

**TRANSACTIONS OF SOCIETY OF ACTUARIES  
1971 REPORTS**

**REPORT OF THE COMMITTEE ON SELF-  
ADMINISTERED RETIREMENT PLANS**

**MORTALITY EXPERIENCE AMONG PENSIONERS**

**A**S WAS the case with the previous pension reports of this Committee (*TSA, 1958 Reports*, p. 115; *TSA, 1962 Reports*, p. 120; and *TSA, 1966 Reports*, p. 182), the present report is limited to a study of mortality experience among pensioners under certain large self-administered plans. Both for consistency with the prior reports and because of the present inability of the Committee to extend the scope of its studies, the following further limitations have also been observed.

1. So far as possible, only regular (service) retirements, as distinguished from retirements due to disability occurring prior to normal retirement age, have been included. Different employers follow different retirement policies and different methods of classifying retirements, so it is likely that this limitation does not produce complete homogeneity.
2. The experience is reported only by number of lives, since few experience data were available by amounts of pension.
3. So far as possible, experience for male and female pensioners was considered separately. In three groups this separation was not available, and therefore the approximate proportion of female employees was indicated.
4. Each employer's experience has been studied and reported separately.

For consistency both with the 1966 report and with the reports of the Committee on Group Annuity Mortality, the *Ga-1951* Table (without projection) has been used as the basis for determining expected deaths for males, and the same table set back five years has been used for females.

Although the experience data on Group I that appeared in the previous three reports were not available for this report, five new groups submitted material which has been included. The groups included in this report represent the experience of twelve large employers, who are identified as follows:

Group	Identification
A	U.S. government employees (males and females)
B	Public utility companies (males and females)
C	Electric utility company (males)
D	Manufacturing company (males, salaried and hourly)
E	Oil company (males)

TABLE 1—MORTALITY OF PENSIONERS UNDER SELF-ADMINISTERED RETIREMENT PLANS  
RATIOS OF ACTUAL DEATHS TO EXPECTED  
ACCORDING TO Ga-1951 MORTALITY TABLE (WITHOUT PROJECTION)

ATTAINED AGES	GROUP A Retired Government Employees, Including Only "Nondisability Annuitants"						
	7/35-6/40	7/40-6/45	7/45-6/50	7/50-6/55	7/55-6/60	7/60-7/64	7/64-6/69
Males							
Under 55.....	150% ( 43)	* ( 2)	* ( 3)	80% ( 21)	121% ( 47)	107% ( 62)	93% ( 130)
55-59.....	158 ( 252)	141% ( 92)	127% ( 340)	129 ( 424)	114 ( 565)	120 ( 616)	107 ( 1,105)
60-64.....	132 ( 885)	142 ( 942)	157 ( 1,940)	147 ( 3,031)	132 ( 4,169)	128 ( 3,512)	124 ( 5,038)
65-69.....	121 ( 2,381)	121 ( 2,887)	128 ( 3,962)	132 ( 6,333)	126 ( 10,206)	118 ( 11,040)	113 ( 13,538)
70-74.....	126 ( 2,851)	120 ( 4,020)	112 ( 5,489)	107 ( 7,649)	109 ( 11,354)	106 ( 13,422)	103 ( 21,983)
75-79.....	124 ( 2,316)	117 ( 3,253)	108 ( 4,588)	102 ( 6,556)	103 ( 9,247)	101 ( 9,967)	99 ( 18,294)
80-84.....	125 ( 1,285)	118 ( 2,130)	109 ( 2,926)	99 ( 4,229)	99 ( 6,383)	99 ( 6,836)	96 ( 11,401)
85-89.....	113 ( 406)	118 ( 762)	109 ( 1,269)	106 ( 1,908)	106 ( 3,130)	103 ( 3,553)	100 ( 5,843)
90 and over.....	133 ( 168)	118 ( 212)	123 ( 372)	119 ( 658)	110 ( 1,018)	110 ( 1,333)	111 ( 2,488)
65 and over.....	124% ( 9,407)	119% ( 13,264)	113% ( 18,606)	109% ( 27,333)	109% ( 41,338)	106% ( 46,151)	103% ( 73,547)
All.....	125% ( 10,587)	120% ( 14,300)	117% ( 20,889)	112% ( 30,809)	111% ( 46,119)	108% ( 50,341)	104% ( 79,820)
Females							
Under 55.....	* ( 1)	* ( 0)	* ( 0)	* ( 3)	* ( 4)	* ( 7)	104% ( 18)
55-59.....	* ( 8)	* ( 8)	75% ( 16)	70% ( 36)	97% ( 55)	85% ( 50)	85 ( 109)
60-64.....	118% ( 23)	124% ( 43)	106 ( 125)	97 ( 263)	103 ( 436)	85 ( 493)	82 ( 792)
65-69.....	174 ( 126)	119 ( 150)	134 ( 364)	110 ( 639)	102 ( 1,021)	90 ( 1,353)	84 ( 2,316)
70-74.....	126 ( 170)	104 ( 266)	108 ( 480)	98 ( 770)	93 ( 1,362)	86 ( 1,764)	79 ( 3,186)
75-79.....	162 ( 189)	127 ( 288)	116 ( 448)	106 ( 710)	92 ( 1,220)	100 ( 1,559)	90 ( 3,083)
80-84.....	167 ( 116)	150 ( 206)	134 ( 342)	117 ( 526)	99 ( 910)	108 ( 1,099)	105 ( 2,293)
85-89.....	187 ( 67)	146 ( 82)	125 ( 136)	131 ( 296)	105 ( 476)	113 ( 608)	111 ( 1,251)
90 and over.....	128 ( 14)	154 ( 28)	123 ( 46)	124 ( 92)	112 ( 192)	132 ( 290)	129 ( 602)
65 and over.....	155% ( 682)	124% ( 1,020)	121% ( 1,816)	109% ( 3,033)	97% ( 5,181)	97% ( 6,673)	91% ( 12,731)
All.....	153% ( 714)	125% ( 1,071)	119% ( 1,957)	107% ( 3,335)	98% ( 5,676)	96% ( 7,223)	90% ( 13,650)

