099 (18)	1,631	67	8,113 (104)	12,438	65
6-10.....	11,445 (160)	17,969	64	631 (13)	1,631	39	12,076 (172)	19,600	62
11-15.....	9,479 (138)	16,410	58	490 (9)	1,175	*	9,969 (146)	17,585	57
16-20.....	5,950 (86)	11,648	51	562 (20)	1,735	32	6,512 (105)	13,383	49
21-25.....	3,043 (44)	4,778	64	413 (9)	1,071	*	3,456 (51)	5,849	59
All.....	\$ 40,843 (535)	\$ 67,820	60%	\$ 6,906 (92)	\$ 8,518	81%	\$ 47,749 (620)	\$ 76,338	63%

\* Fewer than 10 lives terminated by death.

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

TABLE 2 -Continued

POLICY YEARS	PERMANENT PLANS					
	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E
	D. Male Lives without Term Element			E. Male Lives with Term Element		
1-2 .....	\$ 49,478 (583)	\$ 54,394	91%	\$ 11,476 (172)	\$ 13,049	88%
3-5 .....	74,864 (899)	86,013	87	21,357 (324)	24,159	88
6-10 .....	133,661 (1,651)	132,773	101	33,513 (536)	36,460	92
11-15 .....	125,791 (1,840)	134,025	94	29,195 (544)	34,928	84
16-20 .....	84,364 (1,341)	93,347	90	15,502 (332)	21,313	73
21-25 .....	47,088 (772)	51,835	91	4,237 (121)	4,675	91
All .....	\$515,246 (6,407)	\$552,387	93%	\$115,280 (1,946)	\$134,584	86%

**TABLE 3**  
**LARGE-AMOUNT ISSUES OF 1944-72**  
**EXPERIENCE BETWEEN 1968 AND 1973 ANNIVERSARIES**  
**BY CLASSIFICATION AMOUNT AND PLAN OF INSURANCE**  
 Expected Deaths Based on 1968-73 Standard Ordinary Issues Experience  
 (Amounts Shown in \$1,000 Units)

CLASSIFICATION AMOUNT	PERMANENT PLANS			TERM PLANS			ALL PLANS		
	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E
A. Male and Female Lives, with and without Term Element									
\$ 50,000-\$ 99,999.....	\$155,922 (3,719)	\$171,999	91%	\$ 49,295 (1,336)	\$ 48,143	102%	\$205,217 (4,961)	\$220,142	93%
100,000- 199,999.....	244,464 (3,786)	276,666	88	59,436 (1,157)	71,080	84	303,900 (4,796)	347,746	87
200,000- 499,999.....	188,421 (1,673)	205,235	92	38,031 (447)	44,882	85	226,452 (2,008)	250,117	91
500,000- 999,999.....	57,186 (252)	60,470	95	10,384 (59)	13,203	79	67,570 (296)	73,673	92
1,000,000 and over.....	25,376 (59)	40,421	63	11,151 (20)	10,184	109	36,527 (74)	50,605	72
All.....	\$671,369 (8,603)	\$754,791	89%	\$168,297 (2,899)	\$187,492	90%	\$839,666 (10,952)	\$942,283	89%

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

TABLE 3 -Continued

CLASSIFICATION AMOUNT	PERMANENT PLANS			TERM PLANS			ALL PLANS		
	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E
<b>B. Male Lives, with and without Term Element</b>									
\$ 50,000-\$ 99,999	\$141,811 (3,396)	\$150,199	94%	\$ 47,232 (1,279)	\$ 44,978	105%	\$189,043 (4,583)	\$195,177	97%
100,000- 199,999	231,391 (3,620)	253,580	91	57,963 (1,130)	68,346	85	289,354 (4,605)	321,926	90
200,000- 499,999	178,884 (1,606)	190,890	94	37,071 (440)	43,399	85	215,955 (1,936)	234,289	92
500,000- 999,999	54,113 (240)	55,818	97	10,374 (58)	12,680	82	64,487 (284)	68,498	94
1,000,000 and over	24,327 (57)	36,484	67	8,751 (19)	9,571	91	33,078 (71)	46,055	72
All	\$630,526 (8,068)	\$686,971	92%	\$161,391 (2,807)	\$178,974	90%	\$791,917 (10,332)	\$865,945	91%
<b>C. Female Lives, with and without Term Element</b>									
\$ 50,000-\$ 99,999	\$ 14,111 (323)	\$ 21,800	65%	\$ 2,063 (57)	\$ 3,165	65%	\$ 16,174 (378)	\$ 24,965	65%
100,000- 199,999	13,073 (166)	23,086	57	1,473 (27)	2,734	54	14,546 (191)	25,820	56
200,000- 499,999	9,537 (67)	14,345	66	960 (7)	1,483	*	10,497 (72)	15,828	66
500,000- 999,999	3,073 (12)	4,652	66	10 (1)	523	*	3,083 (12)	5,175	60
1,000,000 and over	1,049 (2)	3,937	*	2,400 (1)	613	*	3,449 (3)	4,550	*
All	\$ 40,843 (535)	\$ 67,820	60%	\$ 6,906 (92)	\$ 8,518	81%	\$ 47,749 (620)	\$ 76,338	63%

\* Fewer than 10 lives terminated by death.

TABLE 3 *Continued*

CLASSIFICATION AMOUNT	PERMANENT PLANS					
	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E
	D. Male Lives without Term Element			E. Male Lives with Term Element		
\$ 50,000-\$ 99,999.....	\$106,628 (2,528)	\$110,950	96%	\$ 35,183 (920)	\$ 39,249	90%
100,000- 199,999.....	187,607 (2,901)	200,156	94	43,784 (798)	53,424	82
200,000- 499,999.....	153,088 (1,383)	161,451	95	25,796 (259)	29,439	88
500,000- 999,999.....	47,506 (211)	47,694	100	6,607 (38)	8,124	81
1,000,000 and over.....	20,417 (49)	32,136	64	3,910 (9)	4,348	*
All.....	\$515,246 (6,407)	\$552,387	93%	\$115,280 (1,946)	\$134,584	86%

\* Fewer than 10 lives terminated by death.

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

provided nearly 34 per cent of the total exposures in the first two policy years, as compared with an estimated 27 per cent for the previous study. For female lives the term mortality ratio of 81 per cent was considerably higher than the 60 per cent experienced on permanent plans. This female term ratio was considerably inflated by a \$2.4 million second-policy-year claim in issue-age group 50-59. Without this claim, the female term mortality ratio would have been less than the female permanent plan ratio.

*Experience by Issue Age (Table 1)*

The large-amount experience is concentrated in issue-age groups 30-39, with 40 per cent of the exposures, and 40-49, with nearly 32 per cent. The mortality ratios generally decrease with advancing issue age but are quite flat for issue-age groups above 50. Both permanent and term plans followed this general pattern, except that the ratio for term plans at issue ages 50-59 was somewhat higher than at issue ages 40-49. The favorable experience at the older issue ages probably reflects more careful medical selection of large-amount risks for this group.

*Experience by Policy Year (Table 2)*

The total exposure decreases sharply by policy-year group, with 31 per cent of the total exposure in the first two policy years and 58 per cent of the total exposure in the first five policy years. Following this pattern, less than 7 per cent of the total exposure is in policy years 16-25.

The mortality ratios by policy-year group were remarkably uniform. The single claim previously described produced a very high term plan ratio for female lives in the first two policy years. In the absence of this single large claim, that ratio would have been 103 per cent rather than 291 per cent, and the aggregate term plan and all plans ratios for policy-year group 1-2 would have been lower than the corresponding ratios for all policy years combined.

*Experience by Classification Amount (Table 3)*

Classification amount group \$100,000-\$199,999 contributed the greatest amount of exposure—nearly 38 per cent of the total. As might be expected, the group of \$1 million and over was the smallest, with about 5 per cent.

The aggregate mortality experience was relatively uniform by classification amount group, except that the ratio for classification amount group \$1 million and over, 72 per cent, was considerably lower than for any other group. This is in spite of the \$2.4 million claim described earlier. Since there were 74 deaths in this classification amount, this is a significant result, reflecting careful underwriting on lives insured for very large

amounts. The permanent plan ratios were higher than the term plan ratios except for the smallest and largest classification amount groups.

*Experience by Sex (Tables 1-3)*

Since more than 93 per cent of the total exposure arose from policies issued on male lives, the male experience closely parallels that for both sexes combined. Most of the male mortality ratios were slightly higher than those for the combined experience. The aggregate male mortality ratio was 91 per cent.

The female experience is based on an exposure of \$14.2 billion and claims of \$47.7 million on 620 lives. In interpreting the mortality ratios for female lives, it should be kept in mind that the expected deaths are based on a combined mortality table constructed from data heavily weighted with male lives. The aggregate female mortality ratio was 63 per cent, or about 68 per cent of the corresponding male ratio. In the absence of the \$2.4 million female claim previously discussed, this ratio would have been 59 per cent, or 65 per cent of the male ratio. For all plans combined, the female mortality ratio exceeded the corresponding male ratio only at issue ages 30-39 and 70 and over (where only sixteen female lives were terminated by death). The female mortality ratios were uniformly lower than the corresponding male ratios for all policy year-plan categories except policy years 1-2 for term plans and for all plans combined. The female ratios were also lower for all permanent and term classification amount categories except that of \$1 million and over, where the single large term claim reverses this relationship.

As indicated above, the female term plan mortality ratio was higher than the female permanent plan ratio. This is in contrast to the male experience, where term plan mortality was slightly lower than that on permanent plans. Female mortality ratios for all plans combined exceeded 100 per cent for issue-age groups 20-29, 30-39, and 70 and over. Female mortality decreased by advancing policy-year group except for policy-year group 21-25. By classification amount group, there was no distinguishable pattern in the female mortality experience.

*Experience on Male Lives by Term Element  
Classification (Tables 1-3)*

Overall, slightly less than 27 per cent of the total exposure on permanent policies on male lives is derived from policies with a supplemental term element. The proportion is highest, around 34 per cent, for issue-age groups 20-29 and 30-39, and less than 10 per cent for issue-age groups below 20 and 60 and over. The percentage of male permanent policies having a term element is relatively constant by policy-year group except



for policy years 21-25, where it declines. This percentage decreases sharply by increasing classification amount, from 34 per cent in the lowest class to about 16 per cent for classification amounts of \$1 million and over.

The mortality ratio for male lives without a term element, 93 per cent, was 7 percentage points higher than the ratio for corresponding plans with a term element. This pattern is consistent with the relationship of male mortality for permanent plans, 92 per cent, to that for term plans, 90 per cent. In the previous large-amount study, the same 7-point differential between male lives without a term element and male lives with a term element was observed, although the aggregate mortality ratio for male lives on term plans exceeded that on permanent plans by 8 percentage points. The apparent improvement in term plan mortality as compared with that on permanent plans may be related to the increasing proportion of total business written on term plans or plans with a supplemental term benefit or the introduction of permanent plans with an integral term feature. Any such interpretation is somewhat hazardous, however, because of the variation in product mix and underwriting standards from company to company.

The Appendix presents mortality data for more detailed classifications by age at issue and policy year in Table B, by age at issue and classification amount in Table C, and by policy year and classification amount in Table D, each subdivided by plan of insurance but without regard to sex or the inclusion of a supplemental term element.

#### EXPERIENCE BY PURPOSE OF INSURANCE AND INCOME OF INSURED

Purpose of insurance and annual income information was obtained for issues of 1959-72. The purpose-of-insurance categories were defined in the instructions as follows:

*Personal insurance.*—Insurance where the beneficiary is (a) wife, child, or other close relative; (b) estate; or (c) business involving a sole proprietorship.

*Business insurance.*—Insurance intended for the repurchase of the insured's interest in an organization having not more than five principal owners (partnership or close corporation).

*Key-man or deferred compensation insurance.*—Insurance intended primarily for key-man or deferred compensation purposes.

*Creditor or other insurance.*—Insurance taken out to insure the repayment of a loan where either the creditor is designated beneficiary or the policy is assigned to the creditor. Also included here is any insurance the purpose of which does not fit the other categories.

This experience is analyzed in Table 4 by purpose of insurance, plan of insurance, and issue-age category. For all purposes combined, the mor-

TABLE 4

LARGE-AMOUNT ISSUES OF 1959-72  
EXPERIENCE BETWEEN 1968 AND 1973 ANNIVERSARIES  
BY PURPOSE OF INSURANCE, PLAN OF INSURANCE, AND AGE AT ISSUE  
MALE AND FEMALE LIVES COMBINED

Expected Deaths Based on 1968-73 Standard Ordinary Issues Experience  
(Amounts Shown in \$1,000 Units)

ISSUE AGE	PERMANENT PLANS		TERM PLANS		ALL PLANS	
	Actual Claims	A/E	Actual Claims	A/E	Actual Claims	A/E
A. Personal Insurance						
0-29	\$ 17,382 (266)	117%	\$ 4,416 (88)	88%	\$ 21,798 (350)	110%
30-39	57,931 (839)	105	19,476 (354)	90	77,407 (1,157)	101
40-49	72,140 (1,098)	88	21,776 (360)	85	93,916 (1,428)	87
50 and over	60,823 (867)	82	9,054 (154)	84	69,877 (1,006)	82
All	\$208,276 (3,014)	92%	\$54,722 (950)	87%	\$262,998 (3,868)	91%
B. Business Insurance						
0-29	\$ 550 *	*	602 (9)	*	\$ 1,252 (16)	73%
30-39	11,689 (17)	100%	1,559 (65)	96%	16,228 (206)	99
40-49	26,724 (303)	83	6,798 (90)	70	33,522 (382)	80
50 and over	30,461 (365)	78	4,596 (64)	75	35,057 (426)	78
All	\$ 69,424 (812)	83%	\$16,635 (228)	79%	\$ 86,059 (1,017)	82%
C. Key-Man Insurance						
0-29	\$ 1,339 (14)	122%	\$ 135 (3)	*	\$ 1,474 (16)	103%
30-39	7,536 (85)	89	2,582 (31)	89%	10,118 (116)	89
40-49	24,148 (202)	107	7,939 (66)	125	32,087 (262)	111
50 and over	17,884 (177)	68	5,753 (49)	140	23,637 (221)	77
All	\$ 50,907 (470)	87%	\$16,409 (148)	120%	\$ 67,316 (601)	93%
D. Creditor and Other Insurance						
0-29	\$ 100 (1)	*	\$ 0 (0)	*	\$ 100 (1)	*
30-39	1,022 (11)	132%	265 (5)	*	1,287 (15)	94%
40-49	1,834 (23)	79	1,429 (25)	110%	3,263 (48)	99
50 and over	2,473 (20)	104	533 (8)	*	3,006 (27)	93
All	\$ 5,429 (55)	97%	\$ 2,227 (38)	79%	\$ 7,656 (91)	91%
E. All Purposes						
0-29	\$ 19,371 (285)	112%	\$ 5,253 (99)	89%	\$ 24,624 (379)	106%
30-39	78,178 (1,040)	103	26,862 (443)	90	105,040 (1,427)	99
40-49	124,846 (1,526)	90	37,942 (530)	88	162,788 (1,991)	90
50 and over	111,641 (1,324)	79	19,936 (261)	91	131,577 (1,554)	80
All	\$334,036 (4,069)	89%	\$89,993 (1,321)	89%	\$424,029 (5,200)	89%

\* Fewer than 10 lives terminated by death.

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by deaths.

tality ratios tend to decrease with advancing issue-age group for permanent plans and for all plans combined and generally tend to remain constant for term plans, as in the experience for all years of issue. As in the previous study, business insurance experienced the lowest ratios in both the permanent and term categories.

For all plans combined, the highest ratio for any purpose group, 93 per cent, was for key-man insurance. This represents a substantial increase over the 85 per cent (estimated ratio to 1963-68 all-amounts experience) ratio experienced for key-man insurance in the previous study. The mortality ratio for creditor and other insurance dropped significantly from 121 per cent (estimated ratio to 1963-68 all-amounts experience) in the preceding study period to the current 91 per cent. This is a very small category, including only 91 of the 5,200 deaths categorized by purpose of insurance.

The term plan ratio exceeded the corresponding ratio for permanent plans only for key-man insurance. This result was due partially to the single large term claim previously discussed, which served to increase the key-man ratio for term plans from 102 to 120 per cent.

For all plans combined, business insurance experienced the lowest ratios for issue-age groups 0-29 and 40-49, as well as all ages combined. Key-man insurance had the lowest ratio for issue-age groups 30-39 and 50 and over but experienced the highest ratio at issue-age group 40-49.

