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# Results of HIAA's 1999 Study of LTCI Contract Reserves

by William C. Weller

The majority of long-term care insurance (LTCI) is written using a level premium assumption. One result is that contract or active life reserves are generally established for statutory accounting. Similar liabilities are also recognized in GAAP statements. In most companies, the reserves are determined by applying pre-determined factors to the inforce.

One positive result from this approach is that future reserve expectations are available, and these expectations for different companies can be compared. HIAA has reported on two prior such studies in the *Health Section News* (April 1992 and August 1996). We are now pleased to report the latest results in this newsletter.

## Procedure

A standardized questionnaire was mailed to companies identified as selling LTCI in 1998. Companies

were asked to provide ratios of the active life reserve at specified future policy durations to the current gross premium for four issue ages (55, 65, 75 and 80). Companies were to base their calculations on a plan with benefits and triggers as close to a standard set as possible. Ratios were requested separately for coverage with and without inflation protection. Issue age and duration were to be adjusted if the company was not using a one-year full preliminary term method.

## Survey Responses

Twenty-two companies provided results. Eight used sex-distinct reserves; 14 used unisex reserves. As with prior studies, the number of companies reporting ratios for issue age 80 was lower (16). Of these, five used sex-distinct reserves and 11 used unisex reserves.

For purposes of analysis, the unisex companies were separated into

two groups based on the ratio at duration 8 for issue age 65. The seven with lower ratios at this one point were one group, and the seven with higher ratios were the second group.

Results are averages of the ratios, so each company within a group has equal weight. In addition, a lower ratio does not necessarily mean a lower reserve, nor is a higher ratio always more conservative.

## Results

Two tables and three charts (based on median values) are shown on pages 11 and 12 — two charts, one for age 65 (with and without inflation protection), and the other for age 75 (without inflation protection). For further comparisons, see Tables I and II. A full set, similar to those presented in the August 1996 *Health Section News*, is available from the author (e-mail is [bweller@hiala.org](mailto:bweller@hiala.org)) and are not provided here due to size constraints.

**Table I - Average Ratios for Issue Age 65**

|                  | <u>No Inflation Protection</u> |              |               |               | <u>With Inflation Protection</u> |              |               |               |
|------------------|--------------------------------|--------------|---------------|---------------|----------------------------------|--------------|---------------|---------------|
|                  | <u>Dur 3</u>                   | <u>Dur 8</u> | <u>Dur 13</u> | <u>Dur 18</u> | <u>Dur 3</u>                     | <u>Dur 8</u> | <u>Dur 13</u> | <u>Dur 18</u> |
| Unisex - low 7   | 1.09                           | 4.29         | 8.05          | 12.67         | 1.68                             | 6.99         | 14.20         | 24.60         |
| Unisex - high 7  | 1.50                           | 6.39         | 11.70         | 16.20         | 2.01                             | 9.12         | 18.18         | 28.17         |
| Unisex - average | 1.30                           | 5.34         | 9.87          | 14.44         | 1.85                             | 8.05         | 16.19         | 26.38         |
| Female           | 1.55                           | 6.59         | 11.76         | 16.10         | 2.11                             | 9.52         | 17.77         | 25.97         |
| Male             | 0.97                           | 4.15         | 7.20          | 10.30         | 1.30                             | 5.96         | 11.23         | 16.79         |

For comparison purposes, the results of the prior studies were:

|               |     |     |      |      |                      |     |      |      |
|---------------|-----|-----|------|------|----------------------|-----|------|------|
| Unisex (1995) | 1.6 | 6.3 | 11.4 | 15.4 | 2.2                  | 9.3 | 18.9 | 29.1 |
| Unisex (1991) | 1.1 | 5.1 | 9.3  | 12.7 | Not reported in 1991 |     |      |      |

**Table II - Average Ratios for Issue Age 75**

|   | <b>No Inflation Protection</b> |              |               |               | <b>With Inflation Protection</b> |              |               |               |
|---|--------------------------------|--------------|---------------|---------------|----------------------------------|--------------|---------------|---------------|
|   | <u>Dur 3</u>                   | <u>Dur 8</u> | <u>Dur 13</u> | <u>Dur 18</u> | <u>Dur 3</u>                     | <u>Dur 8</u> | <u>Dur 13</u> | <u>Dur 18</u> |
| Unisex - average  | 1.05                           | 3.50         | 5.19          | 5.48          | 1.34                             | 5.11         | 8.76          | 11.27         |
| Female  | 0.93                           | 3.24         | 4.51          | 4.56          | 1.15                             | 4.533        | 6.99          | 7.66          |
| Male  | 0.57                           | 2.05         | 3.01          | 3.18          | 0.74                             | 3.00         | 4.95          | 6.80          |
| For comparison purposes, the results of the prior studies were: |                                |              |               |               |                                  |              |               |               |
| Unisex (1995)   | 1.0                            | 3.1          | 4.3           | 4.3           | 1.4                              | 5.1          | 8.2           | 9.9           |
| Unisex (1991)   | 0.7                            | 2.4          | 3.5           | 3.5           | Not reported in 1991             |              |               |               |

