

**REPORT OF THE COMMITTEE ON MORTALITY UNDER
ORDINARY INSURANCES AND ANNUITIES**

**A. MORTALITY BETWEEN 1948 AND 1949 ANNIVERSARIES
UNDER STANDARD "ORDINARY" INSURANCE ISSUES**

In continuance of the series of studies made annually since 1934, the present report covers the mortality experience observed between 1948 and 1949 policy anniversaries. In addition there are being presented in Section B of this report two new basic mortality tables derived from the combined experience of the contributing companies between 1946 and 1949 policy anniversaries.

As in the previous years sixteen life insurance companies contributed their data for the additional year of experience between 1948 and 1949 anniversaries. The study covers the following subjects:

1. Mortality during the first fifteen years of insurance under standard, medically examined, "Ordinary" insurances.
2. Mortality during the sixteenth and later policy years combined under standard "Ordinary" insurances.

The names of the contributing companies and their proportionate contributions to the total exposures in the current study are set forth in Table 1.

**EXPERIENCE IN THE FIRST FIFTEEN YEARS OF INSURANCE
ISSUES OF 1934 TO 1948**

The total exposures amounted to \$40,006,417,000 while death losses were \$142,318,000. The actual claims were related to the expected by the 1925-1939 Basic Table published in *TASA XLII*, 182. Table 2 summarizes the results first by ages at entry for all years of issue combined and second by year of issue for all ages combined. Table 3 shows the data for each year of issue subdivided by age at entry. In Table 4 the mortality ratios of the current experience are compared with those of the last seven years after excluding war deaths prior to the 1946 anniversaries. This comparison has been made by age at entry and by policy duration. An additional column has been added to show ratios for the current year in relation to the 1946-1949 Select Basic Table, which is described later in the report.

TABLE 1

| COMPANY | PROPORTION OF TOTAL EXPOSURES | |
|---------------------------|----------------------------------|-----------------------------------|
| | First 15 Policy Years | 16th and Later Policy Years |
| Metropolitan..... | 27.1% | 25.6% |
| Prudential..... | 14.4 | 11.2 |
| New York Life..... | 11.1 | |
| Northwestern Mutual..... | 8.6 | 10.8 |
| Equitable (N.Y.)..... | 8.0 | 12.8 |
| Mutual Life (N.Y.)..... | 5.0 | 7.4 |
| John Hancock..... | 4.2 | 3.5 |
| Massachusetts Mutual..... | 3.6 | 5.3 |
| Travelers..... | 3.4 | 4.8 |
| Penn Mutual..... | 3.2 | 3.8 |
| Aetna..... | 2.6 | 3.4 |
| Connecticut Mutual..... | 2.4 | 2.1 |
| Mutual Benefit..... | 1.9 | 4.0 |
| Provident Mutual..... | 1.8 | 2.4 |
| Sun Life (Canada)..... | 1.4 | 1.8 |
| Connecticut General..... | 1.3 | 1.1 |
| Total..... | 100.0% | 100.0% |

TABLE 2

EXPERIENCE BETWEEN ANNIVERSARIES IN 1948 AND 1949 ON
ISSUES OF 1934 TO 1948—POLICY YEARS 1 TO 15
(EXPECTED DEATHS BY BASIC TABLE 1925-1939)
UNIT \$1,000

ALL POLICY YEARS COMBINED

| Ages at Issue | Exposed to Risk | Actual Deaths | Expected Deaths | Ratio |
|------------------|-----------------|---------------|-----------------|-------|
| 10-14..... | \$ 1,183,783 | \$ 1,010 | \$ 1,931 | 52% |
| 15-19..... | 2,110,086 | 2,187 | 3,846 | 57 |
| 20-24..... | 4,471,165 | 4,380 | 8,596 | 51 |
| 25-29..... | 6,394,733 | 8,974 | 15,600 | 58 |
| 30-34..... | 7,407,008 | 14,514 | 23,922 | 61 |
| 35-39..... | 6,961,954 | 22,165 | 34,094 | 65 |
| 40-44..... | 5,434,929 | 26,035 | 41,267 | 63 |
| 45-49..... | 3,352,590 | 24,575 | 39,369 | 62 |
| 50-54..... | 1,760,998 | 20,363 | 30,764 | 66 |
| 55-59..... | 697,757 | 11,752 | 18,222 | 64 |
| 60-64..... | 196,914 | 5,213 | 7,884 | 66 |
| 65 and over..... | 34,500 | 1,150 | 1,883 | 61 |
| All..... | \$40,006,417 | \$142,318 | \$227,378 | 63% |

