

**TRANSACTIONS OF SOCIETY OF ACTUARIES
1966 REPORTS**

**REPORT OF THE COMMITTEE ON
GROUP ANNUITY MORTALITY
GROUP ANNUITY MORTALITY**

THE current report is limited to a study of the experience of single life matured annuities under Group Annuity contracts. The mortality experience is compared with the *Ga*-1951 male and female tables (without projection), as in prior years. Also, the mortality experience reported in Tables 1, 2, and 3 is compared with the *Ga*-1951 male table with Projection C to 1965, using ages set back five years in the case of female lives. Any experience reported in 1965 which actually occurred in 1964 and prior years is reflected in the tables in the appropriate years. The 1964 experience of the contributing company which was not included in last year's report is reflected in the 1964 experience of the current report. The current report also reflects the 1965 experience of this company, as well as that for years prior to 1964.

Tables 1, 2, and 3 show the experience for the year 1965 by attained five-year age groups for lives retiring on or after normal retirement date, for lives retiring prior to normal retirement date, and for lives retiring on plans having no stated normal retirement date, respectively.

Tables 4, 5, and 6 compare the experience for the year 1965 with corresponding experience for other periods for categories analogous to those shown in Tables 1, 2, and 3, respectively.

Tables 7, 8, and 9 show the experience for successive five-year periods and by age groups for categories analogous to those shown in Tables 1, 2, and 3, respectively.

The volume of data for years of experience prior to 1965 shown in Tables 6 and 9 for lives retiring on plans having no stated normal retirement date shows some decreases from the corresponding data contained in last year's report. This was caused by the submitting of adjusted data by one of the larger contributing companies.

Mortality after normal retirement date under plans with a stated normal retirement date, as shown in Table 1, has remained at about the same level as that shown in last year's report. The mortality under these plans continues to be lower than that under plans having no stated normal retirement date, as shown in Table 3.

TABLE 1

INTERCOMPANY GROUP ANNUITY MORTALITY—MATURED LIFE EXPERIENCE FOR 1965
RETIREMENT ON OR AFTER NORMAL RETIREMENT DATE

ATTAINED AGES	NUMBER OF LIVES		AMOUNT OF ANNUAL INCOME		COMPARISON WITH GA-1951 TABLE (WITHOUT PROJECTION)				COMPARISON WITH GA-1951 TABLE (WITH PROJECTION C TO 1965)			
					By Number of Lives		By Amount of Annual Income		By Number of Lives		By Amount of Annual Income	
	Exposed	Actual Deaths	Exposed	Actual Deaths	Expected Deaths	Ratio Act./Exp.*	Expected Deaths	Ratio Act./Exp.*	Expected Deaths	Ratio Act./Exp.*	Expected Deaths	Ratio Act./Exp.*
Males												
50 and under	55.58	2	\$ 29,105	\$ 2,036	0.19	(†) †	\$ 137	(†) †	0.16	†	\$ 114	†
51-55	213.37	4	302,234	1,408	2.01	(†) †	2,834	(†) †	1.70	†	2,377	†
56-60	1,648.07	58	2,443,010	52,948	23.02	(163) 252%	34,545	(56) 153%	19.28	301%	28,956	183%
61-65	25,259.73	662	33,043,608	730,618	591.68	(117) 112	769,645	(107) 95	496.14	133	645,415	113
66-70	105,390.44	3,705	119,161,631	4,015,495	3,484.67	(107) 106	3,918,203	(99) 102	2,922.15	127	3,285,705	122
71-75	79,575.58	4,297	76,513,685	3,916,475	4,091.34	(108) 105	3,913,525	(101) 100	3,500.44	123	3,346,874	117
76-80	41,533.53	3,452	31,800,928	2,473,845	3,346.92	(105) 103	2,541,720	(104) 97	2,986.41	116	2,265,996	109
81-85	14,698.11	1,833	10,084,938	1,222,360	1,801.32	(99) 102	1,233,174	(100) 99	1,680.95	109	1,150,491	106
86-90	3,142.59	532	2,235,350	350,262	538.62	(108) 99	383,162	(99) 91	526.06	101	374,253	94
91-95	523.32	125	456,179	101,338	120.09	(100) 104	103,883	(86) 98	120.09	104	103,883	98
96 and over	48.58	10	73,847	9,976	16.19	(102) 62	24,422	(157) 41	16.19	62	24,422	41
All ages	272,088.90	14,680	\$276,144,515	\$12,876,761	14,016.05	(106) 105%	\$12,925,250	(101) 100%	12,269.57	120%	\$11,228,486	115%

* Percentages in parentheses are for the year 1964 as adjusted in 1965.