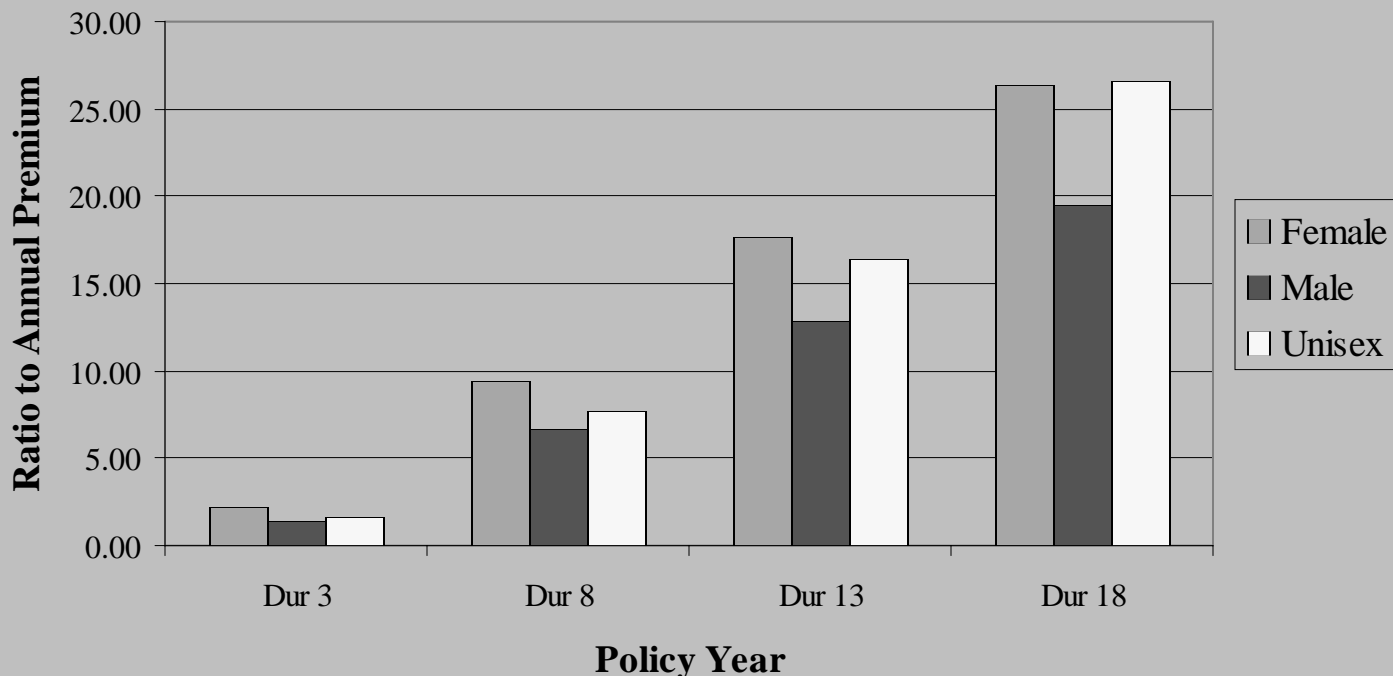
There has always been a considerable spread in the ratios reported. The difference between the highest reported value and the lowest value

for each age/duration combination has been compared to the mean value. These results have routinely been in excess of 100%.