ALL AGES COMBINED

| Year of Issue | Exposed to Risk | Actual Deaths | Expected Deaths | Ratio |
|---------------|-----------------|---------------|-----------------|-------|
| 1934..... | \$ 1,828,998 | \$ 14,308 | \$ 19,014 | 75% |
| 1935..... | 1,847,262 | 12,566 | 17,865 | 70 |
| 1936..... | 2,066,416 | 12,832 | 18,300 | 70 |
| 1937..... | 2,226,783 | 12,709 | 17,987 | 71 |
| 1938..... | 2,146,301 | 10,653 | 15,971 | 67 |
| 1939..... | 1,863,362 | 8,194 | 12,594 | 65 |
| 1940..... | 2,120,487 | 8,382 | 13,006 | 64 |
| 1941..... | 2,642,667 | 9,899 | 15,062 | 66 |
| 1942..... | 1,910,827 | 6,346 | 11,216 | 57 |
| 1943..... | 2,234,838 | 8,225 | 13,573 | 61 |
| 1944..... | 2,609,000 | 8,612 | 14,439 | 60 |
| 1945..... | 2,949,320 | 7,927 | 14,234 | 56 |
| 1946..... | 4,531,263 | 8,980 | 17,379 | 52 |
| 1947..... | 4,557,851 | 7,343 | 15,958 | 46 |
| 1948..... | 4,471,042 | 5,342 | 10,780 | 50 |
| All..... | \$40,006,417 | \$142,318 | \$227,378 | 63% |

TABLE 3
EXPERIENCE BETWEEN ANNIVERSARIES IN 1948 AND 1949
ON INDIVIDUAL YEARS OF ISSUE 1934 TO 1948
(EXPECTED DEATHS BY BASIC TABLE 1925-1939)
UNIT \$1,000

| Issue Year | Policy Year | Ages at Issue | Exposed to Risk | Actual Deaths | Expected Deaths | Ratio |
|----------------|-------------|---------------|-----------------|---------------|-----------------|-------|
| 1934 | 15 | 10-14 | \$ 86,476 | \$ 93 | \$ 186 | 50% |
| | | 15-19 | 117,381 | 150 | 215 | 70 |
| | | 20-24 | 233,655 | 360 | 533 | 68 |
| | | 25-29 | 316,326 | 805 | 1,553 | 52 |
| | | 30-34 | 324,516 | 1,790 | 1,908 | 94 |
| | | 35-39 | 291,681 | 2,387 | 2,993 | 80 |
| | | 40-44 | 225,607 | 2,862 | 3,695 | 77 |
| | | 45-49 | 131,842 | 2,298 | 3,175 | 72 |
| | | 50-54 | 63,485 | 1,991 | 2,308 | 86 |
| | | 55-59 | 28,273 | 1,051 | 1,500 | 70 |
| | | 60-64 | 8,798 | 421 | 821 | 51 |
| | 65 and over | 958 | 100 | 127 | 79 | |
| | All | \$1,828,998 | \$14,308 | \$19,014 | 75% | |
| 1935 | 14 | 10-14 | \$ 76,308 | \$ 72 | \$ 168 | 43% |
| | | 15-19 | 116,961 | 125 | 216 | 58 |
| | | 20-24 | 240,603 | 372 | 527 | 71 |
| | | 25-29 | 323,277 | 1,094 | 1,332 | 82 |
| | | 30-34 | 330,503 | 1,231 | 1,821 | 68 |
| | | 35-39 | 296,572 | 2,093 | 2,666 | 79 |
| | | 40-44 | 223,360 | 2,221 | 3,337 | 67 |
| | | 45-49 | 135,270 | 2,026 | 3,110 | 65 |
| | | 50-54 | 66,005 | 1,583 | 2,326 | 68 |
| | | 55-59 | 27,874 | 1,004 | 1,462 | 69 |
| | | 60-64 | 9,203 | 613 | 744 | 82 |
| | 65 and over | 1,326 | 132 | 156 | 85 | |
| | All | \$1,847,262 | \$12,566 | \$17,865 | 70% | |
| 1936 | 13 | 10-14 | \$ 82,201 | \$ 91 | \$ 178 | 51% |
| | | 15-19 | 131,487 | 155 | 247 | 63 |
| | | 20-24 | 274,706 | 357 | 591 | 60 |
| | | 25-29 | 360,113 | 835 | 1,260 | 66 |
| | | 30-34 | 364,879 | 1,294 | 1,886 | 69 |
| | | 35-39 | 327,654 | 2,068 | 2,644 | 78 |
| | | 40-44 | 262,693 | 2,785 | 3,578 | 78 |
| | | 45-49 | 149,892 | 2,092 | 3,239 | 65 |
| | | 50-54 | 72,577 | 1,743 | 2,383 | 73 |
| | | 55-59 | 29,429 | 883 | 1,474 | 60 |
| | | 60-64 | 9,218 | 484 | 658 | 74 |
| | 65 and over | 1,567 | 45 | 162 | 28 | |
| | All | \$2,066,416 | \$12,832 | \$18,300 | 70% | |