† Less than 10 deaths (actual or expected).

TABLE 1—Continued

ATTAINED AGES	NUMBER OF LIVES		AMOUNT OF ANNUAL INCOME		COMPARISON WITH GQ-1951 TABLE (WITHOUT PROJECTION)				COMPARISON WITH GQ-1951 TABLE (WITH PROJECTION C TO 1965)			
					By Number of Lives		By Amount of Annual Income		By Number of Lives		By Amount of Annual Income	
	Exposed	Actual Deaths	Exposed	Actual Deaths	Expected Deaths	Ratio Act./Exp.*	Expected Deaths	Ratio Act./Exp.*	Expected Deaths	Ratio Act./Exp.*	Expected Deaths	Ratio Act./Exp.*
Females												
50 and under	34.00	1	\$ 23,048	\$ 583	0.01	(†) †	\$ 59	(†) †	0.01	†	\$ 52	†
51-55	338.33	4	181,527	2,257	1.46	(†) †	801	(†) †	1.72	†	925	†
56-60	3,164.08	35	2,080,248	23,987	22.39	(133) 156%	14,885	(152) 161%	25.44	138%	16,856	142%
61-65	13,395.03	145	8,827,496	90,332	158.67	(80) 91	103,724	(80) 87	157.49	92	103,164	88
66-70	26,086.79	418	14,021,631	225,719	479.46	(86) 87	255,729	(82) 88	440.44	95	235,117	96
71-75	17,406.81	502	7,820,684	208,653	592.90	(88) 85	263,850	(86) 79	473.01	106	211,065	99
76-80	7,609.54	363	3,049,779	136,236	448.25	(90) 81	179,438	(90) 76	327.96	111	131,301	104
81-85	2,403.49	227	979,802	98,490	220.91	(88) 103	90,271	(80) 109	168.89	134	69,096	143
86-90	530.50	69	224,812	25,848	72.77	(88) 95	31,016	(85) 83	61.22	113	26,065	99
91-95	87.25	21	40,080	8,571	17.19	(108) 122	7,766	(115) 110	14.52	145	6,585	130
96 and over	15.92	2	8,046	856	4.83	(†) †	2,585	(†) †	3.78	†	1,969	†
All ages..	71,071.74	1,787	\$ 37,257,153	\$ 821,532	2,018.84	(88) 89%	\$ 950,124	(86) 86%	1,674.48	107%	\$ 802,195	102%

TABLE 2
INTERCOMPANY GROUP ANNUITY MORTALITY—MATURED LIFE EXPERIENCE FOR 1965
RETIREMENT PRIOR TO NORMAL RETIREMENT DATE

ATTAINED AGES	NUMBER OF LIVES		AMOUNT OF ANNUAL INCOME		COMPARISON WITH GA-1951 TABLE (WITHOUT PROJECTION)				COMPARISON WITH GA-1951 TABLE (WITH PROJECTION C TO 1965)			
	Exposed	Actual Deaths	Exposed	Actual Deaths	By Number of Lives		By Amount of Annual Income		By Number of Lives		By Amount of Annual Income	
					Expected Deaths	Ratio Act./Exp.*	Expected Deaths	Ratio Act./Exp.*	Expected Deaths	Ratio Act./Exp.*	Expected Deaths	Ratio Act./Exp.*
Males												
50 and under.	1,169.61	15	\$ 280,067	\$ 3,825	4.25	(†) †	\$ 1,346	(†) †	3.57	†	\$ 1,128	†
51-55.....	2,281.26	54	1,710,316	28,634	21.96	(306) 246%	16,387	(201) 175%	18.42	293%	13,732	209%
56-60.....	15,372.86	447	12,525,781	298,119	212.85	(236) 210	174,878	(185) 170	178.41	251	146,593	203
61-65.....	43,706.61	1,493	42,855,776	1,256,501	907.67	(168) 164	891,725	(150) 141	761.04	196	747,697	168
66-70.....	31,407.54	1,373	29,212,745	1,092,101	1,009.93	(138) 136	931,347	(117) 117	846.91	162	780,995	140
71-75.....	13,051.47	819	9,790,385	533,411	660.30	(124) 124	491,720	(117) 108	564.20	145	419,907	127
76-80.....	5,204.74	450	3,194,009	263,252	419.06	(119) 107	254,403	(123) 103	373.91	120	226,724	116
81-85.....	1,562.50	210	901,435	130,662	189.91	(105) 111	109,753	(101) 119	177.05	119	102,336	128
86 and over...	351.67	70	260,734	74,016	65.01	(99) 108	51,317	(62) 144	63.87	110	50,642	146
All ages..	114,108.26	4,931	\$100,731,248	\$3,680,521	3,490.94	(146) 141%	\$2,922,876	(131) 126%	2,987.38	165%	\$2,489,754	148%

* Percentages in parentheses are for the year 1964 as adjusted in 1965.