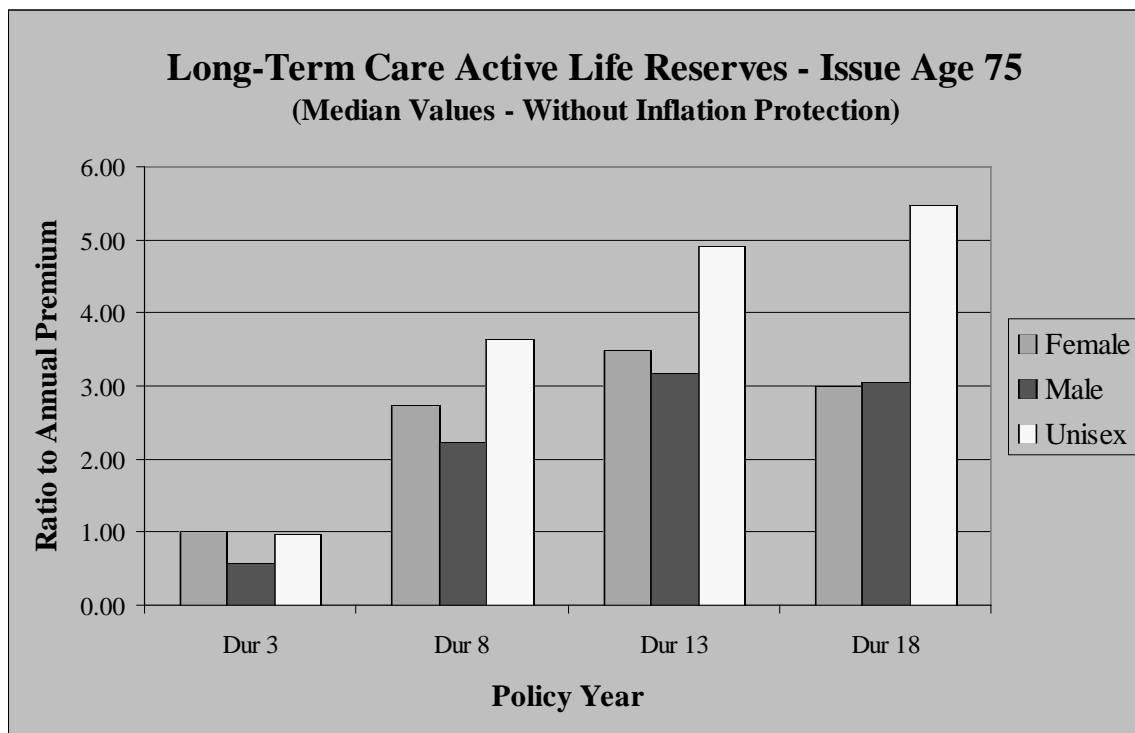
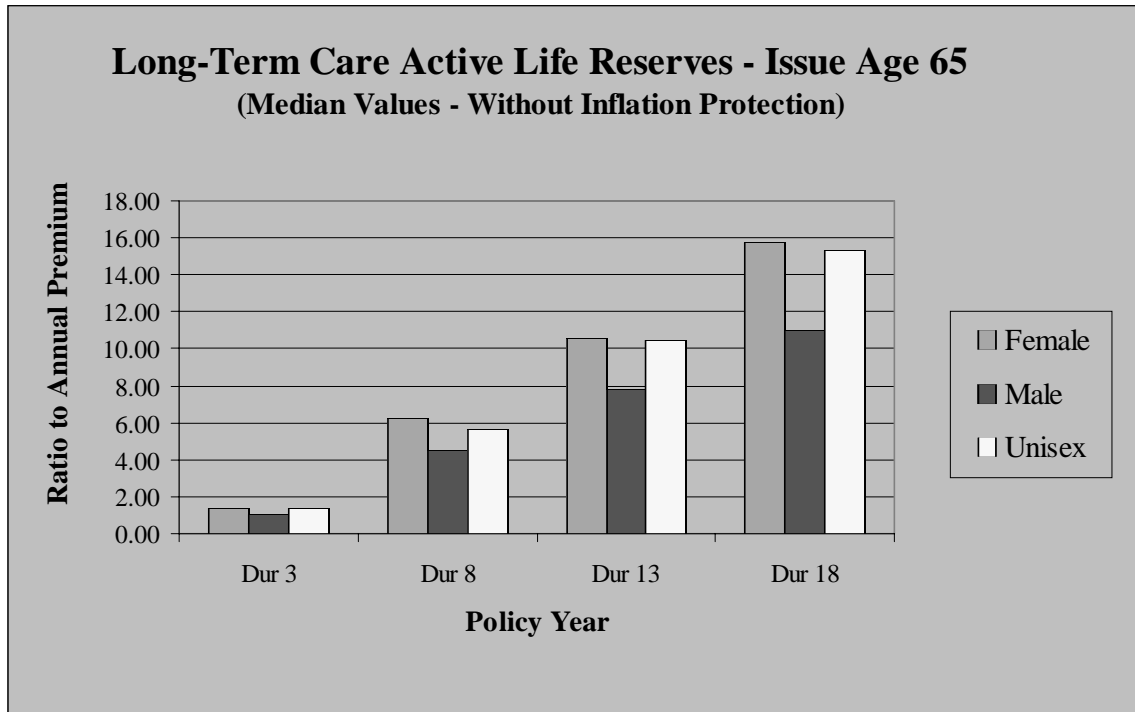
These data are provided for the reader's consideration and a feel for the reserves that exist. Each is free to draw their own conclusions.

*(continued on page 12)*

**Long-Term Care Active Life Reserves - Issue Age 65**  
(Median Values - With Inflation Protection)



**LTCI Contract Reserves Results of HIAA's 1999 Study**  
*continued from page 11*



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