TABLE 3—Continued

| Issue Year | Policy Year | Ages at Issue | Exposed to Risk | Actual Deaths | Expected Deaths | Ratio |
|------------|-------------|---------------|-----------------|---------------|-----------------|----------|
| 1937..... | 12 | 10-14 | \$ 89,092 | \$ 117 | \$ 192 | 61% |
| | | 15-19 | 144,218 | 177 | 273 | 65 |
| | | 20-24 | 313,393 | 334 | 664 | 50 |
| | | 25-29 | 390,931 | 638 | 1,200 | 53 |
| | | 30-34 | 398,162 | 1,368 | 1,919 | 71 |
| | | 35-39 | 338,480 | 2,070 | 2,515 | 82 |
| | | 40-44 | 264,662 | 2,312 | 3,274 | 71 |
| | | 45-49 | 161,480 | 2,430 | 3,244 | 75 |
| | | 50-54 | 81,442 | 1,755 | 2,392 | 73 |
| | | 55-59 | 33,715 | 1,033 | 1,555 | 66 |
| | | 60-64 | 9,646 | 368 | 618 | 60 |
| | | 65 and over | 1,562 | 107 | 141 | 76 |
| | | | All | \$2,226,783 | \$12,709 | \$17,987 |
| 1938..... | 11 | 10-14 | \$ 89,206 | \$ 101 | \$ 180 | 56% |
| | | 15-19 | 129,696 | 151 | 245 | 62 |
| | | 20-24 | 284,811 | 321 | 592 | 54 |
| | | 25-29 | 373,195 | 595 | 1,052 | 57 |
| | | 30-34 | 399,248 | 1,178 | 1,785 | 66 |
| | | 35-39 | 337,941 | 1,699 | 2,328 | 73 |
| | | 40-44 | 252,192 | 1,884 | 2,842 | 66 |
| | | 45-49 | 158,443 | 1,894 | 2,887 | 66 |
| | | 50-54 | 77,804 | 1,663 | 2,026 | 82 |
| | | 55-59 | 31,256 | 730 | 1,273 | 57 |
| | | 60-64 | 10,730 | 323 | 622 | 52 |
| | | 65 and over | 1,779 | 114 | 139 | 82 |
| | | | All | \$2,146,301 | \$10,653 | \$15,971 |
| 1939..... | 10 | 10-14 | \$ 79,411 | \$ 62 | \$ 148 | 42% |
| | | 15-19 | 124,278 | 123 | 235 | 52 |
| | | 20-24 | 266,204 | 279 | 551 | 51 |
| | | 25-29 | 328,112 | 534 | 866 | 62 |
| | | 30-34 | 328,244 | 859 | 1,346 | 64 |
| | | 35-39 | 280,118 | 1,327 | 1,784 | 74 |
| | | 40-44 | 207,539 | 1,548 | 2,102 | 74 |
| | | 45-49 | 135,116 | 1,358 | 2,206 | 62 |
| | | 50-54 | 73,596 | 975 | 1,702 | 57 |
| | | 55-59 | 30,234 | 628 | 1,073 | 59 |
| | | 60-64 | 8,829 | 380 | 463 | 82 |
| | | 65 and over | 1,681 | 121 | 118 | 103 |
| | | | All | \$1,863,362 | \$ 8,194 | \$12,594 |
| 1940..... | 9 | 10-14 | \$ 81,202 | \$ 77 | \$ 140 | 55% |
| | | 15-19 | 143,359 | 144 | 271 | 53 |
| | | 20-24 | 312,068 | 261 | 633 | 41 |
| | | 25-29 | 378,803 | 418 | 947 | 44 |
| | | 30-34 | 372,537 | 776 | 1,416 | 55 |
| | | 35-39 | 317,521 | 1,377 | 1,873 | 74 |
| | | 40-44 | 234,693 | 1,514 | 2,147 | 71 |
| | | 45-49 | 153,333 | 1,397 | 2,240 | 62 |
| | | 50-54 | 81,425 | 1,371 | 1,701 | 81 |
| | | 55-59 | 34,018 | 611 | 1,065 | 57 |
| | | 60-64 | 9,547 | 327 | 449 | 73 |
| | | 65 and over | 1,981 | 109 | 124 | 88 |
| | | | All | \$2,120,487 | \$ 8,382 | \$13,006 |