NOTE.—Number of actual deaths corresponding to each mortality ratio is shown in parentheses.

\* Less than ten deaths.

TABLE 1—Continued

ATTAINED AGES	GROUP B Service Pensioners of a Group of Public Utility Companies Covered under a Uniform Plan; Retirement Is Compulsory at 65, and Service Pensioners Include Employees Retired for Disability if Eligible for a Service Pension							
	1933-37	1938-42	1943-47	1948-52	1953-57	1958-61	1962-65	1966-70
	Males							
Under 55.....	270% ( 20)	523% ( 34)	559% ( 33)	684% ( 39)	523% ( 46)	593% ( 54)	469% ( 30)	714% ( 25)
55-59.....	251 (100)	255 ( 117)	378 ( 155)	336 ( 136)	363 ( 158)	353 ( 176)	341 ( 241)	365 ( 247)
60-64.....	186 (206)	194 ( 308)	195 ( 379)	209 ( 475)	180 ( 458)	180 ( 475)	166 ( 744)	187 (1,556)
65-69.....	157 (259)	130 ( 389)	132 ( 681)	125 ( 990)	126 (1,283)	124 (1,189)	119 (1,358)	115 (2,313)
70-74.....	143 (184)	135 ( 279)	130 ( 487)	114 ( 739)	115 (1,155)	116 (1,163)	120 (1,396)	112 (1,980)
75-79.....	167 (128)	141 ( 180)	113 ( 257)	115 ( 471)	109 ( 788)	109 ( 943)	112 (1,194)	110 (1,710)
80-84.....	134 ( 45)	122 ( 70)	133 ( 137)	102 ( 201)	102 ( 382)	106 ( 546)	105 ( 784)	100 (1,176)
85-89.....	133 ( 12)	110 ( 23)	86 ( 29)	113 ( 73)	129 ( 155)	119 ( 204)	124 ( 340)	91 ( 516)
90 and over.....	* ( 5)	* ( 3)	126 ( 13)	110 ( 21)	127 ( 37)	137 ( 43)	127 ( 77)	92 ( 138)
65 and over.....	152% (633)	131% ( 944)	127% (1,604)	117% (2,495)	116% (3,800)	115% (4,088)	116% (5,149)	108% (7,833)
All.....	167% (959)	151% (1,403)	144% (2,171)	131% (3,145)	125% (4,462)	124% (4,793)	124% (6,164)	119% (9,661)
	Females†							
Under 55.....	396% ( 21)	396% ( 38)	389% ( 58)	311% ( 73)	355% ( 130)	348% ( 131)	353% ( 129)	458% ( 87)
55-59.....	297 ( 38)	251 ( 64)	268 ( 113)	247 ( 180)	208 ( 229)	192 ( 259)	159 ( 346)	188 ( 573)
60-64.....	171 ( 30)	226 ( 88)	196 ( 143)	164 ( 208)	146 ( 332)	148 ( 416)	125 ( 546)	130 (1,111)
65-69.....	184 ( 35)	198 ( 81)	149 ( 140)	124 ( 251)	115 ( 444)	115 ( 601)	104 ( 789)	102 (1,390)
70-74.....	200 ( 27)	140 ( 40)	151 ( 100)	135 ( 204)	115 ( 379)	108 ( 512)	106 ( 810)	95 (1,439)
75-79.....	143 ( 12)	160 ( 31)	98 ( 38)	121 ( 108)	111 ( 233)	104 ( 359)	100 ( 599)	91 (1,196)
80-84.....	* ( 4)	200 ( 16)	143 ( 26)	116 ( 48)	122 ( 119)	105 ( 172)	113 ( 364)	90 ( 701)
85-89.....	* ( 0)	* ( 3)	* ( 5)	167 ( 21)	139 ( 41)	128 ( 67)	125 ( 134)	104 ( 306)
90 and over.....	* ( 0)	* ( 2)	* ( 3)	* ( 0)	* ( 7)	217 ( 20)	124 ( 21)	103 ( 77)
65 and over.....	173% ( 78)	172% ( 173)	141% ( 312)	127% ( 632)	115% (1,223)	110% (1,731)	106% (2,717)	96% (5,109)
All.....	207% (167)	208% ( 363)	178% ( 626)	152% (1,093)	133% (1,914)	126% (2,537)	115% (3,738)	106% (6,880)