Table 5 shows this experience according to estimated annual income at issue, plan of insurance, and issue-age group. For all ages combined, the highest mortality ratios were observed for income levels \$10,000-\$49,999. This is consistent with the last study, in which the lowest ratios were experienced for incomes of \$50,000 and over for permanent plans and for all plans combined. The convex pattern by annual income was evident in both the permanent and term plan experience. By issue-age group, this pattern is most evident for permanent plans at ages 40 and over and for term plans at ages 50 and over. For incomes under \$10,000 the mortality ratios were much higher at issue ages 0-39 than at the higher issue ages.

With one exception, the ratios for the "income not accurately determined" category were lower than those for all incomes combined for every plan and issue-age group. In the previous large-amount study, the mortality ratios were very high for incomes not accurately determined.

Table E of the Appendix analyzes the experience on 1959-72 issues by annual income and purpose of insurance concurrently, with issue-age group as a third variable. Broader annual income and issue-age groupings are used, and creditor insurance is not shown because of the limited volume of data.

TABLE 5

LARGE-AMOUNT ISSUES OF 1959-72  
EXPERIENCE BETWEEN 1968 AND 1973 ANNIVERSARIES  
BY ESTIMATED ANNUAL INCOME AT ISSUE, AGE AT ISSUE,  
AND PLAN OF INSURANCE  
MALE AND FEMALE LIVES COMBINED

Expected Deaths Based on 1968-73 Standard Ordinary Issues Experience  
(Amounts Shown in \$1,000 Units)

ESTIMATED ANNUAL INCOME AT ISSUE	PERMANENT PLANS			TERM PLANS			ALL PLANS		
	Actual Claims	A/E		Actual Claims	A/E		Actual Claims	A/E	
A. Issue Ages 0-29									
Under \$10,000	\$ 8,311	133)	106%	\$ 1,948	(43)	88%	\$ 10,259	(174)	102%
\$ 10,000-\$19,999	5,012	(95)	95	2,074	(43)	84	7,086	(136)	91
20,000- 29,999	2,127	33)	121	671	7)	*	2,798	(40)	117
30,000- 49,999	1,285	12)	137	150	(2)	*	1,435	(14)	119
50,000- 99,999	800	6)	*	250	2)	*	1,050	(8)	*
100,000 and over	1,250	(5)	*	0	(0)	*	1,250	(5)	*
Not accurately determined	586	10)	87	160	2)	*	746	12)	87
All	\$ 19,511	(288)	112%	\$ 5,353	(99)	89%	\$ 24,624	(379)	106%
B. Issue Ages 30-39									
Under \$10,000	\$ 7,120	(144)	100%	\$ 2,967	(56)	104%	\$ 10,087	(198)	101%
\$ 10,000-\$19,999	21,657	(398)	94	9,846	(203)	91	31,503	(586)	93
20,000- 29,999	17,283	(262)	92	6,982	(108)	97	24,265	(357)	94
30,000- 49,999	17,327	(193)	112	5,366	(61)	107	22,693	(253)	111
50,000- 99,999	7,763	(63)	98	1,070	(15)	43	8,833	(75)	85
100,000 and over	5,863	(20)	216	310	3)	*	6,173	(22)	170
Not accurately determined	1,165	(16)	113	321	6)	*	1,486	(22)	98
All	\$ 78,178	(1,040)	103%	\$26,862	(443)	90%	\$105,040	(1,427)	99%
C. Issue Ages 40-49									
Under \$10,000	\$ 5,539	(99)	75%	\$ 1,464	(35)	72%	\$ 7,003	(131)	75%
\$ 10,000-\$19,999	20,694	(391)	90	8,541	(177)	104%	29,235	(561)	90
20,000- 29,999	28,550	(424)	94	7,330	(147)	72	35,880	(554)	88
30,000- 49,999	34,423	(429)	94	7,780	(104)	75	42,203	(521)	90
50,000- 99,999	26,353	(203)	94	7,647	(50)	107	34,000	(246)	96
100,000 and over	7,817	(44)	79	4,457	(16)	141	12,274	(56)	86
Not accurately determined	1,470	(17)	79	723	(8)	*	2,193	(24)	78
All	\$124,846	(1,526)	90%	\$37,942	(530)	88%	\$162,788	(1,991)	90%
D. Issue Ages 50 and Over									
Under \$10,000	\$ 4,363	(61)	59%	\$ 495	(9)	*	\$ 4,858	(69)	60%
\$ 10,000-\$19,999	10,912	(209)	82	3,155	(61)	104%	14,067	(268)	86
20,000- 29,999	18,584	(317)	82	4,481	(73)	108	23,065	(389)	86
30,000- 49,999	27,934	(397)	84	5,262	(70)	108	33,196	(465)	87
50,000- 99,999	29,956	(285)	80	5,414	(36)	101	35,370	(316)	82
100,000 and over	18,517	(114)	73	959	(8)	*	19,476	(119)	68
Not accurately determined	1,375	(26)	58	170	(3)	*	1,545	(29)	57
All	\$111,641	(1,324)	79%	\$19,936	(261)	91%	\$131,577	(1,554)	80%
E. All Issue Ages									
Under \$10,000	\$ 25,333	(437)	85%	\$ 6,874	(142)	88%	\$ 32,207	(571)	86%
\$ 10,000-\$19,999	58,275	(1,087)	90	23,616	(484)	92	81,891	(1,541)	91
20,000- 29,999	66,544	(1,026)	91	19,464	(334)	88	86,008	(1,326)	90
30,000- 49,999	80,969	(1,015)	94	18,558	(241)	90	99,527	(1,231)	93
50,000- 99,999	64,872	(547)	87	14,381	(101)	95	79,253	(627)	89
100,000 and over	33,447	(178)	85	5,726	(27)	77	39,173	(197)	83
Not accurately determined	4,596	(68)	75	1,374	(19)	79	5,970	(86)	75
All	\$334,036	(4,069)	89%	\$89,993	(1,321)	89%	\$424,029	(5,200)	89%

\* Fewer than 10 lives terminated by death.

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

For all issue ages combined, the ratios for key-man insurance and for all insurance combined exhibited a convex pattern with advancing annual income. A high ratio, 118 per cent, was experienced for key-man insurance written on insureds with annual incomes of \$50,000-\$99,999. The ratios for business insurance decreased with advancing annual income. Personal insurance displayed no particular pattern by annual income at issue.

For issue-age group 50 and over, the business insurance mortality ratios at annual incomes in excess of \$20,000 were the lowest in this analysis. The areas of highest mortality indicated in Table E are (a) personal insurance issued at ages 0-34 for annual incomes of \$20,000-\$99,999; (b) personal insurance issued at ages 35-49 for annual incomes of \$100,000 and over; and (c) key-man insurance issued at ages 35-49 for incomes of \$50,000 and over.

The experience is analyzed by annual income and classification amount group concurrently in Table 6. The experience on insureds with annual incomes of \$100,000 and over was particularly bad for the lower classification amount groups and generally improved with increasing classification amount. With this exception, the previously noted convex pattern of mortality ratios by annual income group held generally for classification amounts less than \$500,000, where this experience is concentrated.

Classification amount and purpose of insurance are shown concurrently in Table F of the Appendix, with issue-age group as an additional variable. As in Table E, broad issue-age groupings are used and creditor insurance is not shown.

For all issue ages combined, key-man insurance displays a generally increasing pattern of mortality ratios with increasing classification amounts. In direct contrast, the pattern for business insurance is generally decreasing. There is no clear pattern for personal insurance or for all insurance combined; in each of the latter two categories the highest ratio was for classification amount group \$500,000-\$999,999.

Personal insurance experienced the highest mortality ratios in each of the classification amount groups less than \$1,000,000, even though key-man insurance experienced the highest overall ratio. By issue-age group, the cells experiencing unusually high mortality ratios included (a) classification amount group \$200,000-\$499,999 for issue ages 0-34 for personal and business insurance, (b) classification amount group \$500,000-\$999,999 at ages 35-49 for personal and key-man insurance, and (c) classification amount group \$50,000-\$99,999 for business insurance at issue ages 50 and over.

TABLE 6  
LARGE-AMOUNT ISSUES OF 1959-72  
EXPERIENCE BETWEEN 1968 AND 1973 ANNIVERSARIES  
BY ESTIMATED ANNUAL INCOME AT ISSUE AND CLASSIFICATION AMOUNT OF INSURANCE  
MALE AND FEMALE LIVES COMBINED AND PLANS OF INSURANCE COMBINED

Expected Deaths Based on 1968-73 Standard Ordinary Issues Experience  
(Amounts Shown in \$1,000 Units)

Estimated Annual Income at Issue	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E
	\$50,000-\$99,999			\$100,000-\$199,999			\$200,000-\$499,999		
Under \$10,000.....	\$17,519 (414)	\$ 19,708	89%	\$ 9,606 (133)	\$ 11,881	81%	\$ 3,547 (25)	\$ 3,976	89%
\$ 10,000-\$19,999.....	38,481 (922)	40,862	94	34,547 (559)	40,485	85	8,279 (86)	8,327	99
20,000- 29,999.....	21,845 (474)	21,744	100	41,070 (659)	49,282	83	20,220 (219)	21,974	92
30,000- 49,999.....	10,984 (240)	11,218	98	40,137 (601)	43,719	92	40,307 (407)	43,574	93
50,000- 99,999.....	3,498 (75)	4,118	85	13,831 (213)	17,833	78	37,271 (308)	42,035	89
100,000 and over.....	844 (18)	593	142	2,618 (34)	2,607	100	12,411 (91)	10,922	114
Not accurately determined	1,557 (35)	2,466	63	2,105 (31)	2,819	75	1,683 (17)	1,422	118
All.....	\$94,728 (2,163)	\$100,709	94%	\$143,914 (2,188)	\$168,626	85%	\$123,718 (1,056)	\$132,230	94%
	\$500,000-\$999,999			\$1,000,000 and Over			All Classification Groups		
Under \$10,000.....	\$ 1,435 (7)	\$ 970	*	\$ 100 (1)	\$ 1,064	*	\$ 32,207 (571)	\$ 37,599	86%
\$ 10,000-\$19,999.....	584 (2)	554	*	0 (0)	135	*	81,891 (1,541)	90,363	91
20,000- 29,999.....	2,273 (10)	2,070	110%	600 (1)	569	*	86,008 (1,326)	95,639	90
30,000- 49,999.....	6,749 (32)	6,525	103	1,350 (3)	1,986	*	99,527 (1,231)	107,022	93
50,000- 99,999.....	15,517 (70)	16,960	91	9,136 (11)	8,340	110%	79,253 (627)	89,286	89
100,000 and over.....	12,454 (46)	13,018	96	10,846 (25)	19,822	55	39,173 (197)	46,962	83
Not accurately determined	625 (3)	482	*	0 (0)	721	*	5,970 (86)	7,910	75
All.....	\$39,637 (159)	\$ 40,579	98%	\$ 22,032 (38)	\$ 32,637	68%	\$424,029 (5,200)	\$474,781	89%

\* Fewer than 10 lives terminated by death.

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in determining totals.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

## EXPERIENCE BY MODE OF UNDERWRITING

In order to determine the impact of the recently developed paramedical underwriting procedures on large-amount business, the Committee asked for identification of the mode of underwriting for all experience in the current study. Since paramedical underwriting is so new and since the amount limits for nonmedical underwriting are quite restrictive, a very small portion of the total experience in the current study was underwritten other than medically. Only 0.06 per cent of the total exposures were nonmedically underwritten, and only 0.16 per cent of the exposures were underwritten paramedically. Of the nearly 11,000 total deaths in the study, only five resulted from nonmedical business and two from paramedical business. While the nonmedical and paramedical experience is included in all the data in this report, its volume is insufficient to justify separate analysis.

Issue-age group 30-39 contributed the largest volume of exposure for both nonmedical and paramedical issues. Nonmedical exposures were spread out somewhat by policy year, but paramedical exposures were almost entirely in policy years 1-2. By classification amount group, the exposure was concentrated in classification amounts less than \$200,000, with only about 15 per cent of both nonmedical and paramedical exposures in the higher categories.

## COMPARISON WITH PREVIOUS EXPERIENCE

The large-amount experience between 1968 and 1973 anniversaries showed definite improvement over earlier large-amount experience, both absolutely and in comparison with the respective contemporaneous Standard Ordinary experiences for policies of all sizes. Historic ratios of large-amount experience to corresponding Standard Ordinary experience on policies for all amounts are shown in Table 7. In this table the ratios for the period 1963-68, which were based on the 1958-63 Experience Table, were increased by 4 per cent to approximate the relationship to the 1963-68 Standard Ordinary experience. On this basis of comparison, the aggregate 1968-73 ratio of 89 per cent is 3 percentage points lower than the corresponding ratio for the preceding five-year period. This is the second consecutive decrease in this ratio. The main features of this comparison may be summarized as follows:

1. The aggregate ratios in the table follow a convex pattern, with the highest ratios realized in 1958-63 for permanent plans and for all plans combined

TABLE 7

COMPARISON OF MORTALITY RATIOS DURING FIRST TWENTY-FIVE POLICY YEARS ON LARGE-AMOUNT ISSUES OF 1934-72  
 EXPERIENCE BETWEEN 1941 AND 1973 ANNIVERSARIES  
 BY SEX, AGE AT ISSUE, POLICY-YEAR GROUP, CLASSIFICATION AMOUNT, AND PLAN OF INSURANCE  
 Expected Deaths Based on Corresponding Standard Ordinary Issues Experience\*

	PERMANENT PLANS						TERM PLANS						ALL PLANS					
	1941-48	1948-53	1953-58	1958-63	1963-68*	1968-73	1941-48	1948-53	1953-58†	1958-63	1963-68*	1968-73	1941-48	1948-53	1953-58	1958-63	1963-68*	1968-73
Sex:																		
Male	‡	‡	91%	96%	93%	92%	‡	‡	114%	106%	102%	90%	‡	‡	94%	97%	95%	91%
Female	‡	‡	58	61	56	60	‡	‡	§	46	35	81	‡	‡	59	60	55	63
Ages at issue:																		
0-9	‡	‡	‡	§	145%	143%	‡	‡	‡	§	§	§	‡	‡	‡	§	145%	145%
10-29	113%	141%	96%	128%	118	112	§	§	151%	193%	119%	96%	114%	146%	102%	135%	118	108
30-39	97	104	97	108	103	99	172%	99%	134	117	99	92	107	104	103	109	103	98
40-49	89	90	91	95	91	88	107	94	117	102	103	88	92	90	96	96	93	88
50 and over	78	78	83	83	82	82	91	72	102	92	92	80	79	77	85	84	83	83
Policy years:																		
1-2	90%	98%	75%	93%	95%	88%	81%	83%	126%	83	94	96%	89%	95%	85%	92%	95%	90%
3-5	95	98	89	96	91	85	139	103	112	126	102	90	101	99	94	101	93	87
6-10	84	90	97	96	90	95	109	82	119	105	96	83	87	89	101	97	92	93
11-15	78	81	86	92	90	89	105	85	104	111	73	93	80	81	89	95	93	89
16-25	§	84	89	88	89	85	§	104	121	88	94	89	§	86	93	88	90	86
Classification amounts:																		
\$ 50,000-\$ 99,999	91%	89%	92%	96%	94%	91%	118%	104%	119%	102%	108%	102%	95%	91%	96%	97%	97%	93%
100,000- 199,999	90	85	94	93	88	88	100	86	113	100	96	84	91	85	97	94	90	87
200,000- 499,999	89	94	85	89	89	92	128	80	119	96	96	85	93	92	90	90	91	91
500,000 and over	61	80	75	94	90	82	94	§	120	151	105	92	64	81	80	101	93	84
All	86%	88%	89%	93%	90%	89%	112%	90%	116%	104%	100%	90%	89%	88%	93%	94%	92%	89%

\* Previously published 1963-68 large-amount mortality ratios were based on 1958-63 Standard Ordinary experience. To obtain an approximation for 1963-68 ratios based on 1963-68 Standard Ordinary experience, the ratios based on 1958-63 experience have been increased by 4 per cent.

† Based on correction of previously published values. See *TSA, 1964 Reports*, pp. 62-64.

‡ Not available.

§ Fewer than 10 lives terminated by death.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.



and in 1953-58 for term plans. These ratios have declined to the level of the 1948-53 period.