† Less than 10 deaths (actual or expected).

TABLE 2—Continued

ATTAINED AGES	NUMBER OF LIVES		AMOUNT OF ANNUAL INCOME		COMPARISON WITH GA-1951 TABLE (WITHOUT PROJECTION)				COMPARISON WITH GA-1951 TABLE (WITH PROJECTION C TO 1965)			
					By Number of Lives		By Amount of Annual Income		By Number of Lives		By Amount of Annual Income	
	Exposed	Actual Deaths	Exposed	Actual Deaths	Expected Deaths	Ratio Act./Exp.*	Expected Deaths	Ratio Act./Exp.*	Expected Deaths	Ratio Act./Exp.*	Expected Deaths	Ratio Act./Exp.*
Females												
50 and under..	216.18	3	\$ 56,108	\$ 644	0.49	(†) †	\$ 147	(†) †	0.42	†	\$ 138	†
51-55.....	1,362.79	6	541,528	3,604	5.66	(†) †	2,289	(†) †	6.42	†	2,606	†
56-60.....	4,836.21	68	1,998,825	21,625	31.90	(214) 213%	13,262	(211) 163%	36.64	186%	15,223	142%
61-65.....	10,723.73	164	4,726,458	75,807	121.52	(125) 135	53,486	(91) 142	122.03	134	53,749	141
66-70.....	7,355.53	160	2,874,836	55,098	132.41	(104) 121	51,634	(96) 107	121.99	131	47,571	116
71-75.....	2,717.36	99	990,220	31,558	90.58	(93) 109	32,804	(79) 96	72.71	136	26,381	120
76-80.....	1,044.50	67	353,630	19,556	61.42	(98) 109	20,964	(65) 93	44.89	149	15,341	127
81-85.....	286.75	17	104,266	5,730	26.56	(84) 64	9,702	(116) 59	20.37	83	7,445	77
86 and over..	62.00	12	33,283	6,777	8.84	(†) †	4,893	(†) †	7.49	†	4,130	†
All ages..	28,605.05	596	\$ 11,679,154	\$ 220,399	479.38	(115) 124%	\$ 189,181	(99) 117%	432.96	138%	\$ 172,584	128%

TABLE 3

INTERCOMPANY GROUP ANNUITY MORTALITY—MATURED LIFE EXPERIENCE FOR 1965
RETIREMENT UNDER A PLAN HAVING NO STATED NORMAL RETIREMENT DATE

ATTAINED AGES	NUMBER OF LIVES		AMOUNT OF ANNUAL INCOME		COMPARISON WITH GA-1951 TABLE (WITHOUT PROJECTION)				COMPARISON WITH GA-1951 TABLE (WITH PROJECTION C TO 1965)			
					By Number of Lives		By Amount of Annual Income		By Number of Lives		By Amount of Annual Income	
	Exposed	Actual Deaths	Exposed	Actual Deaths	Expected Deaths	Ratio Act./Exp.*	Expected Deaths	Ratio Act./Exp.*	Expected Deaths	Ratio Act./Exp.*	Expected Deaths	Ratio Act./Exp.*
Male												
50 and under.	24.00	0	\$ 18,909	\$ 0	0.10	(†) †	\$ 106	(†) †	0.05	†	\$ 91	†
51-55.....	131.48	9	117,144	7,022	1.27	(†) †	1,134	(†) †	1.07	†	954	†
56-60.....	1,341.40	36	1,401,627	28,410	18.79	(193) 192%	19,730	(100) 144%	15.72	229%	16,536	172%
61-65.....	9,420.70	334	10,831,711	359,328	207.72	(150) 161	239,732	(133) 150	174.18	192	201,028	179
66-70.....	26,320.66	1,005	25,318,420	876,558	876.98	(127) 115	830,951	(111) 105	735.47	137	696,811	126
71-75.....	21,572.54	1,144	15,749,053	811,738	1,109.22	(111) 103	803,899	(107) 101	949.06	121	687,376	118
76-80.....	9,721.37	770	5,679,118	428,227	780.73	(102) 99	453,802	(100) 94	696.39	111	404,570	106
81-85.....	2,947.07	352	1,625,725	199,042	362.53	(91) 97	200,315	(82) 99	338.42	104	187,048	106
86-90.....	636.52	91	326,657	41,053	108.54	(107) 84	55,497	(112) 74	105.91	86	54,134	76
91 and over...	106.99	19	68,774	13,889	25.43	(91) 75	16,320	(149) 85	25.43	75	16,320	85
All ages..	72,222.73	3,760	\$ 61,137,138	\$ 2,765,267	3,491.31	(115) 108%	\$ 2,621,486	(109) 105%	3,041.70	124%	\$ 2,264,868	122%

* Percentages in parentheses are for the year 1964 as adjusted in 1965.