\* Less than ten deaths.

† For this exhibit only, the expected deaths for females are based on the Ga-1951 Female Table.

TABLE 1--Continued

ATTAINED AGES	GROUP C Regular (Nondisability) Male Pensioners, Retired at or after Age 65, of an Electric Utility Company						
	1935-39	1940-45	1946-51	1952-54	1955-57	1960-65	1966-70
	Males						
65-69.....	* ( 8)	107% ( 97)	96% (150)	125% (143)	108% (133)	116% ( 331)	105% ( 364)
70-74.....	135% ( 78)	136 (108)	109 (186)	123 (128)	111 (144)	131 ( 455)	104 ( 490)
75-79.....	117 ( 63)	118 (105)	129 (138)	112 (107)	131 (138)	118 ( 348)	97 ( 371)
80-84.....	124 ( 34)	126 ( 74)	126 ( 97)	113 ( 48)	91 ( 66)	105 ( 197)	93 ( 258)
85-89.....	163 ( 14)	156 ( 28)	101 ( 35)	95 ( 26)	102 ( 25)	104 ( 102)	89 ( 124)
90 and over.....	* ( 5)	* ( 5)	* ( 7)	* ( 9)	107 ( 16)	113 ( 22)	109 ( 64)
65 and over.....	129% (202)	123% (417)	111% (613)	117% (461)	111% (522)	119% (1,465)	100% (1,671)
All.....	129% (202)	123% (417)	111% (613)	117% (461)	111% (522)	119% (1,465)	100% (1,671)

NOTE.—Number of actual deaths corresponding to each mortality ratio is shown in parentheses.

\* Less than ten deaths.

TABLE 1—Continued

ATTAINED AGES	GROUP D Male Pensioners of a Manufacturing Company	
	1967-69 Salaried	1967-69 Hourly
65-69 .....	92% ( 92)	101% ( 235)
70-74 .....	81 (146)	101 ( 412)
75-79 .....	95 (194)	111 ( 516)
80-84 .....	73 (111)	105 ( 374)
85-89 .....	82 ( 62)	97 ( 154)
90 and over.....	144 ( 13)	89 ( 23)
65 and over.....	86% (618)	104% (1,714)
All .....	86% (618)	104% (1,714)

ATTAINED AGES	GROUP E Pensioners of an Oil Company		
	1962-64	1965-67	1968-70
	Males		
Under 55 .....	* ( 1)	* ( 0)	* ( 5)
55-59 .....	* ( 6)	* ( 6)	233% ( 17)
60-64 .....	112% ( 34)	108% ( 36)	117 ( 47)
65-69 .....	95 (138)	85 (132)	98 (151)
70-74 .....	93 (150)	89 (170)	87 (184)
75-79 .....	82 (104)	95 (160)	85 (174)
80-84 .....	62 ( 14)	103 ( 92)	82 (116)
85-90 .....	* ( 0)	* ( 1)	104 ( 35)
90 and over.....	* ( 0)	* ( 0)	* ( 0)
65 and over.....	89% (406)	91% (555)	88% (660)
All .....	91% (447)	92% (597)	92% (729)

\* Less than ten deaths.

