

Mortality Improvement Scale Recommendation – for Use with AG 38 (October 2016)

Background

As part of the work done by the Society of Actuaries Working Group that developed the 2014 Valuation Basic Table and associated 2017 CSO table, a Mortality Improvements subgroup was tasked with reviewing recent mortality improvement levels based on available data for the individual life insurance insured population.

As a result of this work, the Mortality Improvements subgroup presented a recommendation for the development of a set of improvement factors that vary by gender and attained age to be used in conjunction with the 2014 Valuation Basic table. This recommendation was accepted by the full team in 2013 and the development process was used to produce mortality improvement scales for yearend 2013, 2014, 2015 and 2016 to be used in conjunction with AG 38.

Recommended Development Method:

The mortality improvement factors are equal to the average of the following:

- General population mortality improvement levels from the most recent 10 experience years (2003-2013 for 2016 yearend) available from the Social Security Administration and,
- Mortality improvement levels implied by the Social Security Administration Trustee's report intermediate assumption as to mortality over a 20-year period from the end of the historical experience period (2014-2034 for 2016 yearend).

The averages calculated as above are then manually smoothed to produce a simplified scale by gender and age.

Since year end 2014, a Mortality Improvements Life Working Group (MILWG) has been formed to study and make recommendations as to updates to the annual recommended mortality improvement scales for use with AG38 and VM20 work (this is specific to the life insurance product lines). The SOA Longevity Advisor Group is simultaneously working on a general methodology for developing product-neutral mortality improvement scales which will then be used as a guide by the MILWG to revisit the current approach for creating these particular scales each year.

For the 2016 recommended scale, the Social Security Administration updates to historical population mortality as well as to mortality projections were available.

The MILWG performed a review of this and other recent mortality improvement data including updates to the Human Mortality Database (HMD) through 2014 in making the current recommendation.

Updated Recommendation

Based on a comparison of the resulting improvement factors from the 2016 data updates, it was decided that the additional year of historical data and the updated projected mortality rates did not materially change the recommended rates from 2015 levels. There are some age groups that the MILWG are watching to determine whether the past year's results may indicate the beginning of a new trend. However, it was not felt that enough data was yet available to make any recommended change for this cycle of review.

Therefore, for 2016 yearend, the subgroup recommends continuing to use the 2015 yearend mortality improvement scale recommendation for all ages for both males and females.

Applicability of Improvement Scale

The recommendation above represents the MILWG's view of reasonable mortality improvement factors for short and medium term projections and therefore is not intended to be employed as a standard for longer term projection periods.