† Less than 10 deaths (actual or expected).

TABLE 3—Continued

ATTAINED AGES	NUMBER OF LIVES		AMOUNT OF ANNUAL INCOME		COMPARISON WITH GQ-1951 TABLE (WITHOUT PROJECTION)				COMPARISON WITH GQ-1951 TABLE (WITH PROJECTION C TO 1965)			
					By Number of Lives		By Amount of Annual Income		By Number of Lives		By Amount of Annual Income	
	Exposed	Actual Deaths	Exposed	Actual Deaths	Expected Deaths	Ratio Act./Exp.*	Expected Deaths	Ratio Act./Exp.*	Expected Deaths	Ratio Act./Exp.*	Expected Deaths	Ratio Act./Exp.*
Females												
50 and under.	38.33	1	\$ 32,859	\$ 599	0.03	(†) †	\$ 73	(†) †	0.03	†	\$ 67	†
51-55.....	117.67	0	77,803	0	0.46	(†) †	323	(†) †	0.53	†	364	†
56-60.....	615.09	7	395,468	3,746	4.12	(†) †	2,641	(†) †	4.71	†	3,028	†
61-65.....	2,627.81	34	1,731,842	24,798	31.28	(126) 109%	20,626	(133) 120%	30.98	110%	20,449	121%
66-70.....	4,925.09	87	2,937,470	60,075	91.20	(88) 95	54,027	(69) 111	83.70	104	49,630	121
71-75.....	2,936.78	89	1,597,156	43,924	98.65	(94) 90	53,229	(80) 83	79.06	113	42,737	103
76-80.....	1,000.05	51	518,068	25,321	58.92	(101) 87	30,765	(120) 82	43.08	118	22,512	112
81-85.....	296.41	21	150,808	11,044	27.43	(101) 77	13,990	(107) 79	21.00	100	10,726	103
86-90.....	45.51	7	24,415	1,546	6.26	(†) †	3,335	(†) †	5.32	†	2,806	†
91 and over..	10.58	2	3,669	1,026	2.32	(†) †	771	(†) †	1.86	†	633	†
All ages..	12,613.32	299	\$ 7,469,558	\$ 172,079	320.67	(99) 93%	\$ 179,780	(95) 96%	270.27	111%	\$ 152,952	113%

TABLE 4

INTERCOMPANY GROUP ANNUITY MORTALITY—MATURED LIFE EXPERIENCE TO DECEMBER 31, 1965
RETIREMENT ON OR AFTER NORMAL RETIREMENT DATE

CALENDAR YEARS	NUMBER OF LIVES		AMOUNT OF ANNUAL INCOME		COMPARISON WITH GA-1951 TABLE (WITHOUT PROJECTION)			
	Exposed	Actual Deaths	Exposed	Actual Deaths	By Number of Lives		By Amount of Annual Income	
					Expected Deaths	Ratio Act./Exp.	Expected Deaths	Ratio Act./Exp.
Males								
1924-40.....	56,551.77	2,928	\$ 59,675,861	\$ 2,967,078	2,296.86	127%	\$ 2,493,366	119%
1941-45.....	115,223.09	5,929	87,702,007	4,808,062	4,793.46	124	3,890,953	124
1946-50.....	258,654.88	12,095	173,215,805	8,328,414	10,622.32	114	7,447,159	112
1951-55.....	520,512.68	24,354	359,797,189	16,308,365	21,854.77	111	15,125,318	108
1956-60.....	875,157.70	41,845	708,248,861	30,768,133	39,101.58	107	29,949,701	103
1961-65.....	1,231,667.15	64,680	1,183,499,181	53,631,736	60,703.61	107	53,435,875	100
1965.....	272,088.90	14,680	276,144,515	12,876,761	14,016.05	105	12,925,250	100
Females								
1924-40.....	9,855.07	275	\$ 5,814,703	\$ 153,541	174.37	158%	\$ 99,243	155%
1941-45.....	17,710.13	492	8,970,299	240,129	340.11	145	175,821	137
1946-50.....	39,314.35	915	17,236,097	427,282	788.81	116	365,257	117
1951-55.....	88,032.77	1,992	36,319,123	863,591	1,892.39	105	803,600	107
1956-60.....	173,378.42	3,935	75,901,474	1,692,425	4,097.43	96	1,736,006	97
1961-65.....	296,049.26	7,463	147,527,764	3,356,385	7,995.73	93	3,637,199	92
1965.....	71,071.74	1,787	37,257,153	821,532	2,018.84	89	950,124	86