TABLE 1—Continued

ATTAINED AGES	GROUP F Regular (Nondisability) Pensioners of a Chemical Manufacturing Company; Experience of Employees Retired at the Compulsory Retirement Age of 65						
	7/42-6/46	7/46-6/50	7/50-6/54	7/54-6/58	7/58-6/61	7/61-6/64	1966-70
	Salaried †						
65-69.....	141% (18)	82% (21)	121% (50)	95% (56)	82% (50)	90% (54)	81% (171)
70-74.....	171 (13)	103 (21)	107 (35)	106 (56)	98 (55)	99 (74)	83 (184)
75-79.....	* (7)	* (9)	88 (19)	101 (34)	82 (30)	90 (50)	91 (191)
80-84.....	* (0)	* (1)	* (5)	99 (18)	124 (28)	102 (29)	95 (124)
85-89.....	* (1)	* (1)	* (0)	* (1)	* (8)	164 (17)	86 (45)
90 and over.....	* (0)	* (0)	* (0)	* (0)	* (0)	* (2)	* (6)
65 and over.....	167% (39)	99% (53)	109% (109)	100% (165)	93% (171)	98% (226)	86% (720)
All.....	167% (39)	99% (53)	109% (109)	100% (165)	93% (171)	98% (226)	86% (720)
	Wage ‡						
65-69.....	104% (35)	138% (79)	121% (92)	103% (103)	103% (96)	94% (95)	95% (218)
70-74.....	87 (21)	115 (57)	115 (90)	127 (129)	102 (97)	108 (123)	100 (284)
75-79.....	* (4)	138 (35)	106 (52)	107 (86)	111 (87)	125 (120)	114 (295)
80-84.....	* (1)	* (9)	99 (18)	124 (50)	126 (58)	117 (73)	103 (175)
85-89.....	* (0)	* (1)	* (4)	121 (10)	152 (21)	83 (10)	114 (90)
90 and over.....	* (0)	* (0)	* (1)	* (1)	* (2)	* (4)	124 (26)
65 and over.....	88% (61)	128% (181)	114% (257)	114% (379)	110% (361)	109% (431)	105% (1,088)
All.....	88% (61)	128% (181)	114% (257)	114% (379)	110% (361)	109% (431)	105% (1,088)

NOTE.—Number of actual deaths corresponding to each mortality ratio is shown in parentheses.

\* Less than ten deaths.

† Approximately 18 per cent females.

‡ Approximately 5 per cent females.

TABLE 1—Continued

ATTAINED AGES	GROUP G Service Retirement Pensioners of Los Angeles City Fire and Police Pension Systems	
	1966-70	
	Males	
Under 55.....	100% ( 29)	
55-59.....	105 ( 22)	
60-64.....	123 ( 32)	
65-69.....	143 (134)	
70-74.....	103 (136)	
75-79.....	105 (109)	
80-84.....	86 ( 49)	
85-89.....	100 ( 22)	
90 and over.....	* ( 5)	
65 and over.....	110% (455)	
All.....	110% (538)	

ATTAINED AGES	GROUP H Regular Pensioners of a Midwest State Teachers Retirement System			
	7/63-6/67	7/67-6/70	7/63-6/67	7/67-6/70
	Males		Females	
65-69.....	80% ( 70)	124% (110)	112% ( 237)	122% ( 262)
70-74.....	81 ( 90)	73 ( 74)	71 ( 191)	86 ( 220)
75-79.....	86 ( 79)	89 ( 86)	87 ( 211)	98 ( 244)
80-84.....	71 ( 51)	100 ( 68)	104 ( 192)	92 ( 173)
85-89.....	95 ( 40)	79 ( 34)	112 ( 140)	109 ( 127)
90 and over...	107 ( 16)	74 ( 14)	124 ( 89)	126 ( 72)
65 and over...	83% (346)	93% (386)	96% (1,060)	101% (1,098)
All.....	83% (346)	93% (386)	96% (1,060)	101% (1,098)

\* Less than ten deaths.

