

Historical Mortality Improvement Recommendation (VM-20) 2021 Scale Update



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Mortality Improvements Life Work Group (MILWG) of the Academy Life Experience Committee and SOA Preferred Mortality Project Oversight Group (“Joint Committee”)

Agenda

- Review standard methodology used for Historical Mortality Improvement (HMI) scale development each year
- Review results of application of the methodology for 2021
- Recommendation for HMI scale for use with 2021 valuation under VM20



HMI Standard Methodology

Historical Component

- Most recent HMI data—last 10 years
- Source: Social Security Administration (SSA)
- ***Historical data only available through the end of the year that is 2 years prior to the current valuation year***

Forward-Looking Component

- Most recent SSA Alt 2 forecast of future improvements over longer period (20 years)
- Alt 2 = intermediate projection from most recent SSA Trustees Report release

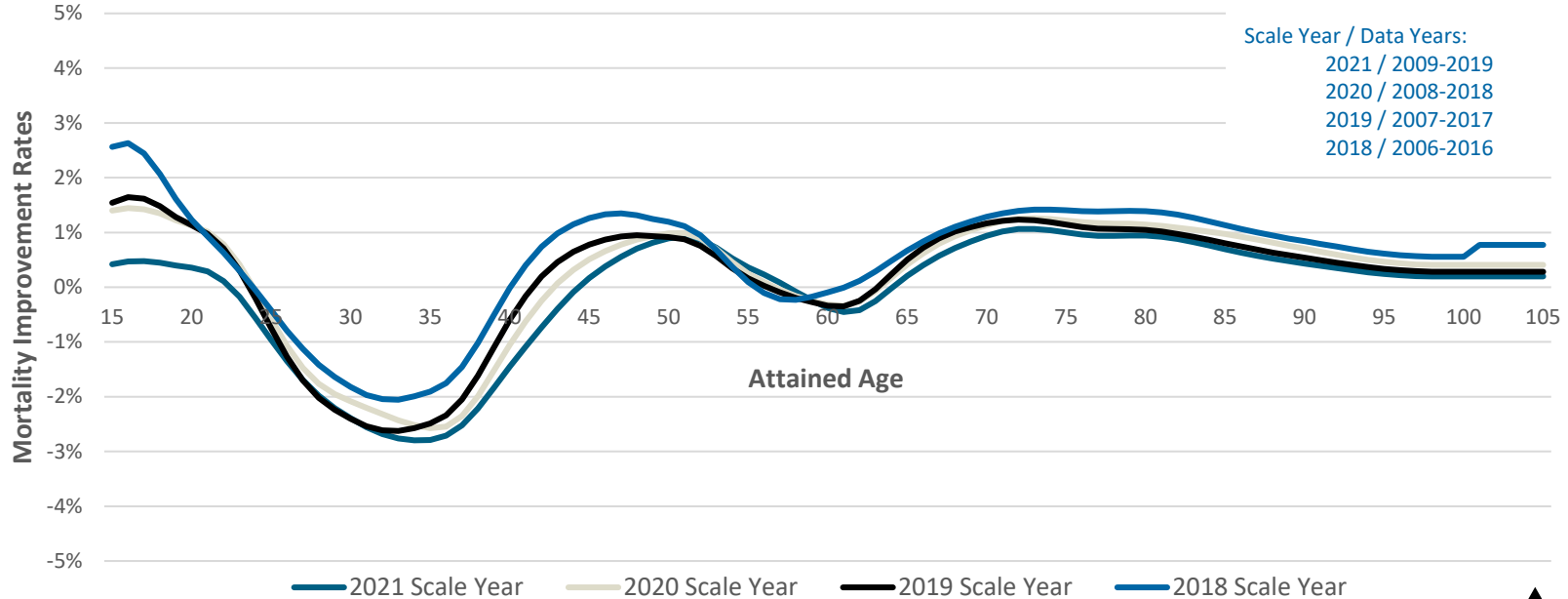
Estimated HMI Scale

- Average of historical data and forecasted components
- With smoothing process applied

Historical Component:

10-Year Historical Average Annual Improvement

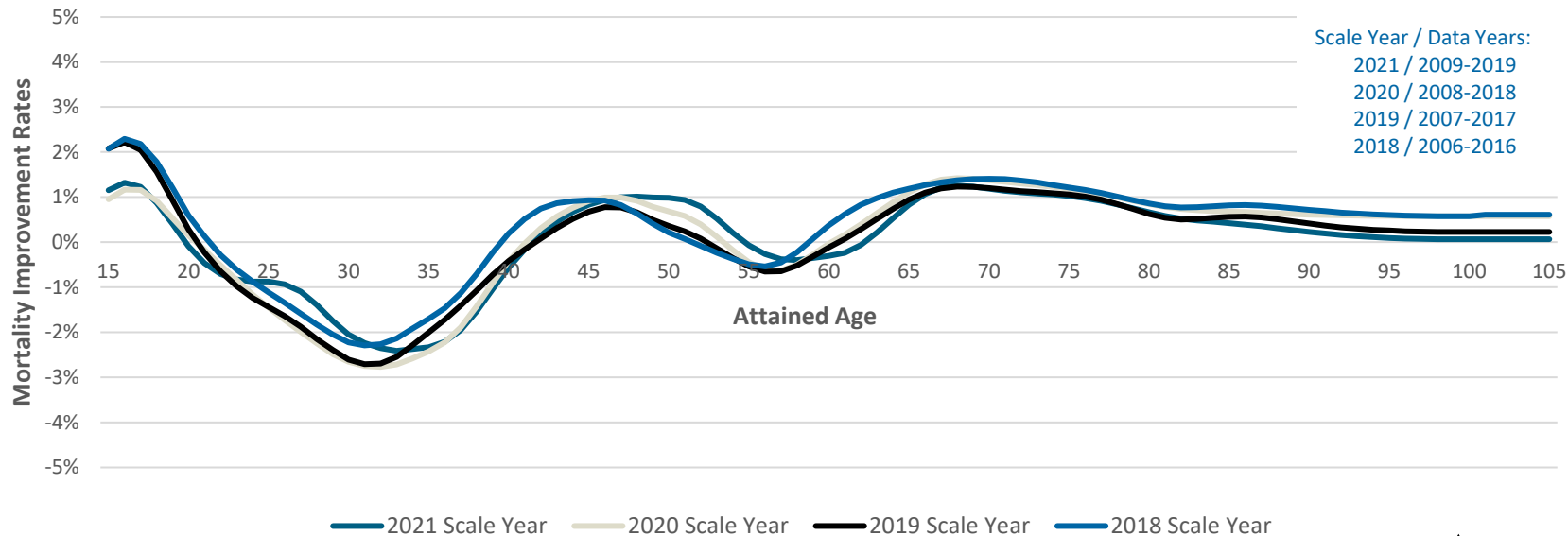
Male 10 Yr Historical Averages—SSA Data



Historical Component:

10-Year Historical Average Annual Improvement

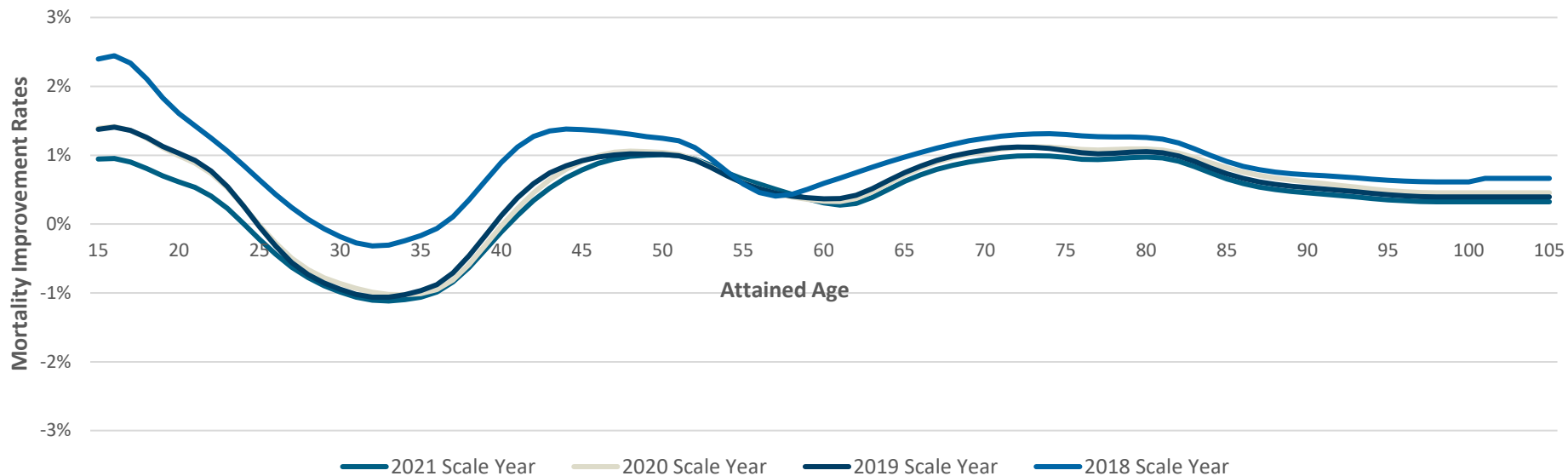
Female 10 Yr Historical Averages—SSA Data