TABLE 5

INTERCOMPANY GROUP ANNUITY MORTALITY—MATURED LIFE EXPERIENCE TO DECEMBER 31, 1965
RETIREMENT PRIOR TO NORMAL RETIREMENT DATE

CALENDAR YEARS	NUMBER OF LIVES		AMOUNT OF ANNUAL INCOME		COMPARISON WITH GA-1951 TABLE (WITHOUT PROJECTION)			
					By Number of Lives		By Amount of Annual Income	
	Exposed	Actual Deaths	Exposed	Actual Deaths	Expected Deaths	Ratio Act./Exp.	Expected Deaths	Ratio Act./Exp.
Males								
1924-40.....	16,778.02	740	\$ 14,785,704	\$ 606,943	405.75	182%	\$ 354,243	171%
1941-45.....	26,201.26	1,458	17,969,723	776,460	725.85	201	526,917	147
1946-50.....	65,026.75	3,460	37,474,863	1,794,647	1,766.80	196	1,123,010	160
1951-55.....	133,861.21	6,791	78,468,729	3,663,544	3,804.49	178	2,346,444	156
1956-60.....	251,053.38	12,046	173,619,300	7,228,272	7,471.82	161	5,064,550	143
1961-65.....	463,343.86	20,586	385,702,999	14,762,711	13,989.54	147	11,112,357	133
1965.....	114,108.26	4,931	100,731,248	3,680,521	3,490.94	141	2,922,876	126
Females								
1924-40.....	1,937.08	44	\$ 815,870	\$ 20,273	17.53	251%	\$ 7,847	258%
1941-45.....	3,855.65	102	1,446,554	38,267	45.34	225	18,978	202
1946-50.....	10,130.74	231	3,380,248	80,824	128.95	179	49,842	162
1951-55.....	23,047.26	527	7,419,669	191,059	321.54	164	117,221	163
1956-60.....	50,799.19	1,152	17,535,992	394,349	771.94	149	278,950	141
1961-65.....	108,723.02	2,267	42,336,007	807,875	1,770.14	128	679,711	119
1965.....	28,605.05	596	11,679,154	220,399	479.38	124	189,181	117

TABLE 6

INTERCOMPANY GROUP ANNUITY MORTALITY—MATURED LIFE EXPERIENCE TO DECEMBER 31, 1965
RETIREMENT UNDER A PLAN HAVING NO STATED NORMAL RETIREMENT DATE

CALENDAR YEARS	NUMBER OF LIVES		AMOUNT OF ANNUAL INCOME		COMPARISON WITH GA-1951 TABLE (WITHOUT PROJECTION)			
					By Number of Lives		By Amount of Annual Income	
	Exposed	Actual Deaths	Exposed	Actual Deaths	Expected Deaths	Ratio Act./Exp.	Expected Deaths	Ratio Act./Exp.
Males								
1956-60.....	126,294.23	6,206	\$ 77,992,638	\$ 3,546,743	5,477.85	113%	\$ 3,199,884	111%
1961-65.....	299,086.56	15,913	235,311,331	11,029,581	13,766.83	116	9,781,194	113
1965.....	72,222.73	3,760	61,137,138	2,765,267	3,491.31	108	2,621,486	105
Females								
1956-60.....	13,660.42	276	\$ 6,597,815	\$ 130,228	300.05	92%	\$ 141,867	92%
1961-65.....	46,359.45	1,110	25,893,481	588,204	1,114.65	100	597,133	99
1965.....	12,613.32	299	7,469,558	172,079	320.67	93	179,780	96

TABLE 7
 INTERCOMPANY GROUP ANNUITY MORTALITY—MATURED LIFE EXPERIENCE
 TO DECEMBER 31, 1965

RETIREMENT ON OR AFTER NORMAL RETIREMENT DATE
 COMPARISON WITH GA-1951 TABLE (WITHOUT PROJECTION)