TABLE 1—Continued

ATTAINED AGES	GROUP M   Service (Nondisability) Retirements of a Railroad; Normal Retirement at Age 65 with Approximately Actuarially Reduced Benefits Available upon Early Retirement between 60 and 65			
	1948-54	1955-59	1960-64	1965-69
60-64	* ( 4)	114% ( 18)	147% ( 33)	102% ( 25)
65-69	161% (302)	123 ( 456)	93 ( 414)	86 ( 352)
70-74	114 (374)	115 ( 620)	99 ( 858)	104 ( 841)
75-79	98 (166)	132 ( 450)	103 ( 856)	101 (1,055)
80-84	97 ( 35)	121 ( 145)	104 ( 478)	103 ( 838)
85 and over	* ( 0)	113 ( 27)	105 ( 156)	111 ( 430)
65 and over	122% (877)	122% (1,698)	100% (2,762)	101% (3,516)
All	122% (881)	121% (1,716)	101% (2,795)	101% (3,541)

ATTAINED AGES	GROUP N   Nondisability Retirements of the Hourly Employees of a Manufacturing Company, Normal Retirement at 65, Compulsory Retirement at 68, and Approximately Actuarially Reduced Benefits between 55 and 62			
	7/50-6/55	7/55-6/60	7/60-6/65	1/65-12/69
55-59				* ( 6)
60-64	* ( 4)	125% ( 55)	123% ( 51)	154% ( 131)
65-69	139% ( 40)	124 (244)	114 ( 260)	113 ( 279)
70-74	98 ( 40)	120 (267)	109 ( 362)	109 ( 398)
75-79	100 ( 30)	116 (150)	99 ( 298)	104 ( 395)
80-84	90 ( 13)	114 ( 71)	102 ( 168)	100 ( 282)
85-89	70 ( 2)	91 ( 15)	109 ( 62)	91 ( 101)
90 and over	* ( 0)	25 ( 1)	91 ( 15)	125 ( 32)
65 and over	107% (125)	119% (748)	106% (1,165)	105% (1,487)
All	109% (129)	119% (803)	107% (1,216)	108% (1,624)

NOTE.—Number of actual deaths corresponding to each mortality ratio is shown in parentheses.

\* Less than ten deaths.

|| Approximately 10 per cent females.



TABLE 1—Continued

ATTAINED AGES	GROUP O Regular (Nondisability) Retired Government Employees in Canada		
	1958-62	1963-66	1967-70
	Males		
Under 55 . . . . .	* ( 5)	* ( 0)	* ( 0)
55-59 . . . . .	* ( 3)	* ( 0)	* ( 0)
60-64 . . . . .	192% ( 230)	240% ( 212)	231% ( 312)
65-69 . . . . .	109 ( 997)	120 (1,090)	113 ( 983)
70-74 . . . . .	101 (1,007)	104 (1,354)	104 (1,580)
75-79 . . . . .	88 ( 621)	93 ( 904)	96 (1,377)
80-84 . . . . .	78 ( 344)	96 ( 537)	85 ( 756)
85-89 . . . . .	77 ( 148)	111 ( 276)	90 ( 335)
90 and over . . . . .	100 ( 81)	92 ( 98)	99 ( 140)
65 and over . . . . .	96% (3,258)	104% (4,259)	99% (5,171)
All . . . . .	100% (3,495)	107% (4,471)	102% (5,491)
Females			
Under 55 . . . . .	* ( 0)	* ( 0)	* ( 0)
55-59 . . . . .	* ( 1)	* ( 0)	* ( 0)
60-64 . . . . .	106% ( 18)	158% ( 34)	127% ( 46)
65-69 . . . . .	64 ( 52)	101 ( 114)	92 ( 156)
70-74 . . . . .	42 ( 37)	101 ( 136)	74 ( 156)
75-79 . . . . .	57 ( 29)	95 ( 87)	87 ( 143)
80-84 . . . . .	83 ( 25)	104 ( 47)	77 ( 79)
85-89 . . . . .	93 ( 13)	112 ( 26)	110 ( 40)
90 and over . . . . .	* ( 5)	* ( 9)	131 ( 20)
65 and over . . . . .	59% ( 161)	101% ( 419)	85% ( 594)
All . . . . .	62% ( 180)	104% ( 453)	87% ( 641)

ATTAINED AGES	GROUP P Service Retirements under a Bargained Plan of a Company Engaged in Heavy Manufacturing			
	1952-55	1956-60	1961-65	1966-70
	Males			
63-67 . . . . .	159% ( 125)	144% ( 397)	144% ( 626)	125% ( 957)
68-72 . . . . .	112 ( 602)	122 (1,469)	110 (1,605)	114 (1,557)
73-77 . . . . .	85 ( 296)	119 (1,137)	99 (1,569)	102 (1,855)
78-82 . . . . .	83 ( 125)	105 ( 475)	87 ( 874)	93 (1,487)
83-87 . . . . .	88 ( 31)	91 ( 135)	84 ( 295)	84 ( 590)
88 and over . . . . .	125 ( 11)	149 ( 35)	81 ( 70)	98 ( 161)
63 and over . . . . .	103% (1,190)	119% (3,648)	102% (5,039)	103% (6,607)
All . . . . .	103% (1,190)	119% (3,648)	102% (5,039)	103% (6,607)

\* Less than ten deaths.