2. The mortality ratios for term plans have been more volatile than those for permanent plans. The improvement in term mortality has been much greater than that for permanent plan mortality. This is particularly pronounced for the latest interperiod comparison, in which term plan mortality decreased 10 percentage points and permanent plan mortality only 1 point.
3. The historic pattern of decreasing mortality ratios by issue-age group was maintained for permanent plans but not for term plans.
4. Issue-age group 10-29 is shown in Table 7 only because it is available historically. While the greatest improvement occurred in that age category, this result represents a mixture of slightly improved mortality at issue ages 10-19 and much lower mortality at ages 20-29. For all plans combined, the Table 7 ratios for issue-age group 10-19 for the last three study periods would be 109, 115 (estimated), and 111 per cent; those for issue-age group 20-29 would be 138, 119 (estimated), and 108 per cent.
5. By policy-year group, increases were observed for policy years 6-10 on permanent plans and all plans combined, and for policy years 1-2 on term plans, the latter increase being the result of the single large claim discussed earlier. All other mortality ratios by policy-year group and plan were lower, with the greatest improvement in policy years 3-5.
6. By classification amount group, the most noticeable feature is the convex pattern of ratios for classification amount group \$500,000 and over. The ratios for this group have experienced the greatest improvement over the last ten years.

In order to facilitate direct absolute comparisons of mortality results among the last three study periods, Tables B, C, and D of the Appendix include expected deaths and mortality ratios calculated on the basis of the 1958-63 Experience Table. Table 8 summarizes the experience of the last three studies using this common basis for expected deaths.

As might be expected, the improvement in large-amount mortality is more dramatic when expressed in this manner. The absolute improvement for the 1963-68 period was 6 percentage points, and a further improvement of 8 percentage points has been experienced in the current study period. The main features of this comparison may be summarized as follows:

1. The decrease in male ratios mirrors the aggregate results; the all-plans female ratios would also have been uniformly decreasing in the absence of the single large claim previously discussed.

TABLE 8  
 COMPARISON OF MORTALITY RATIOS  
 EXPERIENCE BETWEEN 1958 AND 1973 ANNIVERSARIES  
 DURING THE FIRST TWENTY-FIVE POLICY YEARS ON LARGE-AMOUNT ISSUES OF 1934-72  
 BY SEX, AGE AT ISSUE, POLICY-YEAR GROUP, CLASSIFICATION AMOUNT,  
 AND PLAN OF INSURANCE  
 Expected Deaths Based on 1958-63 Standard Ordinary Issues Experience

	PERMANENT PLANS			TERM PLANS			ALL PLANS		
	1958-63	1963-68	1968-73	1958-63	1963-68	1968-73	1958-63	1963-68	1968-73
Sex:									
Male	96%	90%	83%	106%	98%	82%	97%	91%	83%
Female	61	54	54	46	37	73	60	53	56
All	93%	87%	80%	104%	96%	82%	94%	88%	80%
Ages at issue:									
0-9	*	140%	142%	*	*	*	*	139%	144%
10-19	111%	108	125	*	*	*	109%	111	118
20-29	130	114	108	196%	113%	96%	138	114	105
30-39	108	99	92	117	95	86	109	99	91
40-49	95	87	79	102	99	80	96	89	79
50-59	82	77	71	92	95	81	83	79	72
60-69	85	83	78	88	50	66	85	82	77
70 and over	*	142	78	*	*	*	*	142	76
All	93%	87%	80%	104%	96%	82%	94%	88%	80%
Policy years:									
1-2	93%	91%	81%	83%	90%	90%	92%	91%	84%
3-5	96	87	76	126	98	82	101	89	77
6-10	96	87	86	105	92	75	97	88	84
11-15	92	87	80	111	109	84	95	90	81
16-20	85	85	76	87	92	81	86	86	77
21-25	92	88	80	89	88	79	91	88	80
All	93%	87%	80%	104%	96%	82%	94%	88%	80%
Classification amounts:									
\$ 50,000-\$ 99,999	96%	90%	82%	102%	104%	94%	97%	93%	85%
100,000- 199,999	93	85	80	100	92	76	94	86	79
200,000- 499,999	89	86	83	96	92	77	90	87	82
500,000 and over	94	87	73	151	101	83	101	89	75
All	93%	87%	80%	104%	96%	82%	94%	88%	80%

\* Fewer than 10 lives terminated by death.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

2. Despite the strong downward trend in aggregate results, the mortality ratios have increased at the lower issue ages.
3. The pattern of mortality for permanent plans has been similar to that for all plans combined. Overall, permanent plan mortality ratios decreased 6 and 7 points between consecutive study periods; term plan ratios have decreased much faster, closing the excess of term over permanent mortality from 11 points in 1958-63 to 2 points in the current study period.
4. As noted before, the greatest improvement by issue-age group was at ages 20-49, while the greatest improvement by policy-year group was for years 3-5.
5. The greatest improvement by classification amount group occurred in the \$500,000 and over classification. This may reflect more intensive underwriting techniques and a much larger relative volume of business in this category.

#### EXPERIENCE BY CAUSE OF DEATH

The experience by cause of death is presented in Table 9. Data on cause of death are shown in detail by issue-age group in Table G and by policy-year group in Table H of the Appendix. For this purpose, the expected deaths for the first fifteen policy years were distributed by cause of death on the basis of the corresponding distribution of actual deaths on Standard Ordinary medically examined issues for all amounts during the period between 1968 and 1972 anniversaries. For the later policy years this distribution by cause of death was based on the corresponding ultimate experience on medical and nonmedical issues combined.

As in previous studies, very high ratios of actual to expected claims were observed for the suicide and the accidents and homicide categories. The ratio for malignant neoplasms was also noticeably higher than the aggregate mortality ratio. In the current study, permanent plan ratios were higher than term plan ratios for diseases of the heart and circulatory system, for pneumonia and influenza, and for accidents and homicide; the term plan ratios were higher for all other cause groups.

The mortality ratio for suicide, 138 per cent, was substantially higher than that for any other cause-of-death category; it exceeded 100 per cent for every issue-age group except 50-59 in Table G and for nearly every policy-year category in Table H. The ratios were particularly high for issue-age group 0-29 and for policy years 16-25.

At issue ages below 60, the mortality ratios for the accidents and homicide category also exceeded 100 per cent for nearly all permanent and term plan categories in Table G and were rather uniform by issue-age group. These ratios generally increased with duration. Accidents and homicide ratios were generally larger for permanent plans than for term

TABLE 9

LARGE-AMOUNT ISSUES OF 1944-72  
EXPERIENCE BETWEEN 1968 AND 1973 ANNIVERSARIES  
BY CAUSE OF DEATH AND PLAN OF INSURANCE  
MALE AND FEMALE LIVES COMBINED

Expected Deaths Based on 1968-73 Standard Ordinary Issues Experience  
(Amounts Shown in \$1,000 Units)

Cause of Death	Committee 1970 Code	Num- ber of Deaths	Pro- por- tion of All Deaths	Actual Claims	Expected Claims	A/E
Permanent Plans						
Tuberculosis	01-02	0	0%	\$ 0	\$ 439	*
Malignant neoplasms	18-33	2,007	23	165,210	173,783	95%
Diabetes mellitus	37	35	0	2,733	3,174	86
Cerebrovascular diseases	53	419	5	32,812	42,002	78
Heart and circulatory diseases	48-52, 54-55	3,384	39	250,842	302,087	83
Pneumonia and influenza	56-57	149	2	10,060	14,142	71
Accidents and homicide	88-96, 98	1,057	12	93,720	76,122	123
Suicide	97	402	5	31,747	23,353	136
War and residual†	All others	1,150	13	84,245	119,689	70
All causes		8,603	100%	\$671,369	\$754,791	89%
Term Plans						
Tuberculosis	01-02	1	0%	\$ 75	\$ 112	*
Malignant neoplasms	18-33	644	22	39,303	40,694	97%
Diabetes mellitus	37	14	0	710	787	90
Cerebrovascular diseases	53	143	5	8,352	10,053	83
Heart and circulatory diseases	48-52, 54-55	1,082	37	55,367	71,771	77
Pneumonia and influenza	56-57	43	1	2,046	3,381	60
Accidents and homicide	88-96, 98	419	14	29,180	25,554	114
Suicide	97	149	5	9,466	6,603	143
War and residual‡	All others	404	14	23,798	28,537	83
All causes		2,899	100%	\$168,297	\$187,492	90%
All Plans						
Tuberculosis	01-02	1	0%	\$ 75	\$ 551	*
Malignant neoplasms	18-33	2,520	23	204,513	214,477	95%
Diabetes mellitus	37	46	0	3,443	3,961	87
Cerebrovascular diseases	53	541	5	41,164	52,055	79
Heart and circulatory diseases	48-52, 54-55	4,242	39	306,209	373,858	82
Pneumonia and influenza	56-57	185	2	12,106	17,523	69
Accidents and homicide	88-96, 98	1,402	13	122,900	101,676	121
Suicide	97	517	5	41,213	29,956	138
War and residual§	All others	1,498	14	108,043	148,226	73
All causes		10,952	100%	\$839,666	\$942,283	89%

\* Fewer than 10 lives terminated by death.

† Includes 8 war deaths for \$402,000.

‡ Includes 2 war deaths for \$75,000.

§ Includes 10 war deaths for \$477,000.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

plans in the younger issue-age groups and at the earlier durations. The average claim per life for accidents and homicides, \$87,660, was the largest for any cause-of-death group. For all causes of death this average was \$76,668.

Motor vehicle and aviation mishaps continue to account for the majority of the fatal accidents. Table 10 shows the number of deaths from these causes, as well as the percentages of total deaths from accidents and homicides represented by each, in the current and prior studies.

TABLE 10  
MOTOR VEHICLE AND AVIATION ACCIDENT DEATHS  
INCLUDED IN ACCIDENTS AND HOMICIDES  
MALE AND FEMALE LIVES COMBINED

EXPERIENCE PERIOD	MOTOR VEHICLE ACCIDENT DEATHS		AVIATION ACCIDENT DEATHS		MOTOR VEHICLE AND AVIATION ACCIDENT DEATHS	
	Number	Per Cent of All Accidents and Homicides	Number	Per Cent of All Accidents and Homicides	Number	Per Cent of All Accidents and Homicides
1948-53.....	67	35%	45	23%	112	58%
1953-58.....	123	45	47	17	170	62
1958-63.....	242	39	165	26	407	65
1963-68.....	359	38	221	23	580	61
1968-73.....	514	37	266	19	780	56

Public Health Service data indicate that fatalities due to motor vehicle accidents accounted for 48 per cent of all accidental deaths in the general population of the United States during 1968-73. The corresponding figure for the large-amount experience was 40 per cent. Aviation accidents accounted for 21 per cent of all accidental deaths in the large-amount experience, compared with only 1.5 per cent in the general population.

Deaths due to heart and circulatory diseases claimed the greatest number of lives (39 per cent) and accounted for the greatest volume of actual claims (36 per cent). In the previous study more than 40 per cent of both lives and claim amounts were due to such diseases. The aggregate mortality ratio for this cause group was 7 percentage points lower than that for all causes combined. The mortality was slightly higher on perma-

nent plans than on term plans; the lowest ratios were observed for issue-age groups 40-49 (82 per cent) and 50-59 (76 per cent).

Malignant neoplasms were the second leading cause of death, accounting for 23 per cent of the number of deaths and 24 per cent of the total claim amount. The mortality ratio of 95 per cent was 6 percentage points higher than the aggregate. Malignant neoplasm mortality ratios generally increased with duration; there was no particular pattern by issue-age group.

Homicide is a significant risk factor in the large-amount experience. For the current period, 1.06 per cent of the deaths by life and 1.31 per cent by amount were due to homicide. Public Health Service data indicate that 0.91 per cent of all population deaths during this period were due to homicide. The average homicide claim per life, \$95,138, was even larger than that for accidents and homicides combined.

In the aggregate, only ten war deaths were experienced, for a total amount of \$477,000. Six of these deaths were in issue-age group 0-29, increasing that mortality ratio by only 0.9 points.

## APPENDIX

TABLE A

## CONTRIBUTING COMPANIES

Company	Proportion of Permanent Insurance Exposures	Proportion of Term Insurance Exposures	Proportion of Total Exposures
New York Life	11.9%	13.7%	12.3%
Massachusetts Mutual	12.7	10.4	12.1
Northwestern Mutual	12.3	8.7	11.4
Prudential	9.4	13.6	10.5
Equitable, N.Y.	8.7	9.1	8.8
Metropolitan	4.8	11.7	6.6
New England Life	6.6	4.1	5.9
Mutual Benefit	7.1	1.4	5.6
Connecticut General	5.4	4.9	5.3
Aetna	4.6	4.5	4.6
John Hancock	4.2	2.8	3.8
Travelers	2.0	7.4	3.4
Phoenix Mutual	4.2	0.8	3.3
Penn Mutual	3.1	3.9	3.3
Provident Mutual	2.6	1.7	2.4
Lincoln National	0.4	1.3	0.7
Total	100.0%	100.0%	100.0%

TABLE B  
LARGE-AMOUNT ISSUES OF 1944-72  
EXPERIENCE BETWEEN 1968 AND 1973 ANNIVERSARIES  
BY AGE AT ISSUE, POLICY YEAR, AND PLAN OF INSURANCE  
MALE AND FEMALE LIVES COMBINED

Expected Deaths Based on  
(A) 1968-73 Standard Ordinary Issues Experience  
(B) 1958-63 Standard Ordinary Issues Experience  
(C) 1965-70 Basic Tables, Select and Ultimate  
(Amounts Shown in \$1,000 Units)

PERMANENT PLANS

POLICY YEARS	ACTUAL CLAIMS	TABLE (A)		TABLE (B)		TABLE (C)	
		Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Issue Ages 0-9							
1-2...	\$ 646 (10)	\$ 274	<i>237%</i>	\$ 340	<i>190%</i>	\$ 607	<i>106%</i>
3-5...	200 (4)	180	*	206	*	228	*
6-10...	100 (2)	204	*	185	*	211	*
11-15...	500 (1)	214	*	169	*	209	*
16-20...	0 (0)	112	*	94	*	109	*
21-25...	0 (0)	24	*	22	*	24	*
All	\$ 1,446 (17)	\$ 1,008	<i>143%</i>	\$ 1,016	<i>142%</i>	\$ 1,388	<i>104%</i>
Issue Ages 10-19							
1-2...	\$ 726 (13)	\$ 543	<i>134%</i>	\$ 501	<i>145%</i>	\$ 476	<i>153%</i>
3-5...	1,032 (12)	749	<i>138</i>	742	<i>139</i>	637	<i>162</i>
6-10...	717 (11)	777	<i>92</i>	702	<i>102</i>	702	<i>102</i>
11-15...	310 (5)	445	*	421	*	451	*
16-20...	120 (2)	223	*	214	*	233	*
21-25...	500 (4)	141	*	139	*	144	*
All	\$ 3,405 (44)	\$ 2,878	<i>118%</i>	\$ 2,719	<i>125%</i>	\$ 2,643	<i>129%</i>
Issue Ages 20-29							
1-2...	\$ 4,461 (74)	\$ 4,867	<i>92%</i>	\$ 4,896	<i>91%</i>	\$ 4,869	<i>92%</i>
3-5...	5,984 (91)	5,028	119	5,165	116	4,938	121
6-10...	6,181 (93)	5,025	123	5,080	122	4,746	130
11-15...	3,928 (91)	4,200	94	4,432	89	4,254	92
16-20...	3,316 (60)	2,766	120	2,902	114	2,837	117
21-25...	2,435 (36)	1,783	<i>137</i>	1,963	<i>124</i>	1,822	<i>134</i>
All	\$ 26,305 (434)	\$ 23,669	<i>111%</i>	\$ 24,438	<i>108%</i>	\$ 23,466	<i>112%</i>

\* Fewer than 10 lives terminated by death.