MALES

Attained Ages	1946-50	1951-55	1956-60	1957-61	1958-62	1959-63	1960-64	1961-65
Actual Deaths—by Number of Lives								
60 and under . . .	46	51	96	120	155	180	202	235
61-65	1,211	2,142	2,859	2,991	3,083	3,141	3,187	3,270
66-70	4,791	9,662	14,409	15,410	16,234	16,994	17,682	18,066
71-75	3,163	6,773	12,677	14,186	15,513	17,124	18,396	19,523
76-80	1,731	3,549	7,477	8,700	9,876	11,267	12,701	14,191
81-85	855	1,568	3,135	3,694	4,270	5,007	5,811	6,812
86-90	232	494	957	1,119	1,325	1,565	1,823	2,103
91-95	60	104	214	246	288	305	362	437
96 and over	6	11	21	23	26	33	41	43
Total	12,095	24,354	41,845	46,489	50,770	55,616	60,205	64,680
Ratio: Act./Exp.—by Number of Lives								
60 and under . . .	189%	182%	153%	155%	166%	167%	175%	197%
61-65	118	117	113	112	111	112	112	114
66-70	113	113	107	107	107	107	108	107
71-75	113	110	108	109	108	110	109	108
76-80	110	107	106	106	104	104	104	104
81-85	119	108	102	103	103	103	102	102
86-90	108	111	104	103	104	104	104	103
91-95	154	134	123	118	117	107	104	103
96 and over	*	104	79	73	69	72	77	69
Total	114%	111%	107%	108%	107%	107%	107%	107%
Ratio: Act./Exp.—by Amount of Annual Income								
60 and under . . .	198%	157%	125%	116%	113%	120%	113%	116%
61-65	114	115	109	104	101	101	103	100
66-70	114	108	101	101	101	100	100	101
71-75	112	108	104	103	102	102	101	101
76-80	101	104	101	103	99	100	101	100
81-85	121	99	102	102	102	101	101	101
86-90	90	108	105	106	108	105	102	98
91-95	169	157	108	99	89	86	84	88
96 and over	*	92	63	58	45	40	87	76
Total	112%	108%	103%	102%	101%	101%	101%	100%

* Less than 10 deaths (actual or expected).

TABLE 7—Continued

FEMALES

Attained Ages	1946-50	1951-55	1956-60	1957-61	1958-62	1959-63	1960-64	1961-65
Actual Deaths—by Number of Lives								
60 and under . . .	41	68	76	77	88	106	119	142
61-65	163	324	459	495	559	600	599	656
66-70	258	647	1,254	1,390	1,551	1,747	1,852	1,955
71-75	233	424	1,006	1,218	1,418	1,638	1,851	2,114
76-80	128	291	666	759	881	1,112	1,307	1,485
81-85	63	173	311	374	440	542	606	760
86-90	25	53	127	145	180	216	244	270
91-95	4	12	29	37	44	51	62	72
96 and over	0	0	7	6	7	6	10	9
Total	915	1,992	3,935	4,501	5,168	6,018	6,650	7,463
Ratio: Act./Exp.—by Number of Lives								
60 and under . . .	119%	126%	98%	93%	99%	110%	116%	131%
61-65	113	109	96	96	101	101	94	96
66-70	109	104	95	94	94	97	95	93
71-75	125	96	90	92	92	92	90	90
76-80	108	102	102	96	91	95	93	89
81-85	135	127	100	101	102	106	99	102
86-90	144	116	120	112	112	111	107	101
91-95	*	123	103	114	113	109	111	111
96 and over	*	*	*	*	*	*	82	*
Total	116%	105%	96%	95%	95%	97%	94%	93%
Ratio: Act./Exp.—by Amount of Annual Income								
60 and under . . .	100%	109%	107%	100%	103%	109%	117%	129%
61-65	122	115	101	101	104	104	98	97
66-70	108	109	96	94	94	96	93	92
71-75	124	93	86	89	89	89	87	86
76-80	102	106	107	97	94	94	93	87
81-85	150	126	100	96	101	107	98	102
86-90	158	108	118	116	129	123	115	105
91-95	*	108	107	118	114	125	128	123
96 and over	*	*	*	*	*	*	92	*
Total	117%	107%	97%	95%	96%	97%	94%	92%

* Less than 10 deaths (actual or expected).