Group	Identification
F	Chemical manufacturing company (males, salaried and hourly)
G	Los Angeles fire and police (males)
H	Midwest state teachers (males and females)
M	Railroad (males)
N	Manufacturing company (males)
O	Canadian government employees (males and females)
P	Heavy manufacturing company (males)

Table 1 reports the ratio of actual to expected mortality, in five-year age groups, for each of the twelve groups studied. In each case, the data have also been broken down into groups of calendar years of experience to bring out the secular trends of mortality.

Table 2 is a summary of composite mortality ratios, for age 65 and over, charted according to the calendar-year periods for which data were separately available. This table also shows, for comparison, the intercompany group annuity mortality experience relating to males retired at age 65 or over.

For practically all groups that were reported in the 1966 report, the experience since that time has shown improvements ranging from about 3 per cent to 9 per cent. For the largest group studied, Group A, the over-all ratio of actual deaths to expected has shown a steady decline of about 3 per cent in each of the last two studies. This has brought the ratio of actual to expected down to 103 per cent in Group A and provides further evidence that the mortality margin contained in the *Ga-1951* Table has about disappeared for those aged 65 and over.

In the 1966 report it was noted that the improvement in female pensioner mortality appeared to be slowing down and that for Group A the over-all mortality ratio remained constant. In this study, however, the female mortality for Group A showed a decline at all age groups and an over-all decline of about 6 per cent.

The volume of experience covered by Group A is comparable in size to the total volume of experience covered by the intercompany group annuity mortality experience. This fact suggested the further comparison shown in Table 3. Table 3 indicates a significant degree of consistency between the intercompany group annuity and Group A experiences, both in the over-all ratios and in the secular trend of these ratios.

Since the 1971 Group Annuity Mortality Table was available before the publication of this report, expected deaths were also determined on the basis of this table, for males with no age setback and for females with a five-year setback. The ratios of actual to expected deaths by this table for most of the groups that appeared in Table 1 are shown in Appendix Table A. The comparison of the ratios in Appendix Table A with those from Table 2 for the latest period of study is shown in Appendix Table B.

TABLE 2

GROUP	NUMBER OF DEATHS INCLUDED	PERCENTAGE OF ACTUAL DEATHS TO EXPECTED BY GQ-1951 TABLE (WITHOUT PROJECTION) FOR PERIOD INDICATED MALES* AGES 65 AND OVER																																						
		Year of Exposure																																						
		32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70
Group annuity	198,523																																							
A	229,646																																							
B	26,546																																							
C	5,351																																							
D Salaried	618																																							
D Hourly	1,714																																							
E	1,621																																							
F* Salaried	1,483																																							
F* Wage	2,758																																							
G	455																																							
H	732																																							
M*	8,853																																							
N*	3,525																																							
O	12,688																																							
P†	16,484																																							

\* Includes some females (see Table 1).

† Includes experience for ages 63 and over.



The increases in the ratios of the probability of death under the Ga-1951 Table to those under the 1971 GAM Table for ages 65-80 are as shown in the accompanying tabulation.

Age	Percentage Increase	Age	Percentage Increase
65.....	14.9%	75.....	12.9%
66.....	15.0	76.....	13.8
67.....	14.4	77.....	14.0
68.....	13.0	78.....	13.9
69.....	10.8	79.....	14.1
70.....	8.9	80.....	14.0
71.....	7.9		
72.....	8.3		
73.....	9.7		
74.....	11.4		

Even though the percentage increases in the two mortality tables vary over quite a wide range, the percentage increases in Appendix Table B for all groups fall within a fairly narrow range (for males, 11.4-12.7 per cent; for females, 12.9-13.9 per cent). This would seem to indi-