TABLE 3—Continued

| Issue Year | Policy Year | Ages at Issue | Exposed to Risk | Actual Deaths | Expected Deaths | Ratio |
|------------|-------------|---------------|-----------------|---------------|-----------------|-------|
| 1941..... | 8 | 10-14 | \$ 88,881 | \$ 71 | \$ 141 | 50% |
| | | 15-19 | 192,512 | 173 | 366 | 47 |
| | | 20-24 | 388,223 | 347 | 776 | 45 |
| | | 25-29 | 458,764 | 850 | 1,110 | 77 |
| | | 30-34 | 471,490 | 1,058 | 1,679 | 63 |
| | | 35-39 | 404,751 | 1,413 | 2,226 | 63 |
| | | 40-44 | 286,169 | 1,411 | 2,387 | 59 |
| | | 45-49 | 194,317 | 2,079 | 2,571 | 81 |
| | | 50-54 | 101,157 | 1,304 | 1,948 | 67 |
| | | 55-59 | 40,469 | 783 | 1,144 | 68 |
| | | 60-64 | 13,449 | 338 | 569 | 59 |
| | | 65 and over | 2,485 | 72 | 145 | 50 |
| | All | | \$2,642,667 | \$ 9,899 | \$15,062 | 66% |
| 1942..... | 7 | 10-14 | \$ 64,427 | \$ 59 | \$ 95 | 62% |
| | | 15-19 | 135,309 | 148 | 260 | 57 |
| | | 20-24 | 222,845 | 205 | 441 | 46 |
| | | 25-29 | 311,930 | 333 | 739 | 45 |
| | | 30-34 | 336,569 | 707 | 1,131 | 63 |
| | | 35-39 | 304,556 | 815 | 1,562 | 52 |
| | | 40-44 | 227,262 | 1,056 | 1,752 | 60 |
| | | 45-49 | 161,927 | 1,001 | 1,961 | 51 |
| | | 50-54 | 92,808 | 1,105 | 1,677 | 66 |
| | | 55-59 | 38,853 | 472 | 1,008 | 47 |
| | | 60-64 | 11,679 | 383 | 443 | 86 |
| | | 65 and over | 2,662 | 62 | 147 | 42 |
| | All | | \$1,910,827 | \$ 6,346 | \$11,216 | 57% |
| 1943..... | 6 | 10-14 | \$ 67,770 | \$ 67 | \$ 94 | 71% |
| | | 15-19 | 125,911 | 113 | 243 | 47 |
| | | 20-24 | 182,731 | 160 | 362 | 44 |
| | | 25-29 | 307,571 | 297 | 704 | 42 |
| | | 30-34 | 386,180 | 614 | 1,213 | 51 |
| | | 35-39 | 403,501 | 1,015 | 1,941 | 52 |
| | | 40-44 | 336,071 | 1,567 | 2,437 | 64 |
| | | 45-49 | 231,030 | 1,582 | 2,578 | 61 |
| | | 50-54 | 126,487 | 1,496 | 2,160 | 69 |
| | | 55-59 | 50,948 | 935 | 1,230 | 76 |
| | | 60-64 | 14,195 | 332 | 488 | 68 |
| | | 65 and over | 2,443 | 47 | 123 | 38 |
| | All | | \$2,234,838 | \$ 8,225 | \$13,573 | 61% |
| 1944..... | 5 | 10-14 | \$ 79,787 | \$ 68 | \$ 101 | 67% |
| | | 15-19 | 133,823 | 141 | 252 | 56 |
| | | 20-24 | 171,731 | 212 | 328 | 65 |
| | | 25-29 | 294,189 | 340 | 621 | 55 |
| | | 30-34 | 450,266 | 602 | 1,252 | 48 |
| | | 35-39 | 507,445 | 1,123 | 2,131 | 53 |
| | | 40-44 | 451,891 | 1,591 | 2,870 | 55 |
| | | 45-49 | 285,486 | 1,457 | 2,732 | 53 |
| | | 50-54 | 156,786 | 1,557 | 2,338 | 67 |
| | | 55-59 | 59,612 | 944 | 1,251 | 75 |
| | | 60-64 | 15,258 | 554 | 448 | 124 |
| | | 65 and over | 2,726 | 23 | 115 | 20 |
| | All | | \$2,609,000 | \$ 8,612 | \$14,439 | 60% |