TABLE 8
 INTERCOMPANY GROUP ANNUITY MORTALITY—MATURED LIFE EXPERIENCE
 TO DECEMBER 31, 1965
 RETIREMENT PRIOR TO NORMAL RETIREMENT DATE
 COMPARISON WITH G α -1951 TABLE (WITHOUT PROJECTION)
 MALES

Attained Ages	1946-50	1951-55	1956-60	1957-61	1958-62	1959-63	1960-64	1961-65
Actual Deaths—by Number of Lives								
60 and under . . .	651	1,135	1,550	1,665	1,868	2,073	2,285	2,417
61-65	1,238	2,308	3,855	4,227	4,622	5,208	5,686	6,251
66-70	843	1,856	3,216	3,533	4,007	4,531	5,057	5,696
71-75	470	886	2,013	2,284	2,522	2,811	3,036	3,365
76-80	218	422	905	1,044	1,233	1,432	1,691	1,887
81-85	36	160	389	441	485	538	609	712
86-90	4	22	103	111	131	164	183	214
91-95	0	2	14	17	19	26	32	42
96 and over	0	0	1	1	0	0	0	2
Total	3,460	6,791	12,046	13,323	14,887	16,783	18,579	20,586
Ratio: Act./Exp.—by Number of Lives								
60 and under . . .	334%	309%	252%	238%	236%	237%	240%	234%
61-65	243	228	198	190	182	180	175	171
66-70	166	156	151	148	145	145	142	141
71-75	138	129	128	129	129	130	128	127
76-80	126	111	118	115	115	113	115	112
81-85	94	108	114	114	112	110	108	106
86-90	*	82	113	103	100	106	103	105
91-95	*	*	124	111	95	94	92	100
96 and over	*	*	*	*	*	*	*	*
Total	196%	178%	161%	157%	153%	153%	150%	147%
Ratio: Act./Exp.—by Amount of Annual Income								
60 and under . . .	251%	249%	196%	190%	200%	200%	199%	195%
61-65	206	206	164	157	147	147	147	145
66-70	145	141	137	135	137	134	130	126
71-75	131	121	122	122	115	119	117	117
76-80	115	102	119	116	114	112	115	111
81-85	78	94	105	112	116	120	117	118
86-90	*	150	93	88	87	104	100	102
91-95	*	*	106	62	45	38	37	88
96 and over	*	*	*	*	*	*	*	*
Total	160%	156%	143%	140%	137%	137%	135%	133%

* Less than 10 deaths (actual or expected).

TABLE 8--Continued

FEMALES

Attained Ages	1946-50	1951-55	1956-60	1957-61	1958-62	1959-63	1960-64	1961-65
Actual Deaths—by Number of Lives								
60 and under	64	117	194	223	240	275	305	334
61-65	59	155	327	397	466	544	596	667
66-70	54	126	292	339	394	454	497	564
71-75	34	71	186	203	257	297	325	371
76-80	16	40	99	114	128	158	182	223
81-85	3	13	47	52	56	64	65	71
86-90	1	4	6	8	13	17	20	29
91-95	0	1	1	2	5	7	6	8
96 and over	0	0	0	0	0	0	0	0
Total	231	527	1,152	1,338	1,559	1,816	1,996	2,267
Ratio: Act./Exp.—by Number of Lives								
60 and under	260%	254%	220%	223%	211%	215%	215%	212%
61-65	173	186	166	166	163	162	152	146
66-70	174	147	144	144	142	137	125	119
71-75	139	120	119	109	118	117	111	109
76-80	160	119	116	111	103	104	100	102
81-85	*	125	139	125	111	106	89	79
86-90	*	*	*	*	120	115	101	110
91-95	*	*	*	*	*	*	*	*
96 and over	*	*	*	*	*	*	*	*
Total	179%	164%	149%	146%	144%	142%	133%	128%
Ratio: Act./Exp.—by Amount of Annual Income								
60 and under	259%	255%	228%	212%	196%	206%	205%	185%
61-65	166	216	147	152	154	151	133	135
66-70	184	151	147	142	134	134	121	115
71-75	113	102	106	101	113	113	105	102
76-80	134	106	111	102	92	96	88	83
81-85	*	136	138	114	115	114	98	88
86-90	*	*	*	*	79	59	69	80
91-95	*	*	*	*	*	*	*	*
96 and over	*	*	*	*	*	*	*	*
Total	162%	163%	141%	137%	135%	135%	123%	119%

* Less than 10 deaths (actual or expected).

TABLE 9
 INTERCOMPANY GROUP ANNUITY MORTALITY—MATURED LIFE EXPERIENCE
 TO DECEMBER 31, 1965
 RETIREMENT UNDER A PLAN HAVING NO STATED NORMAL RETIREMENT DATE
 COMPARISON WITH GA-1951 TABLE (WITHOUT PROJECTION)
 MALES