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

TABLE B—Continued  
PERMANENT PLANS—Continued

POLICY YEARS	ACTUAL CLAIMS	TABLE (A)		TABLE (B)		TABLE (C)	
		Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Issue Ages 30-39							
1-2...	\$ 14,755 (190)	\$ 14,991	98%	\$ 15,042	98%	\$ 15,024	98%
3-5...	25,253 (295)	22,965	110	23,555	107	22,661	111
6-10...	37,479 (549)	36,635	102	38,653	97	37,317	100
11-15...	38,640 (640)	39,977	97	44,743	86	41,466	93
16-20...	24,916 (441)	25,842	96	29,335	85	26,992	92
21-25...	11,976 (257)	13,383	89	14,773	81	13,900	86
All	\$153,019 (2,232)	\$153,793	99%	\$ 166,101	92%	\$157,360	97%
Issue Ages 40-49							
1-2...	\$ 23,823 (280)	\$ 27,049	88%	\$ 28,993	82%	\$ 27,290	87%
3-5...	37,942 (490)	44,796	85	49,847	76	46,607	81
6-10...	67,270 (834)	69,314	97	77,944	86	75,808	89
11-15...	60,600 (907)	69,540	87	77,869	78	75,335	80
16-20...	39,012 (662)	48,043	81	53,134	73	50,455	77
21-25...	22,677 (375)	26,031	87	29,176	78	27,170	83
All	\$251,324 (3,368)	\$284,773	88%	\$ 316,963	79%	\$302,665	83%
Issue Ages 50-59							
1-2...	\$ 15,507 (171)	\$ 19,789	78%	\$ 23,216	67%	\$ 20,722	75%
3-5...	22,873 (302)	35,831	64	43,762	52	38,035	60
6-10...	49,094 (625)	55,215	89	63,856	77	59,495	83
11-15...	46,267 (644)	53,710	86	59,341	78	56,369	82
16-20...	29,826 (447)	39,231	76	43,182	69	41,456	72
21-25...	15,227 (243)	17,562	87	19,513	78	18,596	82
All	\$178,794 (2,325)	\$221,338	81%	\$ 252,870	71%	\$234,673	76%

NOTE. Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.



TABLE B—Continued  
PERMANENT PLANS—Continued

POLICY YEARS	ACTUAL CLAIMS	TABLE (A)		TABLE (B)		TABLE (C)	
		Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Issue Ages 60-69							
1-2...	\$ 4,630 (52)	\$ 5,602	83%	\$ 6,545	71%	\$ 6,810	68%
3-5...	8,986 (97)	10,428	86	11,993	75	12,460	72
6-10...	16,409 (206)	18,420	89	19,363	85	19,592	84
11-15...	13,552 (185)	16,654	81	17,207	79	16,756	81
16-20...	8,506 (116)	9,885	86	10,754	79	10,703	79
21-25...	1,553 (31)	2,353	66	2,609	60	2,505	62
All	\$ 53,636 (668)	\$ 63,342	85%	\$ 68,471	78%	\$ 68,826	78%
Issue Ages 70 and Over							
1-2...	\$ 318 (8)	\$ 536	*	\$ 701	*	\$ 622	*
3-5...	965 (12)	1,002	96%	924	104%	1,097	88%
6-10...	1,369 (17)	1,612	85	1,628	84	1,696	81
11-15...	668 (14)	623	107	887	75	685	98
16-20...	120 (2)	206	*	273	*	246	*
21-25...	0 (0)	11	*	12	*	11	*
All	\$ 3,440 (53)	\$ 3,990	86%	\$ 4,425	78%	\$ 4,357	79%
All Issue Ages							
1-2...	\$ 64,866 (797)	\$ 73,651	88%	\$ 80,234	81%	\$ 76,420	85%
3-5...	103,235 (1,300)	120,979	85	136,194	76	126,663	82
6-10...	178,619 (2,312)	187,202	95	207,411	86	199,567	90
11-15...	164,465 (2,476)	185,363	89	205,069	80	195,525	84
16-20...	105,816 (1,714)	126,308	84	139,888	76	133,031	80
21-25...	54,368 (920)	61,288	89	68,207	80	64,172	85
All	\$671,369 (8,603)	\$754,791	89%	\$ 837,003	80%	\$795,378	84%

\* Fewer than 10 lives terminated by death.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

TABLE B -Continued

## TERM PLANS

POLICY YEARS	ACTUAL CLAIMS		TABLE (A)		TABLE (B)		TABLE (C)	
			Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Issue Ages 0-9								
1-2	\$ 0	(0)	\$ 2	*	\$ 2	*	\$ 4	*
3-5	0	(0)	1	*	1	*	1	*
6-10	50	(1)	3	*	4	*	4	*
11-15	0	(0)	9	*	7	*	8	*
16-20	0	(0)	7	*	5	*	6	*
21-25	0	(0)	0	*	0	*	0	*
All	\$ 50	(1)	\$ 22	*	\$ 19	*	\$ 23	*
Issue Ages 10-19								
1-2	\$ 35	(1)	\$ 64	*	\$ 54	*	\$ 54	*
3-5	0	(0)	46	*	41	*	39	*
6-10	0	(0)	45	*	42	*	41	*
11-15	0	(0)	31	*	29	*	31	*
16-20	0	(0)	20	*	19	*	22	*
21-25	0	(0)	16	*	15	*	16	*
All	\$ 35	(0)	\$ 222	*	\$ 200	*	\$ 203	*
Issue Ages 20-29								
1-2	\$ 2,548	(39)	\$ 2,726	<i>93%</i>	\$ 2,769	<i>92%</i>	\$ 2,720	<i>94%</i>
3-5	1,874	(34)	2,070	<i>91</i>	2,134	<i>88</i>	2,030	<i>92</i>
6-10	1,181	(26)	1,275	<i>93</i>	1,286	<i>92</i>	1,205	<i>98</i>
11-15	929	(31)	739	<i>126</i>	782	<i>119</i>	751	<i>124</i>
16-20	753	(20)	646	<i>117</i>	679	<i>111</i>	662	<i>114</i>
21-25	487	(15)	425	<i>115</i>	471	<i>103</i>	435	<i>112</i>
All	\$ 7,772	(165)	\$ 7,881	<i>99%</i>	\$ 8,121	<i>96%</i>	\$ 7,803	<i>100%</i>

\* Fewer than 10 lives terminated by death.

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

TABLE B—Continued

TERM PLANS—Continued

POLICY YEARS	ACTUAL CLAIMS	TABLE (A)		TABLE (B)		TABLE (C)	
		Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Issue Ages 30-39							
1-2...	\$ 8,960 (142)	\$ 9,527	94%	\$ 9,556	94%	\$ 9,599	93%
3-5...	9,472 (153)	11,056	86	11,354	83	10,914	87
6-10...	8,416 (164)	10,762	78	11,327	74	10,956	77
11-15...	7,507 (168)	7,791	96	8,728	86	8,089	93
16-20...	7,325 (176)	6,832	107	7,760	94	7,141	103
21-25...	4,014 (105)	3,970	101	4,382	92	4,124	97
All	\$ 45,694 (895)	\$ 49,938	92%	\$ 53,107	86%	\$ 50,823	90%
Issue Ages 40-49							
1-2...	\$ 10,873 (139)	\$ 12,340	88%	\$ 13,177	83%	\$ 12,447	87%
3-5...	15,319 (193)	16,416	93	18,281	84	17,098	90
6-10...	13,754 (220)	17,105	80	19,214	72	18,647	74
11-15...	11,670 (211)	12,910	90	14,434	81	13,964	84
16-20...	12,634 (282)	13,886	91	15,356	82	14,575	87
21-25...	7,170 (178)	8,349	86	9,356	77	8,712	82
All	\$ 71,420 (1,196)	\$ 81,006	88%	\$ 89,818	80%	\$ 85,443	84%
Issue Ages 50-59							
1-2...	\$ 6,123 (56)	\$ 5,062	121%	\$ 5,888	104%	\$ 5,290	116%
3-5...	6,265 (93)	7,178	87	8,719	72	7,639	82
6-10...	8,330 (121)	8,333	100	9,671	86	9,005	93
11-15...	7,244 (128)	7,650	95	8,431	86	8,001	91
16-20...	7,445 (155)	9,832	76	10,826	69	10,386	72
21-25...	4,039 (84)	4,875	83	5,417	75	5,162	78
All	\$ 39,446 (629)	\$ 42,930	92%	\$ 48,952	81%	\$ 45,483	87%

TABLE B—Continued

## TERM PLANS—Continued

POLICY YEARS	ACTUAL CLAIMS		TABLE (A)		TABLE (B)		TABLE (C)	
			Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Issue Ages 60-69								
1-2...	\$ 426	(6)	\$ 564	*	\$ 645	*	\$ 657	*
3-5...	923	(5)	686	*	802	*	816	*
6-10...	385	(4)	1,130	*	1,197	*	1,198	*
11-15...	712	(15)	1,047	<i>68%</i>	1,089	<i>65%</i>	1,027	<i>60%</i>
16-20...	1,138	(33)	1,430	<i>80%</i>	1,556	<i>73%</i>	1,544	<i>74%</i>
21-25...	218	(5)	449	*	497	*	479	*
All	\$ 3,802	(68)	\$ 5,306	<i>72%</i>	\$ 5,786	<i>66%</i>	\$ 5,721	<i>66%</i>
Issue Ages 70 and Over								
1-2...	\$ 0	(0)	\$ 6	*	\$ 9	*	\$ 7	*
3-5...	50	(1)	10	*	8	*	11	*
6-10...	0	(0)	153	*	162	*	161	*
11-15...	0	(0)	6	*	9	*	7	*
16-20...	28	(1)	12	*	16	*	14	*
21-25...	0	(0)	0	*	0	*	0	*
All	\$ 78	(2)	\$ 187	*	\$ 204	*	\$ 200	*
All Issue Ages								
1-2...	\$ 28,965	(381)	\$ 30,291	<i>96%</i>	\$ 32,100	<i>90%</i>	\$ 30,778	<i>94%</i>
3-5...	33,903	(477)	37,463	<i>90%</i>	41,340	<i>82%</i>	38,548	<i>88%</i>
6-10...	32,116	(535)	38,806	<i>83%</i>	42,903	<i>75%</i>	41,217	<i>78%</i>
11-15...	28,062	(552)	30,183	<i>93%</i>	33,509	<i>84%</i>	31,878	<i>88%</i>
16-20...	29,323	(666)	32,665	<i>90%</i>	36,217	<i>81%</i>	34,350	<i>85%</i>
21-25...	15,928	(385)	18,084	<i>88%</i>	20,138	<i>79%</i>	18,928	<i>84%</i>
All	\$168,297	(2,899)	\$187,492	<i>90%</i>	\$ 206,207	<i>82%</i>	\$195,699	<i>86%</i>

\* Fewer than 10 lives terminated by death.

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

TABLE B—Continued

## ALL PLANS

POLICY YEARS	ACTUAL CLAIMS		TABLE (A)		TABLE (B)		TABLE (C)	
			Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Issue Ages 0-9								
1-2....	\$ 646	(10)	\$ 276	234%	\$ 342	189%	\$ 611	106%
3-5....	200	(4)	181	*	207	*	229	*
6-10....	150	(3)	207	*	189	*	215	*
11-15....	500	(1)	223	*	176	*	217	*
16-20....	0	(0)	119	*	99	*	115	*
21-25....	0	(0)	24	*	22	*	24	*
All	\$ 1,496	(18)	\$ 1,030	145%	\$ 1,035	144%	\$ 1,411	106%
Issue Ages 10-19								
1-2....	\$ 761	(14)	\$ 607	125%	\$ 555	137%	\$ 530	144%
3-5....	1,032	(12)	795	130	783	132	676	153
6-10....	717	(11)	822	87	744	96	743	97
11-15....	310	(5)	476	*	450	*	482	*
16-20....	120	(2)	243	*	233	*	255	*
21-25....	500	(4)	157	*	154	*	160	*
All	\$ 3,440	(45)	\$ 3,100	111%	\$ 2,919	118%	\$ 2,846	121%
Issue Ages 20-29								
1-2....	\$ 7,009	(111)	\$ 7,593	92%	\$ 7,665	91%	\$ 7,589	92%
3-5....	7,858	(123)	7,098	111	7,299	108	6,968	113
6-10....	7,362	(118)	6,300	117	6,366	116	5,951	124
11-15....	4,857	(119)	4,939	98	5,214	93	5,005	97
16-20....	4,069	(75)	3,412	119	3,581	114	3,499	116
21-25....	2,922	(50)	2,208	132	2,434	120	2,257	129
All	\$ 34,077	(582)	\$ 31,550	108%	\$ 32,559	105%	\$ 31,269	109%

TABLE B—Continued

ALL PLANS—Continued

POLICY YEARS	ACTUAL CLAIMS	TABLE (A)		TABLE (B)		TABLE (C)	
		Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Issue Ages 30-39							
1-2....	\$ 23,715 (324)	\$ 24,518	97%	\$ 24,598	96%	\$ 24,623	96%
3-5....	34,725 (435)	34,021	102	34,909	99	33,575	103
6-10...	45,895 (692)	47,397	97	49,980	92	48,273	95
11-15...	46,147 (788)	47,768	97	53,471	86	49,555	93
16-20...	32,241 (595)	32,674	99	37,095	87	34,133	94
21-25...	15,990 (321)	17,353	92	19,155	83	18,024	89
All	\$198,713 (2,984)	\$203,731	98%	\$ 219,208	91%	\$208,183	95%
Issue Ages 40-49							
1-2....	\$ 34,696 (412)	\$ 39,389	88%	\$ 42,170	82%	\$ 39,737	87%
3-5....	53,261 (659)	61,212	87	68,128	78	63,705	84
6-10...	81,024 (1,033)	86,419	94	97,158	83	94,455	86
11-15...	72,270 (1,087)	82,450	88	92,303	78	89,299	81
16-20...	51,646 (910)	61,929	83	68,490	75	65,030	79
21-25...	29,847 (547)	34,380	87	38,532	77	35,882	83
All	\$322,744 (4,401)	\$365,779	88%	\$ 406,781	79%	\$388,108	83%
Issue Ages 50-59							
1-2....	\$ 21,630 (223)	\$ 24,851	87%	\$ 29,104	74%	\$ 26,012	83%
3-5....	29,138 (390)	43,009	68	52,481	56	45,674	64
6-10...	57,424 (734)	63,548	90	73,527	78	68,500	84
11-15...	53,511 (757)	61,360	87	67,772	79	64,370	83
16-20...	37,271 (585)	49,063	76	54,008	69	51,842	72
21-25...	19,266 (316)	22,437	86	24,930	77	23,758	81
All	\$218,240 (2,868)	\$264,268	83%	\$ 301,822	72%	\$280,156	78%

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

TABLE B—Continued

ALL PLANS—Continued

POLICY YEARS	ACTUAL CLAIMS		TABLE (A)		TABLE (B)		TABLE (C)	
			Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Issue Ages 60-69								
1-2...	\$ 5,056	(58)	\$ 6,166	82%	\$ 7,190	70%	\$ 7,467	68%
3-5...	9,909	(103)	11,114	89	12,795	77	13,276	75
6-10...	16,794	(210)	19,550	86	20,560	82	20,790	81
11-15...	14,264	(200)	17,701	81	18,296	78	17,783	80
16-20...	9,644	(147)	11,315	85	12,310	78	12,247	79
21-25...	1,771	(35)	2,802	63	3,106	57	2,984	59
All	\$ 57,438	(730)	\$ 68,648	84%	\$ 74,257	77%	\$ 74,547	77%
Issue Ages 70 and Over								
1-2...	\$ 318	(8)	\$ 542	*	\$ 710	*	\$ 629	*
3-5...	1,015	(12)	1,012	100%	932	109%	1,108	92%
6-10...	1,369	(17)	1,765	78	1,790	76	1,857	74
11-15...	668	(14)	629	106	896	75	692	97
16-20...	148	(3)	218	*	289	*	260	*
21-25...	0	(0)	11	*	12	*	11	*
All	\$ 3,518	(54)	\$ 4,177	84%	\$ 4,629	76%	\$ 4,557	77%
All Issue Ages								
1-2...	\$ 93,831	(1,155)	\$103,942	90%	\$ 112,334	84%	\$107,198	88%
3-5...	137,138	(1,739)	158,442	87	177,534	77	165,211	83
6-10...	210,735	(2,786)	226,008	93	250,314	84	240,784	88
11-15...	192,527	(2,948)	215,546	89	238,578	81	227,403	85
16-20...	135,139	(2,297)	158,973	85	176,105	77	167,381	81
21-25...	70,296	(1,262)	79,372	89	88,345	80	83,100	85
All	\$839,666	(10,952)	\$942,283	89%	\$1,043,210	80%	\$991,077	85%

\* Fewer than 10 lives terminated by death.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

TABLE C

LARGE-AMOUNT ISSUES OF 1944-72  
EXPERIENCE BETWEEN 1968 AND 1973 ANNIVERSARIES  
BY CLASSIFICATION AMOUNT, AGE AT ISSUE, AND PLAN OF INSURANCE  
MALE AND FEMALE LIVES COMBINED

Expected Deaths Based on

(A) 1968-73 Standard Ordinary Issues Experience

(B) 1958-63 Standard Ordinary Issues Experience

(C) 1965-70 Basic Tables, Select and Ultimate

(Amounts Shown in \$1,000 Units)

