

**REPORT OF SPECIAL COMMITTEE ON EXPERIENCE
UNDER SELF-ADMINISTERED
RETIREMENT PLANS**

THIS is the first report of the special Committee appointed to study experience under self-administered retirement plans. While the Committee's assignment was sufficiently broad to admit the collection and analysis of experience data on any element (except interest) entering into the determination of the costs of self-administered retirement plans, including mortality, turnover, disability, salary increases, rates of retirement, and perhaps others, it has been necessary to limit the scope of this report to one item—mortality among retired lives.

The regular annual reports of the Society's committees on mortality and morbidity have been possible primarily because of a long-standing and well-established practice among the major insurance companies of exchanging and pooling the information essential to these studies, systematically and as a part of their regular routines. Unfortunately, no such practice exists among employers maintaining self-administered retirement plans, nor among the consulting actuaries of such employers. Your Committee feels that the systematic, cooperative compilation and analysis of data on various experience factors relating to self-administered retirement plans can serve a very useful purpose. It is hoped, therefore, that the publication of this report will demonstrate the potential value of joint experience studies under self-administered retirement plans with sufficient clarity to encourage employers and their actuaries to volunteer their cooperation in connection with any future studies of this nature that may be made.

The experience herein reported covers mortality among retired employees under five large and well-established self-administered retirement plans. In each case more than 1,000 deaths are included in the experience, and in one over 40,000, a larger number than are included in the combined group annuity mortality experience.

The following are the essential facts regarding the bases of the experience analysis:

- a) Primarily to facilitate comparisons with other studies, especially the group annuity experience reported by the Committee on Group Mortality and Morbidity, expected deaths have been determined in accordance with the 1937 Standard Annuity Mortality Table.

- b) So far as possible the experience has been limited to regular ("service") retirements, as distinguished from retirements due to disability occurring prior to the normal retirement age. It is likely, however, that because of variations in policies and definitions, some disability retirements are included in the experience (as is, of course, true in the case of the group annuity mortality experience).
- c) The experience is reported only by numbers of lives, there being available little or no experience by amounts.
- d) Experience of the five groups has not been combined. It was felt that each group is large enough to produce a significant experience by itself, and there was considerable doubt whether the experiences were sufficiently homogeneous to justify combining them.

Table 1 reports in five sections the ratios of actual to expected mortality for each of the five groups, subdivided into calendar year periods so as to bring out the secular trends.

Table 2 compares the mortality ratios of the 1946-1950 Group Annuity Mortality reports with corresponding ratios under the five self-administered plans for the most closely corresponding periods.

To assist in the interpretation of the figures, the following information is provided with respect to each of the groups:

Group A consists of retired government employees, experience of "nondisability annuitants" only being included.

Group B consists of the service pensioners of a group of public utility companies covered under a uniform plan. Retirement is compulsory at age 65, and service pensioners include employees retired for disability if eligible for a service pension.

Group C consists of the regular male pensioners of an electric utility company.

This company has for some years maintained a compulsory retirement age of 65, and has made a rather careful distinction between disability and regular pensions because of differences in available benefits.

Group D consists of the male nondisability pensioners of a large company engaged in heavy manufacturing. The experience arose under a pension fund which was "frozen" some years ago, and has therefore produced pensions which have been gradually diminishing in amount. In general, no compulsory retirement age has been enforced.

Group E consists of the male regular pensioners of a large company in the electrical manufacturing industry. The experience is limited to the period since a major revision in both plan and retirement policy was made, and the company has been enforcing compulsory retirement at age 65. The experience is for normal retirements only.

In each case both salaried and hourly paid employees are included, but only in the case of Groups D and E is there any significant proportion of retired factory workers.

TABLE 1
PENSIONER MORTALITY EXPERIENCE BY CALENDAR YEAR PERIODS
FIVE SELF-ADMINISTERED RETIREMENT PLANS
RATIOS OF ACTUAL DEATHS TO EXPECTED ACCORDING
TO 1937 STANDARD ANNUITY MORTALITY TABLE

