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Proposed 1994 GAR table is generational

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A new mortality valuation standard, called the 1994 Group Annuity Reserve Table (1994 GAR), is being proposed for use by insurance companies to value reserves on new sales of group pension business. Currently, the basis applicable to new sales of group pension contracts, as prescribed by the National Association of Insurance Commissioners (NAIC), is the 1983 Group Annuity Mortality Table (1983 GAM) and dynamic valuation interest rates.

Aside from changes in the underlying mortality experience, the 1994 GAR is different from its predecessor in that it is a generational table.

- The 1983 GAM is a static table, with sex- and age-distinct mortality rates derived at a single point in time (base year 1983), but assumed to apply to all future years.
- The 1994 GAR incorporates a base table with a full range of annual mortality improvement factors (Scale AA) which will be applied in each year beyond 1994.

Thus, under this generational approach, the expected mortality rate for each life will depend not just on sex and age, but also will take the calendar year into account. (An example is illustrated in the box on this page.)

The proposed generational standard with built-in dynamic margins may raise practical issues among insurers. Many reserve and related systems are now in use, which vary in form; time in

existence; purpose and applications; and considerations of time, manpower, and cost required to make a change. Some of the concerns are as follows:

- A generational approach may appear to be a natural and logical extension of pricing practice; however, it adds another degree of complexity to the reserve process.
- The tracking of the year-by-year experience against expected mortality will need to be reconfigured by calendar year of birth. Reaching a decision on whether the existing margins are sufficient or need some sort of generational adjustments may not be clear-cut.
- An increase in the number of valuation cells that are processed, checked, and analyzed creates further timing constraints in the course of annual statement preparation work and interim closing cycles.
- For companies that do not have a generational reserve approach in place, implementation may take between six months to a year or more.
- Because companies' experience and margin needs vary, there is concern that the level and extent of future improvement factors built into the new generational standard will reduce company flexibility in setting reserves that comply with the statutory minimum.

Implementing the change to a generational reserve standard is viewed as an immediate, one-time concern,

but the general consensus seems to be supportive and positive in the long run. However, the perception that long-standing, often old annuity reserve systems never change may leave some unprepared. So for those who have not thought about it: think generational – lest you be considered static.

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3 papers being exposed for comment

Three papers as exposure drafts have been mailed to Pension, Financial Reporting, and Education and Research special interest Sections and to academic and government SOA members in the United States and Canada. These papers are: 1) the 1994 Group Annuity Reserving Table (GAR 94), intended as a potential replacement for the 83 GAM Table for insured group annuity valuation purposes; 2) the 1994 Uninsured Pensions Mortality Table (UP 94), intended as a potential replacement for the 83 GAM and UP84 tables in pension plan calculations; and 3) a paper on using mortality tables in pension plan calculations. Copies are available through Actuaries Online, or by calling Karen Haywood, 708/706-3547.

Generational mortality – an example:

The mortality rate for an annuitant aged x in calendar year 1998 is derived as follows:

$$q(x, 1998) = q(x, 1994) \times [1 - f(x)]^{(1998 - 1994)}$$

where: $q(x, 1994)$ is the 1994 GAR base mortality rate in calendar year 1994 at age x ,
 $f(x)$ is the Scale AA annual improvement factor for age x .

Thus, the full set of mortality rates needed to value the life annuity reserves for an annuitant age x in 1998 is:

$$\{q(x, 1998), q(x + 1, 1999), q(x + 2, 2000), \dots\}.$$