PERMANENT PLANS

CLASSIFICATION AMOUNT	ACTUAL CLAIMS	TABLE (A)		TABLE (B)		TABLE (C)	
		Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Issue Ages 0-9							
\$ 50,000-\$ 99,999	\$ 496 (11)	\$ 432	<i>115%</i>	\$ 424	<i>117%</i>	\$ 562	<i>88%</i>
100,000- 199,999	450 (5)	428	*	438	*	612	*
200,000- 499,999	0 (0)	114	*	118	*	168	*
500,000- 999,999	500 (1)	23	*	24	*	28	*
1,000,000 and over	0 (0)	11	*	12	*	18	*
All.....	\$ 1,446 (17)	\$ 1,008	<i>143%</i>	\$ 1,016	<i>142%</i>	\$ 1,388	<i>104%</i>
Issue Ages 10-19							
\$ 50,000-\$ 99,999	\$ 1,475 (30)	\$ 1,132	<i>130%</i>	\$ 1,064	<i>139%</i>	\$ 1,051	<i>140%</i>
100,000- 199,999	1,540 (15)	1,241	<i>124</i>	1,174	<i>131</i>	1,133	<i>136</i>
200,000- 499,999	390 (3)	378	*	359	*	345	*
500,000- 999,999	0 (0)	41	*	41	*	38	*
1,000,000 and over	0 (0)	86	*	81	*	76	*
All.....	\$ 3,405 (44)	\$ 2,878	<i>118%</i>	\$ 2,719	<i>125%</i>	\$ 2,643	<i>129%</i>
Issue Ages 20-29							
\$ 50,000-\$ 99,999	\$ 10,439 (259)	\$ 11,237	<i>93%</i>	\$ 11,589	<i>90%</i>	\$ 11,157	<i>94%</i>
100,000- 199,999	9,735 (149)	8,802	<i>111</i>	9,092	<i>107</i>	8,718	<i>112</i>
200,000- 499,999	4,631 (37)	2,669	<i>174</i>	2,779	<i>167</i>	2,648	<i>175</i>
500,000- 999,999	950 (3)	567	*	585	*	558	*
1,000,000 and over	550 (1)	394	*	403	*	385	*
All.....	\$ 26,305 (434)	\$ 23,669	<i>111%</i>	\$ 24,438	<i>108%</i>	\$ 23,466	<i>112%</i>
Issue Ages 30-39							
\$ 50,000-\$ 99,999	\$ 45,676 (1,109)	\$ 46,177	<i>99%</i>	\$ 50,078	<i>91%</i>	\$ 47,387	<i>96%</i>
100,000- 199,999	59,701 (944)	65,959	<i>91</i>	71,308	<i>84</i>	67,535	<i>88</i>
200,000- 499,999	31,970 (281)	31,569	<i>101</i>	33,955	<i>94</i>	32,197	<i>99</i>
500,000- 999,999	8,750 (35)	6,134	<i>143</i>	6,563	<i>133</i>	6,236	<i>140</i>
1,000,000 and over	6,922 (13)	3,954	<i>175</i>	4,197	<i>165</i>	4,005	<i>173</i>
All.....	\$153,019 (2,232)	\$153,793	<i>99%</i>	\$ 166,101	<i>92%</i>	\$157,360	<i>97%</i>

\* Fewer than 10 lives terminated by death.

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.



TABLE C—Continued  
PERMANENT PLANS—Continued

CLASSIFICATION AMOUNT	ACTUAL CLAIMS	TABLE (A)		TABLE (B)		TABLE (C)	
		Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Issue Ages 40-49							
\$ 50,000-\$ 99,999	\$ 53,609 (1,287)	\$ 60,871	88%	\$ 67,749	79%	\$ 64,676	83%
100,000- 199,999	94,032 (1,512)	107,555	87	119,791	78	114,443	82
200,000- 499,999	73,630 (672)	79,891	92	88,903	83	84,856	87
500,000- 999,999	21,168 (97)	22,628	94	25,175	84	24,044	88
1,000,000 and over	8,885 (17)	13,828	64	15,345	58	14,646	61
All	\$251,324 (3,368)	\$284,773	88%	\$ 316,963	79%	\$302,665	83%
Issue Ages 50-59							
\$ 50,000-\$ 99,999	\$ 32,806 (776)	\$ 40,083	82%	\$ 45,685	72%	\$ 42,485	77%
100,000- 199,000	63,240 (1,015)	73,006	87	83,189	76	77,404	82
200,000- 499,999	56,753 (568)	68,120	83	77,772	73	72,207	79
500,000- 999,999	20,239 (99)	23,139	87	26,489	76	24,545	82
1,000,000 and over	5,756 (21)	16,990	34	19,735	29	18,032	32
All	\$178,794 (2,325)	\$221,338	81%	\$ 252,870	71%	\$234,673	76%
Issue Ages 60-69							
\$ 50,000-\$ 99,999	\$ 10,633 (254)	\$ 11,332	94%	\$ 12,247	87%	\$ 12,288	87%
100,000- 199,999	14,727 (227)	18,556	79	20,002	74	20,101	73
200,000- 499,999	19,864 (183)	21,247	93	23,000	86	23,073	86
500,000- 999,999	5,229 (25)	7,283	72	7,856	67	7,921	66
1,000,000 and over	3,183 (9)	4,924	*	5,366	*	5,443	*
All	\$ 53,636 (668)	\$ 63,342	85%	\$ 68,471	78%	\$ 68,826	78%
Issue Ages 70 and Over							
\$ 50,000-\$ 99,999	\$ 788 (19)	\$ 735	107%	\$ 830	95%	\$ 807	98%
100,000- 199,999	1,039 (17)	1,119	93	1,230	84	1,218	85
200,000- 499,999	1,183 (14)	1,247	95	1,365	87	1,359	88
500,000- 999,999	350 (3)	655	*	722	*	716	*
1,000,000 and over	80 (1)	234	*	278	*	267	*
All	\$ 3,440 (53)	\$ 3,990	86%	\$ 4,425	78%	\$ 4,357	79%
All Issue Ages							
\$ 50,000-\$ 99,999	\$155,922 (3,719)	\$171,999	91%	\$ 189,666	82%	\$180,413	86%
100,000- 199,999	244,464 (3,786)	276,666	88	306,224	80	291,164	84
200,000- 499,999	188,421 (1,673)	205,235	92	228,241	83	216,843	87
500,000- 999,999	57,186 (252)	60,470	95	67,455	85	64,086	89
1,000,000 and over	25,376 (59)	40,421	63	45,417	56	42,872	59
All	\$671,369 (8,603)	\$754,791	89%	\$ 837,003	80%	\$795,378	84%

TABLE C—Continued

## TERM PLANS

CLASSIFICATION AMOUNT	ACTUAL CLAIMS	TABLE (A)		TABLE (B)		TABLE (C)	
		Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Issue Ages 0-9							
\$ 50,000-\$ 99,999	\$ 50 (1)	\$ 8	*	\$ 7	*	\$ 8	*
100,000- 199,999	0 (0)	8	*	7	*	9	*
200,000- 499,999	0 (0)	5	*	4	*	5	*
500,000- 999,999	0 (0)	0	*	0	*	0	*
1,000,000 and over	0 (0)	1	*	1	*	1	*
All	\$ 50 (1)	\$ 22	*	\$ 19	*	\$ 23	*
Issue Ages 10-19							
\$ 50,000-\$ 99,999	\$ 35 (1)	\$ 114	*	\$ 104	*	\$ 106	*
100,000- 199,999	0 (0)	66	*	59	*	60	*
200,000- 499,999	0 (0)	18	*	16	*	16	*
500,000- 999,999	0 (0)	15	*	13	*	13	*
1,000,000 and over	0 (0)	9	*	8	*	8	*
All	\$ 35 (1)	\$ 222	*	\$ 200	*	\$ 203	*
Issue Ages 20-29							
\$ 50,000-\$ 99,999	\$ 4,005 (103)	\$ 4,085	98%	\$ 4,196	95%	\$ 4,049	99%
100,000- 199,999	2,513 (48)	2,871	88	2,964	85	2,840	88
200,000- 499,999	550 (11)	697	79	725	76	689	80
500,000- 999,999	404 (3)	141	*	146	*	139	*
1,000,000 and over	300 (1)	87	*	90	*	86	*
All	\$ 7,772 (165)	\$ 7,881	99%	\$ 8,121	96%	\$ 7,803	100%
Issue Ages 30-39							
\$ 50,000-\$ 99,999	\$ 17,133 (469)	\$ 16,098	106%	\$ 17,213	100%	\$ 16,446	104%
100,000- 199,999	19,185 (341)	21,038	91	22,406	86	21,438	89
200,000- 499,999	7,907 (96)	9,250	85	9,782	81	9,369	84
500,000- 999,999	1,030 (6)	1,928	*	2,016	*	1,943	*
1,000,000 and over	439 (2)	1,624	*	1,690	*	1,627	*
All	\$ 45,694 (895)	\$ 49,938	92%	\$ 53,107	86%	\$ 50,823	90%

\* Fewer than 10 lives terminated by death.

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

TABLE C—Continued  
TERM PLANS—Continued

CLASSIFICATION AMOUNT	ACTUAL CLAIMS	TABLE (A)		TABLE (B)		TABLE (C)	
		Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Issue Ages 40-49							
\$ 50,000-\$ 99,999	\$ 18,369 (508)	\$ 18,588	99%	\$ 20,616	89%	\$ 19,623	94%
100,000- 199,999	23,947 (493)	30,894	78	34,291	70	32,638	73
200,000- 499,999	19,118 (206)	20,794	92	23,047	83	21,913	87
500,000- 999,999	5,369 (27)	6,258	86	6,925	78	6,581	82
1,000,000 and over	4,617 (8)	4,472	*	4,939	*	4,688	*
All	\$ 71,420 (1,196)	\$ 81,006	88%	\$ 89,818	80%	\$ 85,443	84%
Issue Ages 50-59							
\$ 50,000-\$ 99,999	\$ 8,371 (220)	\$ 8,165	103%	\$ 9,289	90%	\$ 8,648	97%
100,000- 199,999	12,783 (261)	14,727	87	16,736	76	15,607	82
200,000- 499,999	9,966 (137)	12,426	80	14,182	70	13,162	76
500,000- 999,999	2,931 (22)	4,410	66	5,053	58	4,668	63
1,000,000 and over	5,395 (7)	3,202	*	3,692	*	3,398	*
All	\$ 39,446 (629)	\$ 42,930	92%	\$ 48,952	81%	\$ 45,483	87%
Issue Ages 60-69							
\$ 50,000-\$ 99,999	\$ 1,304 (35)	\$ 1,064	123%	\$ 1,156	113%	\$ 1,135	115%
100,000- 199,999	1,008 (24)	1,475	68	1,604	63	1,582	64
200,000- 499,999	490 (6)	1,663	*	1,800	*	1,777	*
500,000- 999,999	600 (2)	368	*	411	*	417	*
1,000,000 and over	400 (2)	736	*	815	*	810	*
All	\$ 3,802 (68)	\$ 5,306	72%	\$ 5,786	66%	\$ 5,721	66%
Issue Ages 70 and Over							
\$ 50,000-\$ 99,999	\$ 28 (1)	\$ 21	*	\$ 28	*	\$ 24	*
100,000- 199,999	0 (0)	1	*	2	*	1	*
200,000- 499,999	0 (0)	29	*	30	*	32	*
500,000- 999,999	50 (1)	83	*	88	*	88	*
1,000,000 and over	0 (0)	53	*	56	*	55	*
All	\$ 78 (2)	\$ 187	*	\$ 204	*	\$ 200	*
All Issue Ages							
\$ 50,000-\$ 99,999	\$ 49,295 (1,336)	\$ 48,143	102%	\$ 52,609	94%	\$ 50,039	99%
100,000- 199,999	59,436 (1,157)	71,080	84	78,069	76	74,175	80
200,000- 499,999	38,031 (447)	44,882	85	49,586	77	46,963	81
500,000- 999,999	10,384 (59)	13,203	79	14,652	71	13,849	75
1,000,000 and over	11,151 (20)	10,184	109	11,291	99	10,673	104
All	\$168,297 (2,899)	\$187,492	90%	\$ 206,207	82%	\$195,699	86%

TABLE C—Continued

## ALL PLANS

CLASSIFICATION AMOUNT	ACTUAL CLAIMS	TABLE (A)		TABLE (B)		TABLE (C)	
		Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Issue Ages 0-9							
\$ 50,000-\$ 99,999	\$ 546 (12)	\$ 440	<i>124%</i>	\$ 431	<i>127%</i>	\$ 570	<i>96%</i>
100,000- 199,999	450 (5)	436	*	445	*	621	*
200,000- 499,999	0 (0)	119	*	122	*	173	*
500,000- 999,999	500 (1)	23	*	24	*	28	*
1,000,000 and over	0 (0)	12	*	13	*	19	*
All	\$ 1,496 (18)	\$ 1,030	<i>145%</i>	\$ 1,035	<i>144%</i>	\$ 1,411	<i>106%</i>
Issue Ages 10-19							
\$ 50,000-\$ 99,999	\$ 1,510 (31)	\$ 1,246	<i>121%</i>	\$ 1,168	<i>129%</i>	\$ 1,157	<i>131%</i>
100,000- 199,999	1,540 (15)	1,307	<i>118%</i>	1,233	<i>125%</i>	1,193	<i>129%</i>
200,000- 499,999	390 (3)	396	*	375	*	361	*
500,000- 999,999	0 (0)	56	*	54	*	51	*
1,000,000 and over	0 (0)	95	*	89	*	84	*
All	\$ 3,440 (45)	\$ 3,100	<i>111%</i>	\$ 2,919	<i>118%</i>	\$ 2,846	<i>121%</i>
Issue Ages 20-29							
\$ 50,000-\$ 99,999	\$ 14,444 (356)	\$ 15,322	<i>94%</i>	\$ 15,785	<i>92%</i>	\$ 15,206	<i>95%</i>
100,000- 199,999	12,248 (193)	11,673	<i>105%</i>	12,056	<i>102%</i>	11,558	<i>106%</i>
200,000- 499,999	5,181 (46)	3,366	<i>154%</i>	3,494	<i>148%</i>	3,337	<i>155%</i>
500,000- 999,999	1,354 (6)	708	*	731	*	697	*
1,000,000 and over	850 (2)	481	*	493	*	471	*
All	\$ 34,077 (582)	\$ 31,550	<i>108%</i>	\$ 32,559	<i>105%</i>	\$ 31,269	<i>109%</i>
Issue Ages 30-39							
\$ 50,000-\$ 99,999	\$ 62,809 (1,537)	\$ 62,275	<i>101%</i>	\$ 67,291	<i>93%</i>	\$ 63,833	<i>98%</i>
100,000- 199,999	78,886 (1,243)	86,997	<i>91%</i>	93,714	<i>84%</i>	88,973	<i>89%</i>
200,000- 499,999	39,877 (356)	40,819	<i>98%</i>	43,737	<i>91%</i>	41,566	<i>96%</i>
500,000- 999,999	9,780 (40)	8,062	<i>121%</i>	8,579	<i>114%</i>	8,179	<i>120%</i>
1,000,000 and over	7,361 (15)	5,578	<i>132%</i>	5,887	<i>125%</i>	5,632	<i>131%</i>
All	\$198,713 (2,984)	\$203,731	<i>98%</i>	\$ 219,208	<i>91%</i>	\$208,183	<i>95%</i>

\* Fewer than 10 lives terminated by death.