| ATTAINED AGES | GROUP A | | |
|---------------|----------------|----------------|----------------|
| | 7/1/35—6/30/40 | 7/1/40—6/30/45 | 7/1/45—6/30/50 |
| | MALES | | |
| Under 55 | 108% (43) | * (2) | * (3) |
| 55-59 | 123 (252) | 110% (92) | 99% (346) |
| 60-64 | 106 (885) | 114 (942) | 126 (1940) |
| 65-69 | 109 (2384) | 109 (2887) | 115 (3062) |
| 70-74 | 123 (2851) | 117 (4020) | 110 (5489) |
| 75-79 | 133 (2316) | 126 (3253) | 116 (4588) |
| 80-84 | 146 (1285) | 137 (2130) | 127 (2926) |
| 85-89 | 132 (406) | 138 (762) | 127 (1269) |
| 90 and over | 147 (168) | 130 (212) | 136 (372) |
| All | 123% (10587) | 121% (14300) | 117% (20889) |
| | FEMALES | | |
| Under 55 | * (1) | * (0) | |
| 55-59 | * (8) | * (8) | 55% (16) |
| 60-64 | 92% (23) | 96% (43) | 82 (125) |
| 65-69 | 139 (126) | 96 (150) | 107 (364) |
| 70-74 | 113 (170) | 93 (266) | 97 (480) |
| 75-79 | 159 (189) | 124 (288) | 113 (448) |
| 80-84 | 179 (116) | 161 (206) | 143 (342) |
| 85-89 | 216 (67) | 167 (82) | 145 (136) |
| 90 and over | 140 (14) | 175 (28) | 139 (46) |
| All | 142% (714) | 116% (1071) | 110% (1957) |

* Less than 10 deaths.

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

TABLE 1—Continued

| ATTAINED AGES | GROUP B | | | |
|------------------|---------------------|---------------------|---------------------|---------------------|
| | 1/1/33— 12/31/37 | 1/1/38— 12/31/42 | 1/1/43— 12/31/47 | 1/1/48— 12/31/52 |
| | MALES | | | |
| Under 55..... | 200% (20) | 382% (34) | 417% (33) | 513% (39) |
| 55-59..... | 195 (100) | 200 (117) | 296 (155) | 263 (136) |
| 60-64..... | 151 (206) | 158 (308) | 160 (379) | 171 (475) |
| 65-69..... | 141 (259) | 117 (389) | 119 (681) | 113 (990) |
| 70-74..... | 141 (184) | 133 (279) | 128 (487) | 112 (739) |
| 75-79..... | 180 (128) | 152 (180) | 122 (257) | 124 (471) |
| 80-84..... | 157 (45) | 142 (70) | 155 (137) | 119 (201) |
| 85-89..... | 154 (12) | 128 (23) | 99 (29) | 131 (73) |
| 90 and over..... | * (5) | * (3) | 138 (13) | 122 (21) |
| All..... | 154% (959) | 141% (1403) | 137% (2171) | 126% (3145) |
| | FEMALES | | | |
| Under 55..... | 193% (21) | 194% (38) | 190% (58) | 152% (73) |
| 55-59..... | 160 (38) | 134 (64) | 143 (113) | 132 (180) |
| 60-64..... | 109 (30) | 144 (88) | 125 (143) | 104 (208) |
| 65-69..... | 135 (35) | 144 (81) | 109 (140) | 90 (251) |
| 70-74..... | 182 (27) | 131 (40) | 139 (100) | 125 (204) |
| 75-79..... | 162 (12) | 181 (31) | 112 (38) | 138 (108) |
| 80-84..... | * (4) | 254 (16) | 178 (26) | 146 (48) |
| 85-89..... | * (0) | * (3) | * (5) | 216 (21) |
| 90 and over..... | * (0) | * (2) | * (3) | * (0) |
| All..... | 147% (167) | 151% (363) | 131% (626) | 116% (1093) |

TABLE 1—Continued

| ATTAINED AGES | GROUP C—MALES | | |
|------------------|-----------------|-----------------|-----------------|
| | 1/1/35—12/31/39 | 1/1/40—12/31/45 | 1/1/46—12/31/51 |
| Under 55 | | | |
| 55-59 | | | |
| 60-64 | | | |
| 65-69 | * (8) | 97% (97) | 86% (150) |
| 70-74 | 133% (78) | 133 (108) | 107 (186) |
| 75-79 | 125 (63) | 126 (105) | 138 (138) |
| 80-84 | 145 (34) | 147 (74) | 147 (97) |
| 85-89 | 189 (14) | 183 (28) | 117 (35) |
| 90 and over | * (5) | * (5) | * (7) |
| All | 136% (202) | 124% (417) | 111% (613) |
| | GROUP D—MALES | | |
| | 1/1/38—12/31/39 | 1/1/40—12/31/44 | 1/1/45—6/30/50 |
| Under 55 | * (0) | * (0) | * (0) |
| 55-59 | * (0) | * (4) | 960% (20) |
| 60-64 | 79% (14) | 103% (37) | 191 (60) |
| 65-69 | 93 (37) | 131 (148) | 111 (164) |
| 70-74 | 112 (61) | 142 (198) | 89 (164) |
| 75-79 | 146 (74) | 128 (177) | 127 (215) |
| 80-84 | 155 (52) | 134 (126) | 128 (161) |
| 85-89 | 148 (24) | 97 (49) | 142 (91) |
| 90 and over | * (4) | 110 (24) | 149 (44) |
| All | 118% (266) | 128% (763) | 122% (919) |
| | GROUP E—MALES | | |
| | 9/1/46—12/31/48 | 1/1/49—12/31/51 | |
| 65-69 | 96% (207) | 93% (346) | |
| 70-74 | 105 (189) | 101 (295) | |
| 75-79 | 123 (142) | 113 (219) | |
| 80-84 | 127 (76) | 116 (123) | |
| 85-89 | 121 (25) | 134 (42) | |
| 90 and over | * (0) | * (8) | |
| All | 108% (639) | 103% (1033) | |

