



Individual Life Insurance Mortality Improvement Scale Recommendation – for Use with AG 38 and VM 20 October 2018

This document outlines the 2018 individual life insurance mortality improvement recommendation.

Background

As part of the work done by the Joint Academy of Actuaries' Life Experience Committee and Society of Actuaries' Preferred Mortality Oversight Group Valuation Basic Table Team that developed the 2015 Valuation Basic Table and the Joint American Academy of Actuaries' Life Experience Committee and Society of Actuaries Preferred Mortality Oversight Group CSO Development Subgroup that developed the 2017 CSO table, a subgroup was tasked with reviewing recent mortality improvement levels based on available data for the individual life insurance policyholder population.

As a result of this work, the 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 2015 Valuation Basic table. This recommended methodology was accepted and has been used for yearend 2013-2017 in conjunction with AG 38 and VM20.

Mortality Improvement Scale Methodology

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

- 10-year average historical mortality improvement levels implied from general population historical mortality data published by the Social Security Administration (SSA). Note that for the most recent year of historical data, the SOA applies the SSA methodology to produce a preliminary set of SSA mortality rates for use in this calculation. So for the 2018 recommendation, the 2016 historical rates were calculated by the SOA.

- 20-year average mortality improvement levels for the period 2016 to 2036 based on the most recent Social Security Administration Trustee’s report intermediate assumption (Alt 2).

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

Historical data from the Human Mortality Database (HMD) was also considered in determining the 10-year historical averages, which provided a perspective from multiple sources in examining potential population mortality trends.

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 individual life insurance product lines). The SOA Longevity Advisor Group is simultaneously working on a general framework 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.

Updated Recommendation

Based on a review of the resulting improvement factors from the 2018 data updates, it was determined that the changes implied from the 2017 level were not material and did not warrant a modification of the scale for 2018. The 2017/2018 scale is provided in the attached spreadsheet.

Applicability of Improvement Scale

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