TABLE 3  
COMPARISON OF MORTALITY EXPERIENCE

	Intercompany Group Annuity (Retirements on or after Normal Retirement Date)	Group A (Ages 65 and Over)
Males		
1941-45.....	124% ( 5,951)	119% (13,264)
1946-50.....	114 (12,104)	113 (18,606)
1951-55.....	111 (24,371)	109 (27,333)
1956-60.....	107 (41,901)	109 (41,338)
1961-64.....	107 (50,084)	106 (46,151)
1965-68.....	104 (64,112)	103 (79,820)
Females		
1941-45.....	135% ( 497)	124% ( 1,020)
1946-50.....	109 ( 918)	121 ( 1,816)
1951-55.....	100 ( 1,996)	109 ( 3,033)
1956-60.....	94 ( 3,943)	97 ( 5,181)
1961-64.....	95 ( 5,703)	97 ( 6,673)
1965-68.....	89 ( 8,335)	91 (12,731)

NOTE.—Number of actual deaths corresponding to each mortality ratio is shown in parentheses.

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cate that the average weighted attained ages of retired employees in the groups over age 65 are fairly close. For three tested groups the actual weighted attained ages for retired employees over age 65 were as follows:

Group	Males	Females
A.....	72.9	72.4
B.....	71.6	71.0
O.....	72.9	71.3

APPENDIX

TABLE A

MORTALITY OF PENSIONERS UNDER SELF-ADMINISTERED RETIREMENT PLANS  
 RATIO OF ACTUAL DEATHS TO EXPECTED  
 ACCORDING TO THE 1971 GROUP ANNUITY MORTALITY TABLE  
 (WITHOUT PROJECTION)

Attained Ages	Group A 7:64-6/69	Group B 1966-70	Group C 1966-70	Group D 1967-69
	Males	Males	Males	Males Salaried
Under 55.....	114% ( 130)	871% ( 25)		
55-59.....	130 ( 1,105)	444 ( 247)		
60-64.....	143 ( 5,038)	217 ( 1,556)		
65-69.....	128 (13,538)	132 (2,313)	119% ( 364)	104% ( 92)
70-74.....	112 (21,983)	123 (1,980)	113 ( 490)	89 ( 146)
75-79.....	113 (18,294)	126 (1,710)	111 ( 371)	108 ( 194)
80-84.....	110 (11,401)	113 (1,176)	106 ( 258)	83 ( 111)
85-89.....	113 ( 5,843)	101 ( 516)	100 ( 124)	93 ( 62)
90 and over.....	124 ( 2,488)	102 ( 138)	121 ( 64)	161 ( 13)
65 and over.....	115% (73,547)	122% (7,833)	112% (1,671)	96% ( 618)
All.....	117% (79,820)	134% (9,661)	112% (1,671)	96% ( 618)
	Females	Females		Males, Hourly
Under 55.....	128% ( 18)	425% ( 87)		
55-59.....	104 ( 109)	168 ( 573)		
60-64.....	100 ( 792)	131 (1,111)		
65-69.....	98 ( 2,316)	108 (1,390)		114% ( 235)
70-74.....	89 ( 3,186)	112 (1,439)		110 ( 412)
75-79.....	98 ( 3,083)	116 (1,196)		127 ( 516)
80-84.....	119 ( 2,293)	121 ( 701)		120 ( 374)
85-89.....	127 ( 1,251)	132 ( 306)		109 ( 154)
90 and over.....	145 ( 602)	132 ( 77)		100 ( 23)
65 and over.....	101% (12,731)	114% (5,109)		117% (1,714)
All.....	101% (13,650)	121% (6,880)		117% (1,714)

NOTE.—Number of actual deaths corresponding to each mortality ratio is shown in parentheses.