TABLE 3—Continued

| Issue Year | Policy Year | Ages at Issue | Exposed to Risk | Actual Deaths | Expected Deaths | Ratio |
|---------------|-------------|---------------|-----------------|---------------|-----------------|----------|
| 1945. | 4 | 10-14 | \$ 81,031 | \$ 43 | \$ 94 | 46% |
| | | 15-19 | 133,387 | 133 | 243 | 55 |
| | | 20-24 | 193,990 | 139 | 357 | 39 |
| | | 25-29 | 333,524 | 362 | 654 | 55 |
| | | 30-34 | 540,403 | 700 | 1,346 | 52 |
| | | 35-39 | 605,450 | 1,242 | 2,258 | 55 |
| | | 40-44 | 499,380 | 1,534 | 2,817 | 54 |
| | | 45-49 | 310,799 | 1,418 | 2,577 | 55 |
| | | 50-54 | 168,142 | 1,375 | 2,188 | 63 |
| | | 55-59 | 63,464 | 768 | 1,165 | 66 |
| | | 60-64 | 16,778 | 159 | 430 | 37 |
| | | 65 and over | 2,972 | 54 | 105 | 51 |
| | | | All | \$2,949,320 | \$ 7,927 | \$14,234 |
| 1946. | 3 | 10-14 | \$ 85,040 | \$ 45 | \$ 92 | 49% |
| | | 15-19 | 156,543 | 177 | 277 | 64 |
| | | 20-24 | 500,652 | 464 | 891 | 52 |
| | | 25-29 | 762,754 | 613 | 1,411 | 43 |
| | | 30-34 | 892,308 | 1,058 | 2,034 | 52 |
| | | 35-39 | 843,893 | 1,595 | 2,844 | 56 |
| | | 40-44 | 637,030 | 1,598 | 3,217 | 50 |
| | | 45-49 | 368,903 | 1,455 | 2,715 | 54 |
| | | 50-54 | 189,835 | 1,023 | 2,187 | 47 |
| | | 55-59 | 72,123 | 734 | 1,171 | 63 |
| | | 60-64 | 18,822 | 171 | 434 | 39 |
| | | 65 and over | 3,360 | 47 | 106 | 44 |
| | | | All | \$4,531,263 | \$ 8,980 | \$17,379 |
| 1947. | 2 | 10-14 | \$ 77,498 | \$ 24 | \$ 79 | 30% |
| | | 15-19 | 177,396 | 168 | 303 | 55 |
| | | 20-24 | 430,006 | 310 | 740 | 42 |
| | | 25-29 | 686,740 | 625 | 1,167 | 54 |
| | | 30-34 | 901,565 | 576 | 1,848 | 31 |
| | | 35-39 | 875,668 | 1,251 | 2,609 | 48 |
| | | 40-44 | 689,374 | 1,198 | 2,971 | 40 |
| | | 45-49 | 400,899 | 1,108 | 2,526 | 44 |
| | | 50-54 | 214,229 | 1,000 | 2,104 | 48 |
| | | 55-59 | 81,160 | 769 | 1,118 | 69 |
| | | 60-64 | 20,048 | 244 | 400 | 61 |
| | | 65 and over | 3,268 | 70 | 93 | 75 |
| | | | All | \$4,557,851 | \$ 7,343 | \$15,958 |
| 1948. | 1 | 10-14 | \$ 55,453 | \$ 20 | \$ 43 | 47% |
| | | 15-19 | 147,825 | 109 | 200 | 55 |
| | | 20-24 | 455,547 | 259 | 610 | 42 |
| | | 25-29 | 768,504 | 635 | 984 | 65 |
| | | 30-34 | 910,138 | 703 | 1,338 | 53 |
| | | 35-39 | 826,723 | 690 | 1,720 | 40 |
| | | 40-44 | 637,006 | 954 | 1,841 | 52 |
| | | 45-49 | 373,853 | 980 | 1,608 | 61 |
| | | 50-54 | 195,220 | 422 | 1,324 | 32 |
| | | 55-59 | 76,329 | 407 | 733 | 56 |
| | | 60-64 | 20,714 | 116 | 297 | 39 |
| | | 65 and over | 3,730 | 47 | 82 | 57 |
| | | | All | \$4,471,042 | \$ 5,342 | \$10,780 |