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

TABLE C—Continued

ALL PLANS—Continued

CLASSIFICATION AMOUNT	ACTUAL CLAIMS	TABLE (A)		TABLE (B)		TABLE (C)	
		Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Issue Ages 40-49							
\$ 50,000-\$ 99,999	\$ 71,978 (1,765)	\$ 79,459	91%	\$ 88,365	81%	\$ 84,299	85%
100,000- 199,999	117,979 (1,966)	138,449	85	154,082	77	147,081	80
200,000- 499,999	92,748 (835)	100,685	92	111,950	83	106,769	87
500,000- 999,999	26,537 (117)	28,886	92	32,100	83	30,625	87
1,000,000 and over	13,502 (22)	18,300	74	20,284	67	19,334	70
All	\$322,744 (4,401)	\$365,779	88%	\$ 406,781	79%	\$388,108	83%
Issue Ages 50-59							
\$ 50,000-\$ 99,999	\$ 41,177 (988)	\$ 48,248	85%	\$ 54,974	75%	\$ 51,133	81%
100,000- 199,999	76,023 (1,252)	87,733	87	99,925	76	93,011	82
200,000- 499,999	66,719 (678)	80,546	83	91,954	73	85,379	78
500,000- 999,999	23,170 (115)	27,549	84	31,542	73	29,213	79
1,000,000 and over	11,151 (27)	20,192	55	23,427	48	21,430	52
All	\$218,240 (2,868)	\$264,268	83%	\$ 301,822	72%	\$280,156	78%
Issue Ages 60-69							
\$ 50,000-\$ 99,999	\$ 11,937 (289)	\$ 12,396	96%	\$ 13,403	89%	\$ 13,423	89%
100,000- 199,999	15,735 (247)	20,031	79	21,606	73	21,683	73
200,000- 499,999	20,354 (188)	22,910	89	24,800	82	24,850	82
500,000- 999,999	5,829 (27)	7,651	76	8,267	71	8,338	70
1,000,000 and over	3,583 (10)	5,660	63	6,181	58	6,253	57
All	\$ 57,438 (730)	\$ 68,648	84%	\$ 74,257	77%	\$ 74,547	77%
Issue Ages 70 and Over							
\$ 50,000-\$ 99,999	\$ 816 (20)	\$ 756	108%	\$ 858	95%	\$ 831	98%
100,000- 199,999	1,039 (17)	1,120	93	1,232	84	1,219	85
200,000- 499,999	1,183 (14)	1,276	93	1,395	85	1,381	86
500,000- 999,999	400 (3)	738	*	810	*	804	*
1,000,000 and over	80 (1)	287	*	334	*	322	*
All	\$ 3,518 (54)	\$ 4,177	84%	\$ 4,629	76%	\$ 4,557	77%
All Issue Ages							
\$ 50,000-\$ 99,999	\$205,217 (4,961)	\$220,142	93%	\$ 242,275	85%	\$230,452	89%
100,000- 199,999	303,900 (4,796)	347,746	87	384,293	79	365,339	83
200,000- 499,999	226,452 (2,008)	250,117	91	277,827	82	263,806	86
500,000- 999,999	67,570 (296)	73,673	92	82,107	82	77,935	87
1,000,000 and over	36,527 (74)	50,605	72	56,708	64	53,545	68
All	\$839,666 (10,952)	\$942,283	89%	\$1,043,210	80%	\$991,077	85%

**TABLE D**  
**LARGE-AMOUNT ISSUES OF 1944-72**  
**EXPERIENCE BETWEEN 1968 AND 1973 ANNIVERSARIES**  
**BY CLASSIFICATION AMOUNT, POLICY YEAR, AND PLAN OF INSURANCE**  
**MALE AND FEMALE LIVES COMBINED**

Expected Deaths Based on  
(A) 1968-73 Standard Ordinary Issues Experience  
(B) 1958-63 Standard Ordinary Issues Experience  
(C) 1965-70 Basic Tables, Select and Ultimate

(Amounts Shown in \$1,000 Units)

**PERMANENT PLANS**

CLASSIFICATION AMOUNT	ACTUAL CLAIMS	TABLE (A)		TABLE (B)		TABLE (C)	
		Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Policy Years 1-2							
\$ 50,000-\$ 99,999	\$ 15,703 (329)	\$ 15,576	101%	\$ 16,710	94%	\$ 16,144	97%
100,000- 199,999	18,935 (277)	23,391	81	25,252	75	24,212	78
200,000- 499,999	18,468 (162)	21,200	87	23,249	79	21,980	84
500,000- 999,999	8,172 (35)	6,882	119	7,643	107	7,193	114
1,000,000 and over	3,588 (9)	6,602	*	7,380	*	6,891	*
All	\$ 64,866 (797)	\$ 73,651	88%	\$ 80,234	81%	\$ 76,420	85%
Policy Years 3-5							
\$ 50,000-\$ 99,999	\$ 21,074 (467)	\$ 24,179	87%	\$ 26,865	78%	\$ 25,118	84%
100,000- 199,999	35,558 (521)	41,143	86	45,975	77	42,824	83
200,000- 499,999	31,488 (294)	34,780	91	39,398	80	36,595	86
500,000- 999,999	10,063 (44)	11,120	90	12,691	79	11,771	85
1,000,000 and over	5,052 (10)	9,757	52	11,265	45	10,355	49
All	\$103,235 (1,300)	\$120,979	85%	\$ 136,194	76%	\$126,663	82%
Policy Years 6-10							
\$ 50,000-\$ 99,999	\$ 37,087 (868)	\$ 40,168	92%	\$ 44,131	84%	\$ 42,458	87%
100,000- 199,999	61,890 (979)	68,454	90	75,666	82	72,849	85
200,000- 499,999	53,723 (481)	51,595	104	57,444	94	55,271	97
500,000- 999,999	16,190 (74)	15,888	102	17,757	91	17,068	95
1,000,000 and over	9,729 (16)	11,097	88	12,413	78	11,921	82
All	\$178,619 (2,312)	\$187,202	95%	\$ 207,411	86%	\$199,567	90%

\* Fewer than 10 lives terminated by death.

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

TABLE D—Continued  
PERMANENT PLANS—Continued

CLASSIFICATION AMOUNT	ACTUAL CLAIMS	TABLE (A)		TABLE (B)		TABLE (C)	
		Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Policy Years 11-15							
\$ 50,000-\$ 99,999	\$ 40,876 (997)	\$ 43,120	95%	\$ 47,644	86%	\$ 45,352	90%
100,000- 199,999	64,925 (1,088)	71,657	91	79,381	82	75,629	86
200,000- 499,999	43,003 (422)	48,245	89	53,387	81	50,960	84
500,000- 999,999	11,861 (60)	14,966	79	16,508	72	15,787	75
1,000,000 and over	3,800 (13)	7,375	52	8,149	47	7,797	49
All	\$164,465 (2,476)	\$185,363	89%	\$ 205,069	80%	\$195,525	84%
Policy Years 16-20							
\$ 50,000-\$ 99,999	\$ 27,387 (736)	\$ 32,929	83%	\$ 36,499	75%	\$ 34,602	79%
100,000- 199,999	40,351 (701)	48,107	84	53,338	76	50,616	80
200,000- 499,999	27,422 (283)	32,588	84	36,023	76	34,383	80
500,000- 999,999	7,849 (50)	8,340	94	9,207	85	8,832	89
1,000,000 and over	2,807 (12)	4,344	65	4,821	58	4,598	61
All	\$105,816 (1,714)	\$126,308	84%	\$ 139,888	76%	\$133,031	80%
Policy Years 21-25							
\$ 50,000-\$ 99,999	\$ 13,795 (368)	\$ 16,027	86%	\$ 17,817	77%	\$ 16,739	82%
100,000- 199,999	22,805 (384)	23,914	95	26,612	86	25,034	91
200,000- 499,999	14,317 (180)	16,827	85	18,740	76	17,654	81
500,000- 999,999	3,051 (16)	3,274	93	3,649	84	3,435	89
1,000,000 and over	400 (5)	1,246	*	1,389	*	1,310	*
All	\$ 54,368 (920)	\$ 61,288	89%	\$ 68,207	80%	\$ 64,172	85%
All Policy Years							
\$ 50,000-\$ 99,999	\$155,922 (3,719)	\$171,999	91%	\$ 189,666	82%	\$180,413	86%
100,000- 199,999	244,464 (3,786)	276,666	88	306,224	80	291,164	84
200,000- 499,999	188,421 (1,673)	205,235	92	228,241	83	216,843	87
500,000- 999,999	57,186 (252)	60,470	95	67,455	85	64,086	89
1,000,000 and over	25,376 (59)	40,421	63	45,417	56	42,872	59
All	\$671,369 (8,603)	\$754,791	89%	\$ 837,003	80%	\$795,378	84%

TABLE D—Continued  
TERM PLANS

CLASSIFICATION AMOUNT	ACTUAL CLAIMS		TABLE (A)		TABLE (B)		TABLE (C)	
			Expected Claims	A E	Expected Claims	A E	Expected Claims	A E
Policy Years 1-2								
\$ 50,000-\$ 99,999	\$ 7,707	(173)	\$ 7,352	105%	\$ 7,685	100%	\$ 7,461	103%
100,000- 199,999	9,414	(139)	10,297	91	10,832	87	10,443	90
200,000- 499,999	5,652	(59)	7,475	76	7,991	71	7,594	74
500,000- 999,999	2,923	(11)	2,591	113	2,797	105	2,645	111
1,000,000 and over	3,269	(4)	2,576	*	2,795	*	2,635	*
All	\$ 28,965	(381)	\$ 30,291	96%	\$ 32,100	90%	\$ 30,778	94%
Policy Years 3-5								
\$ 50,000-\$ 99,999	\$ 8,451	(196)	\$ 8,906	95%	\$ 9,674	87%	\$ 9,086	93%
100,000- 199,999	10,766	(187)	13,208	82	14,475	74	13,533	80
200,000- 499,999	8,676	(81)	9,272	94	10,344	84	9,581	91
500,000- 999,999	3,243	(19)	3,099	105	3,494	93	3,232	100
1,000,000 and over	2,767	(3)	2,978	*	3,353	*	3,116	*
All	\$ 33,903	(477)	\$ 37,463	90%	\$ 41,340	82%	\$ 38,548	88%
Policy Years 6-10								
\$ 50,000-\$ 99,999	\$ 9,098	(233)	\$ 9,117	100%	\$ 9,971	91%	\$ 9,586	95%
100,000- 199,999	11,257	(219)	14,852	76	16,393	69	15,757	71
200,000- 499,999	7,641	(83)	9,557	80	10,640	72	10,219	75
500,000- 999,999	1,120	(5)	2,857	*	3,194	*	3,061	*
1,000,000 and over	3,000	(6)	2,423	*	2,705	*	2,594	*
All	\$ 32,116	(535)	\$ 38,806	83%	\$ 42,903	75%	\$ 41,217	78%

\* Fewer than 10 lives terminated by death.

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.



TABLE D—Continued

## TERM PLANS—Continued

CLASSIFICATION AMOUNT	ACTUAL CLAIMS		TABLE (A)		TABLE (B)		TABLE (C)	
			Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Policy Years 11-15								
\$ 50,000-\$ 99,999	\$ 8,100	(231)	\$ 8,551	95%	\$ 9,476	85%	\$ 9,000	90%
100,000-199,999	10,919	(227)	12,302	89	13,678	80	13,011	84
200,000-499,999	6,018	(86)	6,778	89	7,520	80	7,163	84
500,000-999,999	1,775	(11)	1,650	108	1,833	97	1,750	101
1,000,000 and over	1,250	(2)	902	*	1,002	*	954	*
All	\$ 28,062	(552)	\$ 30,183	93%	\$ 33,509	84%	\$ 31,878	88%
Policy Years 16-20								
\$ 50,000-\$ 99,999	\$ 11,272	(334)	\$ 9,088	124%	\$ 10,096	112%	\$ 9,546	118%
100,000-199,999	10,721	(252)	13,030	82	14,456	74	13,698	78
200,000-499,999	5,757	(86)	7,453	77	8,249	70	7,848	73
500,000-999,999	808	(9)	2,053	*	2,270	*	2,161	*
1,000,000 and over	765	(5)	1,041	*	1,146	*	1,097	*
All	\$ 29,323	(666)	\$ 32,665	90%	\$ 36,217	81%	\$ 34,350	85%
Policy Years 21-25								
\$ 50,000-\$ 99,999	\$ 4,667	(174)	\$ 5,129	91%	\$ 5,707	82%	\$ 5,360	87%
100,000-199,999	6,359	(150)	7,391	86	8,235	77	7,733	82
200,000-499,999	4,287	(68)	4,347	99	4,842	89	4,558	94
500,000-999,999	515	(5)	953	*	1,064	*	1,000	*
1,000,000 and over	100	(1)	264	*	290	*	277	*
All	\$ 15,928	(385)	\$ 18,084	88%	\$ 20,138	79%	\$ 18,928	84%
All Policy Years								
\$ 50,000-\$ 99,999	\$ 49,295	(1,336)	\$ 48,143	102%	\$ 52,609	94%	\$ 50,039	99%
100,000-199,999	59,436	(1,157)	71,080	84	78,069	76	74,175	80
200,000-499,999	38,031	(447)	44,882	85	49,586	77	46,963	81
500,000-999,999	10,384	(59)	13,203	79	14,652	71	13,849	75
1,000,000 and over	11,151	(20)	10,184	109	11,291	99	10,673	104
All	\$168,297	(2,899)	\$187,492	90%	\$ 206,207	82%	\$195,699	86%

TABLE D—Continued

## ALL PLANS

CLASSIFICATION AMOUNT	ACTUAL CLAIMS	TABLE (A)		TABLE (B)		TABLE (C)	
		Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Policy Years 1-2							
\$ 50,000-\$ 99,999	\$ 23,410 (497)	\$ 22,928	102%	\$ 24,395	96%	\$ 23,605	99%
100,000- 199,999	28,349 (413)	33,688	84	36,084	79	34,655	82
200,000- 499,999	24,120 (213)	28,675	84	31,240	77	29,574	82
500,000- 999,999	11,095 (44)	9,473	117	10,440	106	9,838	113
1,000,000 and over	6,857 (13)	9,178	75	10,175	67	9,526	72
All	\$ 93,831 (1,155)	\$103,942	90%	\$ 112,334	84%	\$107,198	88%
Policy Years 3-5							
\$ 50,000-\$ 99,999	\$ 29,525 (658)	\$ 33,085	89%	\$ 36,539	81%	\$ 34,204	86%
100,000- 199,999	46,324 (699)	54,351	85	60,450	77	56,357	82
200,000- 499,999	40,164 (356)	44,052	91	49,742	81	46,176	87
500,000- 999,999	13,306 (60)	14,219	94	16,185	82	15,003	89
1,000,000 and over	7,819 (12)	12,735	61	14,618	53	13,471	58
All	\$137,138 (1,729)	\$158,442	87%	\$ 177,534	77%	\$165,211	83%
Policy Years 6-10							
\$ 50,000-\$ 99,999	\$ 46,185 (1,090)	\$ 49,285	94%	\$ 54,102	85%	\$ 52,044	89%
100,000- 199,999	73,147 (1,170)	83,306	88	92,059	79	88,606	83
200,000- 499,999	61,364 (553)	61,152	100	68,084	90	65,480	94
500,000- 999,999	17,310 (79)	18,745	92	20,951	83	20,129	86
1,000,000 and over	12,729 (21)	13,520	94	15,118	84	14,515	88
All	\$210,735 (2,786)	\$226,008	93%	\$ 250,314	84%	\$240,784	88%

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

TABLE D—Continued

## ALL PLANS—Continued

CLASSIFICATION AMOUNT	ACTUAL CLAIMS	TABLE (A)		TABLE (B)		TABLE (C)	
		Expected Claims	A/E	Expected Claims	A/E	Expected Claims	A/E
Policy Years 11-15							
\$ 50,000-\$ 99,999	\$ 48,976 (1,206)	\$ 51,671	95%	\$ 57,120	86%	\$ 54,352	90%
100,000-199,999	75,844 (1,291)	83,959	90	93,059	82	88,640	86
200,000-499,999	49,021 (492)	55,023	89	60,907	80	58,123	84
500,000-999,999	13,636 (65)	16,616	82	18,341	74	17,537	78
1,000,000 and over	5,050 (15)	8,277	61	9,151	55	8,751	58
All	\$192,527 (2,948)	\$215,546	89%	\$ 238,578	81%	\$227,403	85%
Policy Years 16-20							
\$ 50,000-\$ 99,999	\$ 38,659 (1,044)	\$ 42,017	92%	\$ 46,595	83%	\$ 44,148	88%
100,000-199,999	51,072 (927)	61,137	84	67,794	75	64,314	79
200,000-499,999	33,179 (350)	40,041	83	44,272	75	42,231	79
500,000-999,999	8,657 (58)	10,393	83	11,477	75	10,993	79
1,000,000 and over	3,572 (16)	5,385	66	5,967	60	5,695	63
All	\$135,139 (2,297)	\$158,973	85%	\$ 176,105	77%	\$167,381	81%
Policy Years 21-25							
\$ 50,000-\$ 99,999	\$ 18,462 (527)	\$ 21,156	87%	\$ 23,524	78%	\$ 22,099	84%
100,000-199,999	29,164 (526)	31,305	93	34,847	84	32,767	89
200,000-499,999	18,604 (232)	21,174	88	23,582	79	22,212	84
500,000-999,999	3,566 (21)	4,227	84	4,713	76	4,435	80
1,000,000 and over	500 (5)	1,510	*	1,679	*	1,587	*
All	\$ 70,296 (1,262)	\$ 79,372	89%	\$ 88,345	80%	\$ 83,100	85%
All Policy Years							
\$ 50,000-\$ 99,999	\$205,217 (4,961)	\$220,142	93%	\$ 242,275	85%	\$230,452	89%
100,000-199,999	303,900 (4,796)	347,746	87	384,293	79	365,339	83
200,000-499,999	226,452 (2,008)	250,117	91	277,827	82	263,806	86
500,000-999,999	67,570 (296)	73,673	92	82,107	82	77,935	87
1,000,000 and over	36,527 (74)	50,605	72	56,708	64	53,545	68
All	\$839,666 (10,952)	\$942,283	89%	\$1,043,210	80%	\$991,077	85%

\* Fewer than 10 lives terminated by death.

