**Mortality Improvement Scale Recommendation – for Use with AG 38 (December 2015)**

Background

As part of the work done by the Society of Actuaries Working Group that developed the 2015 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 both the individual life insurance insured population and the general 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 2015 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 year end 2013 and 2014 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 (*2001-2011 for 2015 year-end*) 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 (*2012-2032 for 2015 year-end).*

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 new developments in the area of mortality improvements and make recommendations as to their application specifically to the life insurance product lines.*

*In addition, the Social Security Administration has put out updates to both historical population mortality, extending actual data through 2011, as well as the 2015 Trustees Report.*

*The MILWG performed a review of this and other recent mortality improvement data including updates to the Human Mortality Database (HMD) through 2013.*

Updated Recommendation

Based on a comparison of the resulting improvement factors from the 2014 and 2015 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 2014 levels. The exception to this is for attained ages 95 and above where both the 2014 and 2015 historical experience updates have shown evidence of a continued trend of small increases in improvement rates.

**Therefore, for 2015 year end, the newly established subgroup recommends continuing to use the 2014 year end mortality improvement scale recommendation for ages 0-80 for both males and females. Then starting at age 81, the scale will grade linearly to .0025 per year for ages 95 and above – thus reflecting a portion of the historical improvements being seen at ages above 95 in this year’s recommendation.**

Applicability of Improvement Scale

The recommendation above represents the VBT development team’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.