TABLE 4

MORTALITY RATIOS DURING EIGHT YEAR PERIOD 1941 TO 1949 ANNIVERSARIES

(WAR DEATHS PRIOR TO 1946 ANNIVERSARIES EXCLUDED)

Ratios, for Experience Years Indicated, of Actual Deaths by Amount
to Expected Deaths Computed by Basic Table 1925-1939

POLICY YEARS 1 TO 15 COMBINED

| Ages at Issue | 1941-1942 | 1942-1943 | 1943-1944 | 1944-1945 | 1945-1946 | 1946-1947 | 1947-1948 | 1948-1949 | 1948-1949* |
|----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| 10-14... | 70% | 50% | 52% | 27% | 87% | 65% | 56% | 52% | 94% |
| 15-19... | 71 | 57 | 61 | 50 | 94 | 61 | 56 | 57 | 98 |
| 20-24... | 64 | 63 | 61 | 61 | 66 | 58 | 52 | 51 | 91 |
| 25-29... | 66 | 62 | 61 | 62 | 57 | 56 | 57 | 58 | 101 |
| 30-34... | 71 | 71 | 75 | 67 | 67 | 61 | 60 | 61 | 99 |
| 35-39... | 78 | 74 | 75 | 70 | 68 | 65 | 66 | 65 | 101 |
| 40-44... | 78 | 72 | 77 | 72 | 70 | 66 | 65 | 63 | 98 |
| 45-49... | 79 | 76 | 74 | 69 | 73 | 74 | 68 | 62 | 93 |
| 50-54... | 82 | 79 | 71 | 70 | 64 | 68 | 59 | 66 | 102 |
| 55-59... | 81 | 77 | 77 | 81 | 66 | 65 | 66 | 64 | 99 |
| 60-64... | 84 | 70 | 91 | 70 | 60 | 66 | 67 | 66 | 100 |
| 65 and over... | 75 | 69 | 96 | 75 | 71 | 75 | 73 | 61 | 89 |
| All... | 77% | 73% | 74% | 69% | 68% | 66% | 63% | 63% | 98% |

