APPENDIX P. SELECTION FACTORS MEMORANDUM

TO: Mr. Ted Becker, Chairman, TSAG

FROM: Robert J. Johansen, Chairman
Society of Actuaries Committee
on Valuation and Nonforfeiture
Mortality Problems - Individual
Life Insurance and Annuities

RE: Select Factors for Blended 1980 CSO Mortality Tables

The select factors for use with the 1980 CSO tables are different for males and females but select factors for use with the blended 1980 CSO tables must themselves be blended.

The tables of ratios of male 1x to total 1x shown in the report of our Committee indicate that for most of the insuring ages the ratios of males and females in the blended tables do not differ significantly from the ratio at the pivotal age. This suggests that the pivotal age ratio can be used for all ages.

The select factors must also be weighted for the relative male and female mortality rates. Considering the nature of the select factors and the need for a practicable solution, it seems reasonable to assume that female mortality is 60% of male mortality. Using the pivotal age ratios (=z) and assuming female mortality is 60% of male mortality the blended factors can be obtained from:

$${}^{z}F_t^T = [z/100 \bullet F_t^m + 0.6(1-z/100)\, F_t^F] \div [z/100 + 0.6(1-z/100)]$$

where z is the ratio % at the pivotal age of 1x male to 1x total and F_t^m and F_t^F are the male and female selection factors for year t and ${}^{z}F_t^t$ is the selection factor applicable to the blended CSO table having z% male 1x to total 1x at the pivotal age.

[**Source:** Added at 9 Ok Reg 2497, eff 6-26-92]