TABLE E  
 LARGE-AMOUNT ISSUES OF 1959-72  
 EXPERIENCE BETWEEN 1968 AND 1973 ANNIVERSARIES  
 BY AGE AT ISSUE, ESTIMATED ANNUAL INCOME AT ISSUE, AND PURPOSE OF INSURANCE  
 MALE AND FEMALE LIVES COMBINED AND PLANS OF INSURANCE COMBINED  
 Expected Deaths Based on 1968-73 Standard Ordinary Issues Experience  
 (Amounts Shown in \$1,000 Units)

ISSUE AGE	ESTIMATED ANNUAL INCOME AT ISSUE	PERSONAL INSURANCE		BUSINESS INSURANCE		KEY-MAN INSURANCE		ALL INSURANCE	
		Actual Claims	A/E	Actual Claims	A/E	Actual Claims	A/E	Actual Claims	A/E
108 0-34	Under \$20,000	\$ 31,419 (581)	98%	\$ 2,664 (45)	92%	\$ 1,978 (31)	89%	\$ 36,236 (653)	96%
	\$ 20,000-\$49,999	14,444 (193)	115	2,357 (29)	83	1,162 (16)	63	18,096 (232)	103
	50,000- 99,999	2,216 (22)	109	798 (8)	*	300 (1)	*	3,373 (32)	108
	100,000 and over	1,850 (7)	*	300 (1)	*	550 (1)	*	2,800 (8)	*
	Not accurately determined	956 (17)	72	235 (4)	*	0 (0)	*	1,191 (20)	83
	All	\$ 50,885 (800)	104%	\$ 6,354 (85)	96%	\$ 3,990 (49)	84%	\$ 61,696 (915)	102%
35-49	Under \$20,000	\$ 42,759 (870)	90%	\$ 8,835 (160)	81%	\$ 6,049 (99)	88%	\$ 58,937 (1,122)	89%
	\$ 20,000-\$49,999	68,986 (1,037)	94	23,514 (279)	87	16,709 (182)	94	111,178 (1,444)	93
	50,000- 99,999	18,245 (187)	79	9,288 (74)	85	12,407 (52)	151	40,510 (292)	94
	100,000 and over	9,777 (51)	117	2,561 (15)	63	4,209 (10)	110	16,897 (73)	99
	Not accurately determined	2,469 (29)	85	450 (5)	*	315 (3)	*	3,234 (37)	86
	All	\$142,236 (2,112)	92%	\$44,648 (517)	84%	\$39,689 (338)	108%	\$230,756 (2,830)	92%

\* Fewer than 10 lives terminated by death.

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

TABLE E -Continued

ISSUE AGE	ESTIMATED ANNUAL INCOME AT ISSUE	PERSONAL INSURANCE		BUSINESS INSURANCE		KEY MAN INSURANCE		ALL INSURANCE	
		Actual Claims	A/E	Actual Claims	A/E	Actual Claims	A/E	Actual Claims	A/E
50 and over..	Under \$20,000	\$ 11,592 (216)	72%	\$ 5,261 (92)	99%	\$ 1,942 (36)	71%	\$ 18,925 (337)	77%
	\$ 20,000-\$49,999	31,630 (530)	93	14,483 (221)	78	8,960 (114)	82	56,261 (832)	86
	50,000- 99,999	16,254 (194)	80	9,201 (89)	73	8,427 (53)	91	35,370 (316)	82
	100,000 and over	9,091 (75)	71	6,027 (36)	76	4,158 (24)	57	19,476 (119)	68
	Not accurately determined	1,310 (24)	71	85 (3)	*	150 (2)	*	1,545 (29)	57
	All	\$ 69,877 (1,006)	82%	\$35,057 (426)	78%	\$23,637 (221)	77%	\$131,577 (1,554)	80%
All ages.....	Under \$20,000	\$ 85,770 (1,662)	90%	\$16,760 (296)	88%	\$ 9,969 (164)	84%	\$114,098 (2,102)	89%
	\$ 20,000-\$49,999	115,060 (1,746)	96	40,354 (528)	83	26,831 (310)	88	185,535 (2,476)	92
	50,000- 99,999	36,715 (398)	81	19,287 (170)	80	21,134 (105)	118	79,253 (627)	89
	100,000 and over	20,718 (131)	94	8,888 (51)	73	8,917 (35)	79	39,173 (197)	83
	Not accurately determined	4,735 (70)	78	770 (12)	68	465 (5)	*	5,970 (86)	75
	All	\$262,998 (3,868)	91%	\$86,059 (1,017)	82%	\$67,316 (601)	93%	\$424,029 (5,200)	89%

**TABLE F**  
**LARGE-AMOUNT ISSUES OF 1959-72**  
**EXPERIENCE BETWEEN 1968 AND 1973 ANNIVERSARIES**  
**BY AGE AT ISSUE, CLASSIFICATION AMOUNT, AND PURPOSE OF INSURANCE**  
**MALE AND FEMALE LIVES COMBINED AND PLANS OF INSURANCE COMBINED**  
**Expected Deaths Based on 1968-73 Standard Ordinary Experience Issues**  
**(Amounts Shown in \$1,000 Units)**

ISSUE AGE	CLASSIFICATION AMOUNT	PERSONAL INSURANCE			BUSINESS INSURANCE			KEY-MAN INSURANCE		ALL INSURANCE	
		Actual Claims	A/E		Actual Claims	A/E		Actual Claims	A/E	Actual Claims	A/E
0-34	\$ 50,000-\$ 99,999	\$ 21,036 (478)	101%		\$ 1,195 (30)	77%		\$ 625 (14)	72%	\$ 23,064 (521)	99%
	100,000- 199,999	19,165 (283)	93		2,444 (36)	93		1,854 (26)	100	23,622 (342)	94
	200,000- 499,999	7,278 (65)	124		2,493 (20)	150		961 (8)	*	10,732 (87)	120
	500,000- 999,999	2,056 (6)	*		222 (1)	*		0 (0)	*	2,378 (7)	*
	1,000,000 and over	1,350 (2)	*		0 (0)	*		550 (1)	*	1,900 (2)	*
	All	\$ 50,885 (800)	104%		\$ 6,354 (85)	96%		\$ 3,990 (49)	84%	\$ 61,696 (915)	102%
35-49	\$ 50,000-\$ 99,999	\$ 36,606 (875)	94%		\$ 6,858 (152)	87%		\$ 3,986 (86)	100%	\$ 47,999 (1,107)	94%
	100,000- 199,999	55,558 (911)	86		13,744 (205)	79		9,053 (128)	83	79,644 (1,228)	85
	200,000- 499,999	37,974 (368)	97		16,369 (149)	90		12,805 (106)	103	68,973 (586)	97
	500,000- 999,999	8,956 (38)	119		5,960 (28)	92		6,356 (25)	129	21,793 (83)	111
	1,000,000 and over	3,142 (8)	*		1,717 (7)	*		7,488 (7)	*	12,347 (18)	87
	All	\$142,236 (2,112)	92%		\$44,648 (517)	84%		\$39,689 (338)	108%	\$230,756 (2,830)	92%

\* Fewer than 10 lives terminated by death.

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

TABLE F—Continued

ISSUE AGE	CLASSIFICATION AMOUNT	PERSONAL INSURANCE		BUSINESS INSURANCE		KEY-MAN INSURANCE		ALL INSURANCE	
		Actual Claims	A/E	Actual Claims	A/E	Actual Claims	A/E	Actual Claims	A/E
50 and over . . .	\$ 50,000-\$ 99,999	\$ 15,492 (369)	89%	\$ 6,020 (133)	103%	\$ 1,985 (45)	75%	\$ 23,665 (542)	90%
	100,000- 199,999	24,663 (409)	84	9,926 (153)	83	5,524 (84)	77	40,648 (632)	82
	200,000- 499,999	21,469 (226)	87	13,217 (133)	82	8,052 (76)	79	44,013 (403)	84
	500,000- 999,999	6,954 (41)	90	4,194 (21)	69	3,690 (17)	77	15,466 (69)	81
	1,000,000 and over	1,299 (6)	*	1,700 (7)	*	4,386 (8)	*	7,785 (18)	45
	All	\$ 69,877 (1,006)	82%	\$35,057 (426)	78%	\$23,637 (221)	77%	\$131,577 (1,554)	80%
All ages . . . . .	\$ 50,000-\$ 99,999	\$ 73,134 (1,718)	95%	\$14,073 (314)	92%	\$ 6,596 (144)	88%	\$ 94,728 (2,163)	94%
	100,000- 199,999	99,386 (1,596)	87	26,114 (394)	82	16,431 (237)	82	143,914 (2,188)	85
	200,000- 499,999	66,721 (648)	96	32,079 (300)	89	21,818 (188)	91	123,718 (1,056)	94
	500,000- 999,999	17,966 (85)	111	10,376 (50)	80	10,047 (42)	99	39,637 (159)	98
	1,000,000 and over	5,791 (16)	48	3,417 (14)	39	12,424 (16)	117	22,032 (38)	68
	All	\$262,998 (3,868)	91%	\$86,059 (1,017)	82%	\$67,316 (601)	93%	\$424,029 (5,200)	89%

TABLE G

LARGE-AMOUNT ISSUES OF 1944-72  
 EXPERIENCE BETWEEN 1968 AND 1973 ANNIVERSARIES  
 BY CAUSE OF DEATH, AGE AT ISSUE, AND PLAN OF INSURANCE  
 MALE AND FEMALE LIVES COMBINED  
 Expected Deaths Based on 1968-73 Standard Ordinary Issues Experience  
 (Amounts Shown in \$1,000 Units)

CAUSE OF DEATH	PERMANENT PLANS			TERM PLANS			ALL PLANS		
	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E
	Issue Ages 0-99								
Tuberculosis . . . . .	\$ 0 (0)	\$ 5 *	<i>107%</i>	\$ 75 (1)	\$ 1 *	<i>63%</i>	\$ 75 (1)	\$ 6 *	<i>98%</i>
Malignant neoplasms . . . . .	4,381 (69)	4,096 *	<i>107%</i>	688 (14)	1,099 *	<i>155%</i>	5,069 (81)	5,195 *	<i>98%</i>
Diabetes mellitus . . . . .	0 (0)	60 *	<i>100%</i>	0 (0)	15 *	<i>100%</i>	0 (0)	75 *	<i>100%</i>
Cerebrovascular diseases . . . . .	858 (17)	734 *	<i>117%</i>	158 (6)	205 *	<i>120%</i>	1,016 (22)	939 *	<i>108%</i>
Heart and circulatory . . . . .	4,549 (88)	4,814 *	<i>117%</i>	1,396 (34)	1,162 *	<i>120%</i>	5,945 (116)	5,976 *	<i>99%</i>
Pneumonia and influenza . . . . .	608 (6)	350 *	<i>174%</i>	130 (2)	74 *	<i>174%</i>	738 (8)	424 *	<i>174%</i>
Accidents and homicide . . . . .	14,169 (200)	10,761 *	<i>132%</i>	3,596 (66)	3,669 *	<i>98%</i>	17,765 (261)	14,430 *	<i>123%</i>
Suicide . . . . .	3,286 (49)	1,840 *	<i>179%</i>	744 (19)	513 *	<i>145%</i>	4,030 (67)	2,353 *	<i>171%</i>
War and residual . . . . .	3,305 (64)	4,895 *	<i>68%</i>	1,070 (25)	1,387 *	<i>77%</i>	4,375 (87)	6,282 *	<i>70%</i>
All . . . . .	\$ 31,156 (493)	\$ 27,555 *	<i>113%</i>	\$ 7,857 (167)	\$ 8,125 *	<i>97%</i>	\$ 39,013 (643)	\$ 35,680 *	<i>109%</i>

\* Fewer than 10 lives terminated by death.

NOTE: Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE: Mortality ratio in italics where 10-49 lives terminated by death.



TABLE G Continued

CAUSE OF DEATH	PERMANENT PLANS			TERM PLANS			ALL PLANS		
	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E
Issue Ages 30-39									
Tuberculosis.....	\$ 0 (0)	\$ 101	*	\$ 0 (0)	\$ 33	*	\$ 0 (0)	\$ 134	*
Malignant neoplasms.....	29,203 (444)	30,749	95%	7,832 (159)	9,442	83%	37,035 (577)	40,191	92%
Diabetes mellitus.....	850 (9)	580	*	70 (2)	158	*	920 (11)	738	125%
Cerebrovascular diseases.....	5,591 (80)	6,443	87	1,830 (28)	2,017	91	7,421 (105)	8,460	88
Heart and circulatory.....	50,551 (783)	56,150	90	12,634 (297)	16,468	77	63,185 (1,018)	72,618	87
Pneumonia and influenza.....	1,561 (30)	2,041	76	445 (9)	600	*	2,006 (38)	2,641	76
Accidents and homicide.....	33,658 (426)	26,858	125	130,69 (210)	11,214	117	46,727 (612)	38,072	123
Suicide.....	12,118 (166)	7,532	161	3,332 (56)	2,567	130	15,450 (212)	10,099	153
War and residual.....	19,487 (294)	23,339	83	6,482 (134)	7,439	87	25,969 (411)	30,778	84
All.....	\$153,019 (2,232)	\$153,793	99%	\$45,694 (895)	\$49,938	92%	\$198,713 (2,984)	\$203,731	98%
Issue Ages 40-49									
Tuberculosis.....	\$ 0 (0)	\$ 141	*	\$ 0 (0)	\$ 45	*	\$ 0 (0)	\$ 186	*
Malignant neoplasms.....	66,782 (853)	66,160	101%	17,820 (301)	18,584	96%	84,602 (1,108)	84,744	100%
Diabetes mellitus.....	661 (9)	1,363	*	281 (6)	386	*	942 (14)	1,749	54
Cerebrovascular diseases.....	9,248 (133)	15,380	60	3,065 (56)	4,343	71	12,313 (184)	19,723	62
Heart and circulatory.....	100,984 (1,430)	121,967	83	26,192 (488)	33,767	78	127,176 (1,852)	155,734	82
Pneumonia and influenza.....	2,536 (42)	5,133	49	827 (18)	1,461	57	3,363 (57)	6,594	51
Accidents and homicide.....	30,660 (330)	25,455	120	9,449 (115)	8,404	112	40,109 (430)	33,859	118
Suicide.....	11,259 (146)	8,899	127	4,379 (62)	2,677	164	15,638 (194)	11,576	135
War and residual.....	29,194 (425)	40,275	72	9,407 (150)	11,339	83	38,601 (562)	51,614	75
All.....	\$251,324 (3,368)	\$284,773	88%	\$71,420 (1,196)	\$81,006	88%	\$322,744 (4,401)	\$365,779	88%

TABLE G—Continued

CAUSE OF DEATH	PERMANENT PLANS			TERM PLANS			ALL PLANS		
	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E
Issue Ages 50-59									
Tuberculosis.....	\$ 0 (0)	\$ 167	*	\$ 0 (0)	\$ 31	*	\$ 0 (0)	\$ 198	*
Malignant neoplasms.....	48,419 (612)	56,515	86%	11,907 (164)	10,458	114%	60,326 (751)	66,973	90%
Diabetes mellitus.....	937 (14)	1,002	94	359 (7)	215	*	1,296 (19)	1,217	106
Cerebrovascular diseases.....	11,334 (144)	14,636	77	2,994 (45)	3,130	96	14,328 (183)	17,766	81
Heart and circulatory.....	72,541 (977)	95,629	76	14,349 (261)	18,697	77	86,890 (1,201)	114,326	76
Pneumonia and influenza.....	3,558 (55)	5,292	67	454 (9)	1,142	*	4,012 (64)	6,434	62
Accidents and homicide.....	13,536 (147)	10,729	126	2,791 (35)	2,103	133	16,327 (178)	12,832	127
Suicide.....	4,284 (50)	4,508	95	901 (13)	810	111	5,185 (61)	5,318	97
War and residual.....	24,185 (326)	32,860	74	5,691 (92)	9,344	90	29,876 (411)	39,204	76
All.....	\$178,794 (2,325)	\$221,338	81%	\$39,446 (629)	\$42,980	92%	\$218,240 (2,868)	\$264,268	83%
Issue Ages 60 and Over									
Tuberculosis.....	\$ 0 (0)	\$ 25	*	\$ 0 (0)	\$ 2	*	\$ 0 (0)	\$ 27	*
Malignant neoplasms.....	16,425 (178)	16,263	101%	1,056 (20)	1,111	95%	17,481 (197)	17,374	101%
Diabetes mellitus.....	285 (5)	169	*	0 (0)	13	*	285 (5)	182	*
Cerebrovascular diseases.....	5,781 (64)	4,809	120	305 (10)	358	85	6,086 (74)	5,167	118
Heart and circulatory.....	22,217 (303)	23,527	94	796 (22)	1,677	47	23,013 (322)	25,204	91
Pneumonia and influenza.....	1,797 (25)	1,326	136	190 (6)	104	*	1,987 (30)	1,430	139
Accidents and homicide.....	1,697 (23)	2,319	73	275 (2)	164	*	1,972 (25)	2,483	79
Suicide.....	800 (9)	574	*	110 (2)	36	*	910 (10)	610	149
War and residual.....	8,074 (109)	18,320	44	1,148 (8)	2,028	*	9,222 (116)	20,348	45
All.....	\$ 57,076 (716)	\$ 67,332	85%	\$ 3,880 (70)	\$ 5,493	71%	\$ 60,956 (779)	\$ 72,825	84%

\* Fewer than 10 lives terminated by death.