ALL AGES COMBINED

| Policy Year | 1941-1942 | 1942-1943 | 1943-1944 | 1944-1945 | 1945-1946 | 1946-1947 | 1947-1948 | 1948-1949 | 1948-1949* |
|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| 1..... | 64% | 57% | 61% | 51% | 50% | 47% | 47% | 50% | 105% |
| 2..... | 59 | 51 | 58 | 51 | 49 | 48 | 45 | 46 | 98 |
| 3..... | 71 | 64 | 53 | 52 | 61 | 58 | 57 | 52 | 95 |
| 4..... | 59 | 57 | 55 | 57 | 74 | 63 | 59 | 56 | 96 |
| 5..... | 64 | 55 | 65 | 57 | 58 | 68 | 60 | 60 | 98 |
| 6..... | 69 | 62 | 56 | 59 | 58 | 56 | 57 | 61 | 102 |
| 7..... | 70 | 61 | 64 | 63 | 66 | 55 | 61 | 57 | 95 |
| 8..... | 72 | 67 | 72 | 60 | 64 | 63 | 63 | 66 | 104 |
| 9..... | 80 | 73 | 70 | 72 | 68 | 65 | 65 | 64 | 100 |
| 10..... | 77 | 78 | 70 | 72 | 66 | 68 | 62 | 65 | 99 |
| 11..... | 76 | 76 | 80 | 76 | 70 | 74 | 67 | 67 | 98 |
| 12..... | 87 | 81 | 84 | 73 | 72 | 68 | 70 | 71 | 101 |
| 13..... | 86 | 81 | 83 | 73 | 77 | 72 | 70 | 70 | 98 |
| 14..... | 90 | 84 | 89 | 81 | 83 | 78 | 74 | 70 | 94 |
| 15..... | 88 | 89 | 90 | 91 | 80 | 88 | 81 | 75 | 94 |
| All... | 77% | 73% | 74% | 69% | 68% | 66% | 63% | 63% | 98% |

* Ratios of actual deaths to expected deaths computed by the 1946-1949 Select Basic Table.

The 63% over-all ratio of actual to expected mortality computed by the 1925-1939 Basic Table is the same as in the previous year. There was an increase of 1% in the mortality ratios for three age groups below 35 and of 7% for age group 50-54, but these increases were counterbalanced by decreases in all other age groups.

The two contributors whose data had included nonmedical insurance in previous years have excluded it in this year's experience so that the figures for 1948-1949 relate solely to medically examined business.

EXPERIENCE IN THE 16TH AND LATER YEARS OF INSURANCE
ISSUES OF 1933 AND EARLIER

All but one of the companies contributing to the study of the recent issues have supplied data on exposures and death losses by attained ages for standard issues in force more than fifteen years.

The total exposure was \$17,707,761,000 of insurance and the death claims amounted to \$331,277,000. Table 5 summarizes the results in quinary attained age groups and shows for each age group the exposures

TABLE 5
EXPERIENCE BETWEEN ANNIVERSARIES IN 1948 AND 1949 ON ISSUES
OF 1933 AND EARLIER—POLICY YEARS 16 AND OVER COMBINED
UNIT \$1,000

| Attained Ages | (1) Exposed to Risk | (2) Actual Deaths | (3) Rate of Mortality per M* | (4) Expected Deaths† | (5) Ratio (2)÷(4) |
|---------------|------------------------|----------------------|---------------------------------|-------------------------|----------------------|
| 25-29..... | \$ 169,031 | \$ 187 | 1.10 | \$ 537 | 35% |
| 30-34..... | 400,059 | 566 | 1.41 | 1,601 | 35 |
| 35-39..... | 908,388 | 1,862 | 2.05 | 4,788 | 39 |
| 40-44..... | 1,780,240 | 5,634 | 3.16 | 12,746 | 44 |
| 45-49..... | 2,505,971 | 14,068 | 5.61 | 25,123 | 56 |
| 50-54..... | 3,040,283 | 28,514 | 9.38 | 43,919 | 65 |
| 55-59..... | 3,127,064 | 47,990 | 15.35 | 65,911 | 73 |
| 60-64..... | 2,545,688 | 62,784 | 24.66 | 79,237 | 79 |
| 65-69..... | 1,634,043 | 60,208 | 36.85 | 75,446 | 80 |
| 70-74..... | 959,527 | 49,904 | 52.01 | 65,895 | 76 |
| 75-79..... | 445,262 | 34,380 | 77.21 | 45,310 | 76 |
| 80-84..... | 153,287 | 18,158 | 118.46 | 22,846 | 79 |
| 85-89..... | 34,307 | 6,081 | 177.27 | 7,396 | 82 |
| 90-95..... | 4,611 | 941 | 204.04 | 1,432 | 66 |
| All..... | \$17,707,761 | \$331,277 | | \$452,187 | 73% |