* Less than 10 deaths.

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

The following general observations are offered to assist in the interpretation of the experience presented:

- a) The secular improvements in mortality are evident at nearly all points, consistent with the findings of Jenkins and Lew in *TSA I*, 369, and Peterson in *TSA IV*, 246. While apparent improvements in mortality of this type may result from gradual changes in retirement policies (e.g., a policy tending to classify an increasing proportion of borderline cases as "disability" retire-

TABLE 2
RECENT PENSIONER MORTALITY EXPERIENCE—MALES
GROUP ANNUITIES AND SELF-ADMINISTERED PENSION PLANS

| EXPERIENCE: | GROUP ANNUITY "NORMAL" | GROUP ANNUITY "EARLY" | GROUP A | GROUP B | GROUP C | GROUP D | GROUP E |
|-----------------------|-------------------------------------|-----------------------|----------------|-----------------|-----------------|----------------|-----------------|
| Period: | 1946-50 | 1946-50 | 7/1/45-6/30/50 | 1/1/43-12/31/52 | 1/1/46-12/31/51 | 1/1/45-6/30/50 | 9/1/46-12/31/51 |
| Total Deaths: | 11,837 | 3,477 | 20,889 | 5,316 | 613 | 919 | 1,672 |
| Attained Ages | Ratios of Actual to Expected Deaths | | | | | | |
| Under 55..... | * | 312% | * | 465% | | * | |
| 55-59..... | 152% | 248 | 99% | 280 | | 960% | |
| 60-64..... | 96 | 197 | 126 | 166 | | 191 | |
| 65-69..... | 102 | 149 | 115 | 116 | 86% | 111 | 94% |
| 70-74..... | 112 | 136 | 110 | 118 | 107 | 89 | 102 |
| 75-79..... | 119 | 137 | 116 | 123 | 138 | 127 | 117 |
| 80-84..... | 137 | 113 | 127 | 131 | 147 | 128 | 120 |
| 85-89..... | 124 | * | 127 | 120 | 117 | 142 | 129 |
| 90 and over..... | 127 | * | 136 | 128 | * | 149 | 110 |
| All Ages..... | 109% | 174% | 117% | 130% | 111% | 122% | 105% |
| Ages 65 and over..... | 110% | 142% | 116% | 119% | 111% | 117% | 105% |

* Less than 10 deaths.

NOTE.—Group Annuity Experience from pages 111-12 of *TSA 1951 Reports*, Table III ("Normal") and Table IV ("Early"). Actual attained age groups of group experience were 1 year older, i.e., under 56, 56-60, etc.

ments, thus removing them from the "service pensioner" experience), it is not felt that such changes have been an important factor in any of the experiences covered by this report. On the contrary, wherever there has been any change in policy it has probably been toward a stricter definition of disability, which would tend to obscure, or even reverse, the secular trend.

- b) The experiences which include ages below 65 (Groups A, B, and D) show generally high mortality ratios at the lower ages. This is indicative of the gen-

eral tendency of employees in good health to remain in active service until they have reached the point where no further increase in pension is available (generally the "normal retirement age"). The group annuity experience shows this tendency clearly, by separating the "early" and "normal" retirements, but it was not feasible to make a corresponding separation for any of the experiences here reported.

- c) Groups C and E, the only groups where experience was limited to employees retiring at a compulsory normal retirement age of 65, both show an experience equal to or better than the group annuity experience for normal retirements. This comparison is considered significant, as the two groups mentioned are those for which the conditions correspond most closely with conditions governing the operation of a group annuity contract.

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