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

TABLE H  
 LARGE-AMOUNT ISSUES OF 1944-72  
 EXPERIENCE BETWEEN 1968 AND 1973 ANNIVERSARIES  
 BY CAUSE OF DEATH, POLICY YEAR, AND PLAN OF INSURANCE  
 MALE AND FEMALE LIVES COMBINED  
 Expected Deaths Based on 1968-73 Standard Ordinary Issues Experience  
 (Amounts Shown in \$1,000 Units)

CAUSE OF DEATH	PERMANENT PLANS			TERM PLANS			ALL PLANS		
	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E
Policy Years 1-5									
Tuberculosis.....	\$ 0 (0)	\$ 101	*	\$ 0 (0)	\$ 37	*	\$ 0 (0)	\$ 138	*
Malignant neoplasms.....	39,293 (445)	47,701	82%	16,083 (177)	14,793	109%	55,376 (602)	62,494	89%
Diabetes mellitus.....	283 (6)	314	*	80 (2)	105	*	363 (7)	419	*
Cerebrovascular diseases.....	4,352 (55)	6,372	68	1,855 (27)	2,100	88	6,207 (78)	8,472	73
Heart and circulatory.....	45,414 (596)	60,508	75	12,682 (209)	19,382	65	58,096 (790)	79,890	73
Pneumonia and influenza.....	2,043 (25)	2,213	92	360 (6)	683	*	2,403 (30)	2,896	83
Accidents and homicide.....	47,301 (517)	41,147	115	18,648 (234)	17,884	104	65,949 (725)	59,031	112
Suicide.....	11,375 (153)	9,510	120	5,234 (74)	3,547	148	16,609 (215)	13,057	127
War and residual.....	18,040 (236)	26,764	67	7,926 (116)	9,223	86	25,966 (343)	35,987	72
All.....	\$168,101 (2,033)	\$194,630	86%	\$62,868 (845)	\$67,754	93%	\$230,969 (2,790)	\$262,384	88%

\* Fewer than 10 lives terminated by death.

NOTE.—Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

NOTE.—Mortality ratio in italics where 10-49 lives terminated by death.

TABLE H *Continued*

CAUSE OF DEATH	PERMANENT PLANS			TERM PLANS			ALL PLANS		
	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E
Policy Years '6-10									
Tuberculosis	\$ 0 (0)	\$ 117	*	\$ 0 (0)	\$ 25	*	\$ 0 (0)	\$ 142	*
Malignant neoplasms	49,351 (598)	49,370	100%	6,853 (120)	9,798	70%	56,204 (708)	59,168	95%
Diabetes mellitus	500 (5)	483	*	50 (1)	100	*	550 (6)	583	*
Cerebrovascular diseases	7,835 (105)	8,135	96	853 (16)	1,569	51	8,688 (120)	9,704	90
Heart and circulatory	64,097 (851)	72,192	89	10,397 (177)	14,707	71	74,494 (995)	86,899	86
Pneumonia and influenza	2,896 (44)	2,561	113	479 (9)	504	*	3,375 (52)	3,065	110
Accidents and homicide	23,114 (288)	18,677	124	5,377 (90)	4,445	121	28,491 (370)	23,122	123
Suicide	8,882 (122)	7,596	117	2,402 (41)	1,824	132	11,284 (158)	9,420	120
War and residual	21,944 (299)	28,071	78	5,705 (81)	5,834	98	27,649 (377)	33,905	82
All	\$178,619 (2,312)	\$187,202	95%	\$32,116 (535)	\$38,806	83%	\$210,735 (2,786)	\$226,008	93%
Policy Years '11-'15									
Tuberculosis	\$ 0 (0)	\$ 84	*	\$ 0 (0)	\$ 12	*	\$ 0 (0)	\$ 96	*
Malignant neoplasms	41,090 (605)	45,034	91%	6,673 (126)	7,261	92%	47,763 (711)	52,295	91%
Diabetes mellitus	578 (10)	632	91	133 (3)	98	*	711 (13)	730	97
Cerebrovascular diseases	8,095 (113)	9,542	85	1,254 (29)	1,406	89	9,349 (138)	10,948	85
Heart and circulatory	69,486 (1,054)	81,990	85	12,150 (240)	13,388	91	81,636 (1,252)	93,378	86
Pneumonia and influenza	2,179 (39)	3,194	68	305 (9)	495	*	2,484 (47)	3,689	67
Accidents and homicide	15,873 (222)	12,176	130	3,160 (51)	2,105	150	19,033 (271)	14,281	133
Suicide	6,719 (93)	4,898	137	838 (18)	866	97	7,557 (108)	5,764	131
War and residual	20,445 (340)	27,813	74	3,549 (76)	4,552	78	23,994 (408)	32,365	74
All	\$164,465 (2,476)	\$185,363	89%	\$28,062 (552)	\$30,183	93%	\$192,527 (2,948)	\$215,546	89%

\* Fewer than 10 lives terminated by death.

Note. Number of lives involved shown in parentheses; duplications have been eliminated in arriving at the total number of deaths shown in this table.

Note. Mortality ratio in italics where 10-49 lives terminated by death.

TABLE H *Continued*

CAUSE OF DEATH	PERMANENT PLANS			TERM PLANS			ALL PLANS		
	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E	Actual Claims	Expected Claims	A/E
Policy Years 16-20									
Tuberculosis.....	\$ 0 (0)	\$ 89	*	\$ 75 (1)	\$ 24	*	\$ 75 (1)	\$ 113	*
Malignant neoplasms.....	23,015 (391)	21,637	106%	6,511 (151)	5,843	111%	29,526 (518)	27,480	107%
Diabetes mellitus.....	840 (10)	1,137	74	297 (7)	305	*	1,137 (17)	1,442	79
Cerebrovascular diseases.....	8,123 (109)	11,161	73	2,249 (48)	2,985	75	10,372 (155)	14,146	73
Heart and circulatory.....	47,106 (782)	56,988	83	13,107 (304)	15,325	86	60,213 (1,045)	72,313	83
Pneumonia and influenza.....	1,606 (31)	3,723	43	240 (8)	989	*	1,846 (39)	4,712	39
Accidents and homicide.....	5,651 (100)	2,827	200	1,360 (35)	746	182	7,011 (132)	3,573	196
Suicide.....	3,486 (45)	998	349	579 (14)	264	219	4,065 (56)	1,262	322
War and residual.....	15,989 (246)	27,748	58	4,905 (98)	6,184	79	20,894 (334)	33,932	62
All.....	\$105,816 (1,714)	\$126,308	84%	\$29,323 (666)	\$32,665	90%	\$135,139 (2,297)	\$158,973	85%
Policy Years 21-25									
Tuberculosis.....	\$ 0 (0)	\$ 48	*	\$ 0 (0)	\$ 14	*	\$ 0 (0)	\$ 62	*
Malignant neoplasms.....	12,461 (207)	10,041	124%	3,183 (86)	2,999	106%	15,644 (286)	13,040	120%
Diabetes mellitus.....	532 (7)	608	*	150 (2)	179	*	682 (7)	787	*
Cerebrovascular diseases.....	4,407 (71)	6,792	65	2,141 (31)	1,993	107	6,548 (99)	8,785	75
Heart and circulatory.....	24,739 (421)	30,409	81	7,031 (184)	8,969	78	31,770 (582)	39,378	81
Pneumonia and influenza.....	1,336 (26)	2,451	55	662 (14)	710	93	1,998 (39)	3,161	63
Accidents and homicide.....	1,781 (31)	1,295	138	635 (18)	374	170	2,416 (48)	1,669	145
Suicide.....	1,285 (24)	351	366	413 (8)	102	*	1,698 (32)	453	375
War and residual.....	7,827 (133)	9,293	84	1,713 (42)	2,744	62	9,540 (169)	12,037	79
All.....	\$ 54,368 (920)	\$ 61,288	89%	\$15,928 (385)	\$18,084	88%	\$ 70,296 (1,262)	\$ 79,372	89%

TABLE J

COMBINED MALE AND FEMALE BASIC MORTALITY TABLE USED TO CALCULATED EXPECTED DEATHS  
GRADUATED MORTALITY RATES PER \$1,000

POLICY YEAR	ISSUE AGES																
	0	1	2-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 and Over
1	1.34	0.61	0.52	0.28	0.32	0.91	0.62	0.55	0.65	0.86	1.34	1.90	2.49	3.24	4.78	6.33	8.13
2	0.53	0.49	0.44	0.26	0.39	1.05	0.68	0.65	0.85	1.18	1.77	2.67	3.86	5.14	6.92	8.91	11.32
3	0.46	0.44	0.39	0.25	0.50	1.14	0.73	0.73	0.97	1.46	2.19	3.31	4.93	6.82	9.39	13.03	15.56
4	0.42	0.40	0.35	0.26	0.65	1.16	0.77	0.79	1.05	1.70	2.60	3.92	5.79	8.34	11.66	16.30	20.46
5	0.39	0.37	0.31	0.28	0.81	1.15	0.80	0.84	1.15	1.92	3.00	4.51	6.63	9.79	13.64	18.77	26.06
6	0.36	0.34	0.28	0.32	0.95	1.13	0.82	0.89	1.27	2.15	3.38	5.08	7.56	11.18	15.32	21.01	33.72
7	0.33	0.31	0.27	0.39	1.06	1.10	0.84	0.95	1.42	2.41	3.78	5.63	8.64	12.53	17.48	24.32	42.66
8	0.30	0.28	0.26	0.50	1.13	1.08	0.87	1.03	1.64	2.71	4.22	6.23	9.81	13.86	20.25	28.68	52.71
9	0.28	0.27	0.28	0.62	1.17	1.06	0.91	1.14	1.88	3.05	4.71	6.90	11.03	15.31	23.47	33.74	62.60
10	0.27	0.26	0.32	0.73	1.18	1.05	0.95	1.27	2.14	3.43	5.27	7.70	12.32	17.24	27.14	39.64	72.16
11	0.26	0.28	0.39	0.83	1.16	1.04	1.00	1.41	2.42	3.84	5.92	8.77	13.70	19.95	31.26	46.05	81.45
12	0.28	0.33	0.50	0.93	1.12	1.04	1.06	1.57	2.71	4.29	6.67	9.87	15.20	22.87	35.81	52.78	90.51
13	0.33	0.40	0.62	1.02	1.09	1.04	1.15	1.75	3.02	4.78	7.52	11.19	17.36	26.12	40.87	60.46	99.64
14	0.41	0.51	0.73	1.08	1.06	1.05	1.26	1.96	3.35	5.34	8.50	12.84	19.95	30.08	46.48	71.14	108.95
15	0.52	0.63	0.83	1.12	1.05	1.06	1.38	2.20	3.74	6.00	9.67	15.12	23.00	34.93	53.33	82.63	119.08
16	0.64	0.74	0.93	1.13	1.04	1.08	1.50	2.48	4.17	6.74	11.01	17.44	26.85	41.46	62.44	95.01	130.55
17	0.75	0.84	1.02	1.12	1.04	1.12	1.63	2.79	4.64	7.54	12.40	19.72	30.82	47.23	72.09	107.41	143.86
18	0.85	0.93	1.08	1.09	1.05	1.19	1.79	3.12	5.15	8.40	13.83	21.97	34.03	52.46	81.03	119.35	159.16
19	0.94	1.01	1.11	1.06	1.06	1.29	2.00	3.47	5.70	9.32	15.30	24.22	37.06	57.47	88.58	130.86	175.95
20	1.01	1.07	1.12	1.05	1.07	1.41	2.25	3.85	6.30	10.32	16.81	26.51	40.01	62.24	96.01	142.06	193.75
21	1.07	1.10	1.12	1.04	1.09	1.53	2.53	4.26	6.96	11.40	18.35	28.84	43.27	67.53	103.54	152.98	211.76
22	1.10	1.11	1.09	1.04	1.13	1.66	2.83	4.70	7.69	12.57	19.91	31.20	46.99	73.49	111.48	163.74	230.07
23	1.11	1.11	1.06	1.05	1.21	1.83	3.15	5.18	8.48	13.84	21.64	33.61	51.22	79.96	120.89	174.45	249.23
24	1.11	1.08	1.05	1.06	1.31	2.04	3.49	5.70	9.32	15.24	23.54	36.55	56.01	86.66	131.11	185.13	271.13
25	1.08	1.06	1.04	1.07	1.43	2.29	3.85	6.27	10.24	16.78	25.62	39.94	61.41	93.49	141.77	195.88	296.78

#### NOTE TO TABLE J

This table was constructed from intercompany experience under Standard Ordinary issues between 1968 and 1973 anniversaries. Medical and nonmedical experience and male and female lives were combined, except that select nonmedical experience was excluded for issue ages 20 and above. The Standard Ordinary experience was in fifteen-year select form for issue-age groups 0, 1, 2-4, 5-9, . . . , 65-69, and 70 and over and in ultimate form for attained-age groups 15-19, 20-24, . . . , 90-95 representing the experience after fifteen policy years. In order to fit the ultimate data into the twenty-five-year select pattern, ultimate experience rates for quinquennial age groups were assumed to fall at issue-age and duration combinations appropriate for the central attained ages of the quinquennial groupings. For most issue-age groups, these ultimate rates provided values for policy years 16 and 21. Crude death rates for policy years 17-20 were determined by a Karup-King four-point interpolation formula applied to the ultimate experience rates corresponding to policy years 11, 16, 21, and 26. Crude death rates for policy years 22-25 were determined in the same manner, using data for policy years 16, 21, 26, and 31. Parallel procedures were employed to obtain assumed death rates at durations beyond 15 for issue-age groups 0, 1, and 2-4.

Ratios of the crude rates to the rates in the basic table used for the 1958-63 large-amount study were formed. The resulting series for each issue-age group was smoothed using a Whittaker-Henderson Type A method with  $a = 2$ . A subsequent Whittaker-Henderson Type A graduation with  $a = 0.5$  was performed on each set of values for a common attained age. A small value of  $a$  was chosen for this graduation because the data were already fairly smooth, in order to preserve the fit and in order to retain the existing smoothness within each issue-age group. Each of these graduations was iterated ten times to eliminate the effects of arbitrary selection of initial values.

The resulting graduated ratios were then applied to the old table and arbitrary adjustments made to improve both smoothness and fit.

Smoothness was tested by the use of difference methods, and fit was tested by analysis of the ratios of actual to expected deaths. After the final adjustments, the fit was satisfactory, with all row and column actual-to-expected ratios between 0.90 and 1.10 and 75 per cent of those values between 0.98 and 1.02. The aggregate ratio of actual to expected deaths was 1.00.

The new table generally has higher mortality rates than the 1958-63 table for issue ages 10-25 and lower rates at the higher issue ages.