* The rate of mortality for each age group was obtained from deaths and exposed taken to the dollar, although in columns (1) and (2) the amounts are given to the nearest \$1,000.

† By Commissioners 1941 Standard Ordinary Mortality Table for individual attained ages.

and deaths, the rate of mortality, the expected deaths by the Commissioners 1941 Standard Ordinary Mortality Table (*TASA XLII*, 329) and the ratio of actual to expected deaths. The over-all ratio of actual to expected deaths was 73%, which compares favorably with 77% in the previous year and 75% in 1946-1947.

In Table 6 the mortality in the current report is compared with that of

TABLE 6
MORTALITY RATIOS DURING EIGHT YEAR PERIOD 1941 TO 1949 ANNIVERSARIES
(WAR DEATHS PRIOR TO 1946 ANNIVERSARIES EXCLUDED)
POLICY YEARS 16 AND OVER

Ratios, for Experience Years Indicated, of Actual Deaths by Amount to
Expected Deaths Computed by CSO Table

| Attained Ages | 1941- 1942 | 1942- 1943 | 1943- 1944 | 1944- 1945 | 1945- 1946 | 1946- 1947 | 1947- 1948 | 1948- 1949 | 1948- 1949* |
|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| 25-29... | 79% | 62% | 57% | 76% | 66% | 34% | 37% | 35% | 92% |
| 30-34... | 48 | 53 | 47 | 47 | 52 | 43 | 36 | 35 | 95 |
| 35-39... | 47 | 41 | 47 | 47 | 46 | 37 | 39 | 39 | 101 |
| 40-44... | 50 | 51 | 53 | 48 | 46 | 44 | 49 | 44 | 96 |
| 45-49... | 61 | 63 | 66 | 57 | 63 | 58 | 56 | 56 | 99 |
| 50-54... | 74 | 72 | 70 | 70 | 67 | 66 | 67 | 65 | 99 |
| 55-59... | 78 | 76 | 76 | 74 | 74 | 76 | 77 | 73 | 98 |
| 60-64... | 87 | 87 | 82 | 81 | 79 | 81 | 80 | 79 | 99 |
| 65-69... | 86 | 88 | 83 | 80 | 79 | 77 | 85 | 80 | 99 |
| 70-74... | 83 | 87 | 84 | 86 | 80 | 79 | 81 | 76 | 95 |
| 75-79... | 83 | 85 | 86 | 81 | 80 | 85 | 85 | 76 | 96 |
| 80-84... | 85 | 98 | 87 | 87 | 78 | 83 | 74 | 79 | 98 |
| 85-89... | 84 | 80 | 88 | 76 | 79 | 78 | 84 | 82 | 99 |
| 90-95... | 89 | 74 | 76 | 58 | 73 | 84 | 85 | 66 | 84 |
| All.. | 79% | 80% | 78% | 76% | 75% | 75% | 77% | 73% | 98% |

* Ratio of actual deaths to expected deaths calculated by the 1946-1949 Ultimate Basic Table.

the preceding seven years, war deaths prior to the 1946 anniversaries being excluded. Only age group 80-84 shows an increase in mortality over the previous year. Two other attained age groups remained unchanged, while all others decreased. The last column of Table 6 shows ratios to the new 1946-1949 Ultimate Basic Table that is presented later in the report.