Attained Ages	1956-60	1957-61	1958-62	1959-63	1960-64	1961-65
Actual Deaths—by Number of Lives						
60 and under	60	80	105	139	165	188
61-65.....	525	636	802	1,016	1,200	1,381
66-70.....	2,410	3,038	3,648	4,232	4,713	4,968
71-75.....	1,802	2,389	3,014	3,636	4,282	4,782
76-80.....	943	1,231	1,624	2,051	2,486	2,910
81-85.....	342	462	612	808	994	1,230
86-90.....	104	139	197	267	331	384
91-95.....	15	26	31	40	52	63
96 and over..	5	5	6	7	8	7
Total...	6,206	8,006	10,039	12,196	14,231	15,913
Ratio: Act./Exp.—by Number of Lives						
60 and under	303%	282%	272%	269%	251%	239%
61-65.....	150	144	142	148	151	154
66-70.....	119	122	123	124	125	123
71-75.....	108	112	114	114	114	111
76-80.....	102	103	106	109	109	105
81-85.....	93	94	95	99	98	98
86-90.....	95	94	100	107	108	102
91-95.....	84	110	106	104	100	94
96 and over..	*	*	*	*	*	*
Total...	113%	115%	116%	118%	118%	116%
Ratio: Act./Exp.—by Amount of Annual Income						
60 and under	169%	196%	222%	233%	202%	194%
61-65.....	131	125	125	136	137	142
66-70.....	110	114	115	117	116	115
71-75.....	111	114	112	113	112	108
76-80.....	104	104	108	110	109	104
81-85.....	105	104	104	103	92	94
86-90.....	102	97	107	108	112	103
91-95.....	53	83	81	68	98	92
96 and over..	*	*	*	*	*	*
Total...	111%	113%	114%	116%	115%	113%

* Less than 10 deaths (actual or expected).

TABLE 9—Continued

FEMALES

Attained Ages	1956-60	1957-61	1958-62	1959-63	1960-64	1961-65
Actual Deaths—by Number of Lives						
60 and under	11	10	16	24	31	37
61-65.....	50	60	77	96	118	134
66-70.....	119	153	197	267	296	346
71-75.....	54	79	126	175	240	307
76-80.....	22	30	65	99	141	184
81-85.....	15	25	31	47	63	77
86-90.....	5	6	10	14	19	23
91-95.....	0	0	0	0	0	2
96 and over..	0	0	0	0	0	0
Total...	276	363	522	722	908	1,110
Ratio: Act./Exp.—by Number of Lives						
60 and under	240%	150%	182%	206%	213%	213%
61-65.....	123	109	108	108	110	108
66-70.....	107	101	99	107	98	98
71-75.....	65	70	84	90	96	96
76-80.....	51	47	73	85	93	95
81-85.....	105	115	99	105	105	94
86-90.....	*	*	151	136	126	115
91-95.....	*	*	*	*	*	*
96 and over..	*	*	*	*	*	*
Total...	92%	87%	94%	101%	101%	100%
Ratio: Act./Exp.—by Amount of Annual Income						
60 and under	241%	166%	173%	200%	213%	197%
61-65.....	95	90	88	95	105	109
66-70.....	109	105	99	111	95	100
71-75.....	64	61	75	84	87	86
76-80.....	59	52	79	84	97	97
81-85.....	131	118	102	111	109	98
86-90.....	*	*	138	162	157	107
91-95.....	*	*	*	*	*	*
96 and over..	*	*	*	*	*	*
Total...	92%	85%	90%	100%	98%	99%

* Less than 10 deaths (actual or expected).

The ratios shown in Tables 2 and 3 show some decrease in mortality from last year for male lives. For female lives, the ratios in Table 2 indicate, after a year of exceptionally low mortality in 1964, a return to the levels characteristic of earlier years, while the ratios in Table 3 indicate decreased mortality based on lives and slightly increased mortality based on amounts.

In Table 7, the ratios for male lives have remained virtually static for each five-year period shown since 1956, and the ratios for female lives show a decrease in mortality for the same periods.

In Table 8, the ratios for both male and female lives show a continuing decrease in mortality for each five-year period shown.

In Table 9, the ratios for both male and female lives, after showing increased mortality for a number of the five-year periods, indicate decreased mortality for the last one or two periods shown.

The following companies have contributed experience for the investigation covered by this report:

- Aetna Life Insurance Company
- Bankers Life Company
- Canada Life Assurance Company
- Confederation Life Association
- Connecticut General Life Insurance Company
- Equitable Life Assurance Society
- Great-West Life Assurance Company
- John Hancock Mutual Life Insurance Company
- Massachusetts Mutual Life Insurance Company
- Metropolitan Life Insurance Company
- North American Life Assurance Company
- Occidental Life Insurance Company
- Pacific Mutual Life Insurance Company
- Prudential Insurance Company of America
- Sun Life Assurance Company of Canada
- The Travelers Insurance Company