TABLE A—Continued

ATTAINED AGES	GROUP E			GROUP F 1966-70	GROUP G 1966-70
	1962-64	1965-67	1968-70		
	Males	Males	Males	Salaried†	Males
Under 55 . . .	* ( 1)	* ( 0)	* ( 5)	* ( 0)	121% ( 29)
55-59 . . . . .	* ( 6)	* ( 6)	285% ( 17)	* ( 0)	129 ( 22)
60-64 . . . . .	130% ( 34)	125% ( 36)	135 ( 47)	120% ( 57)	145 ( 32)
65-69 . . . . .	107 (138)	96 (132)	111 (151)	92 ( 171)	163 (134)
70-74 . . . . .	102 (150)	97 (170)	95 (184)	91 ( 184)	111 (136)
75-79 . . . . .	93 (104)	108 (160)	97 (174)	103 ( 190)	120 (109)
80-84 . . . . .	71 ( 14)	117 ( 92)	93 (116)	108 ( 124)	98 ( 49)
85-89 . . . . .	* ( 0)	* ( 1)	118 ( 35)	97 ( 45)	116 ( 22)
90 and over	* ( 0)	* ( 0)	* ( 0)	* ( 6)	* ( 5)
65 and over	100% (406)	102% (555)	99% (660)	97% ( 720)	124% (455)
All . . . . .	102% (447)	104% (597)	103% (729)	99% ( 777)	128% (538)
				Hourly ‡	
Under 55 . . .				* ( 0)	
55-59 . . . . .				* ( 0)	
60-64 . . . . .				101% ( 44)	
65-69 . . . . .				108 ( 218)	
70-74 . . . . .				109 ( 284)	
75-79 . . . . .				130 ( 295)	
80-84 . . . . .				117 ( 175)	
85-89 . . . . .				128 ( 90)	
90 and over				139 ( 26)	
65 and over				117% (1,088)	
All . . . . .				117% (1,132)	

\* Less than ten deaths.  
 † Approximately 18 per cent females.  
 ‡ Approximately 5 per cent females.

TABLE A—Continued

ATTAINED AGES	GROUP H		GROUP O	
	7/63-6/67	7/67-6/70	1963-66	1967-70
	Males	Males	Males	Males
Under 55.....			* ( 0)	* ( 1)
55-59.....			* ( 0)	* ( 7)
60-64.....			278% ( 212)	267% ( 312)
65-69.....	92% ( 70)	143% ( 110)	135 (1,090)	129 ( 983)
70-74.....	89 ( 90)	80 ( 74)	114 (1,354)	114 (1,580)
75-79.....	99 ( 79)	101 ( 86)	105 ( 904)	109 (1,377)
80-84.....	81 ( 51)	113 ( 68)	109 ( 537)	96 ( 756)
85-89.....	108 ( 40)	87 ( 34)	125 ( 276)	101 ( 335)
90 and over.....	114 ( 16)	82 ( 14)	103 ( 98)	110 ( 140)
65 and over.....	93% ( 346)	104% ( 386)	116% (4,259)	111% (5,171)
All.....	93% ( 346)	104% ( 386)	120% (4,471)	115% (5,491)
	Females	Females	Females	Females
Under 55.....			* ( 0)	* ( 1)
55-59.....			* ( 0)	* ( 0)
60-64.....			192% ( 34)	155% ( 46)
65-69.....	130% ( 237)	141% ( 262)	117 ( 114)	106 ( 156)
70-74.....	81 ( 191)	98 ( 220)	115 ( 136)	84 ( 156)
75-79.....	95 ( 211)	107 ( 244)	103 ( 87)	95 ( 143)
80-84.....	119 ( 192)	105 ( 173)	118 ( 47)	88 ( 79)
85-89.....	127 ( 140)	123 ( 127)	127 ( 26)	125 ( 40)
90 and over.....	139 ( 89)	141 ( 72)	* ( 9)	147 ( 20)
65 and over.....	109% (1,060)	115% (1,098)	114% ( 419)	96% ( 594)
All.....	109% (1,060)	115% (1,098)	118% ( 453)	99% ( 641)

NOTE.—Number of actual deaths corresponding to each mortality ratio is shown in parentheses.  
 \* Less than ten deaths.



TABLE B  
 PERCENTAGE OF ACTUAL DEATHS TO EXPECTED BY  
 Ga-1951 TABLE (WITHOUT PROJECTION) AND BY  
 1971 GAM TABLE (WITHOUT PROJECTION) FOR THE PERIOD INDICATED

Group	Years of Exposure	By Ga-1951	By 1971 GAM	Per Cent Increase
Males, Ages 65 and Over				
A.....	7/64-6/69	103%	115%	11.7%
B.....	1966-70	108	122	13.0
C.....	1967-70	100	112	12.0
D Salaried.....	1967-69	86	96	11.6
D Hourly.....	1967-69	104	117	12.5
E.....	1968-70	88	99	12.5
F Salaried.....	1966-70	86	97	12.8
F Hourly.....	1966-70	105	117	11.4
G.....	1966-70	110	124	12.7
H.....	7/67-6/70	93	104	11.8
O.....	1967-70	99	111	12.1
Females, Ages 65 and Over				
A.....	7/64-6/69	89%	101%	13.5%
B.....	1966-70	96*	114	18.8
H.....	7/67-6/70	101	115	13.9
O.....	1967-70	85	96	12.9

\* Based on Ga-1951 Female Table.

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