Unsmoothed Preliminary—Male

Comparison by Scale Year

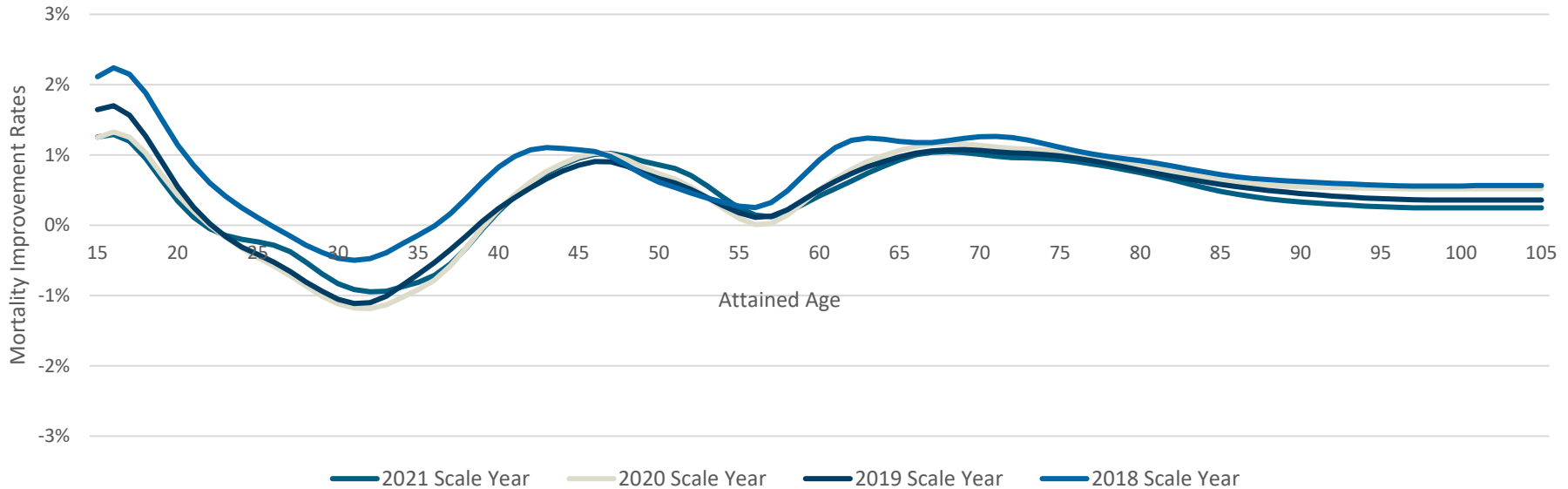
Males - Compare Unsmoothed Rates



Unsmoothed Preliminary—Female

Comparison by Scale Year

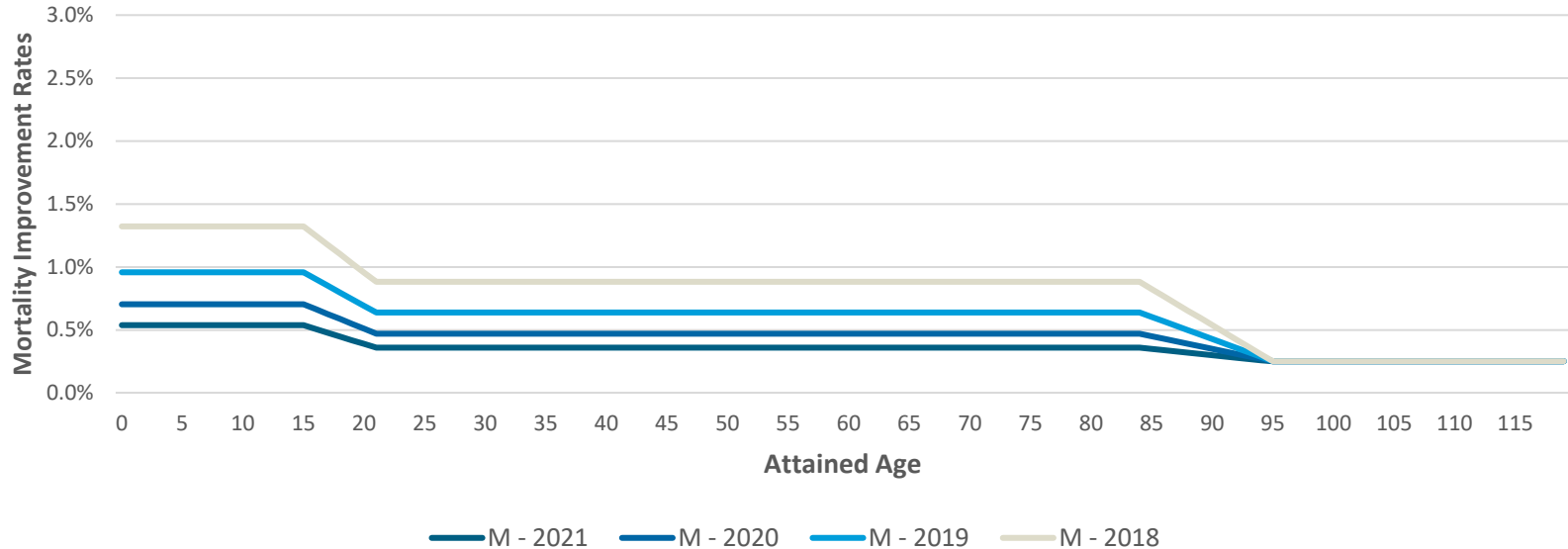
Females - Compare Unsmoothed Rates



Smoothed Preliminary—Male

Comparison by Scale Year

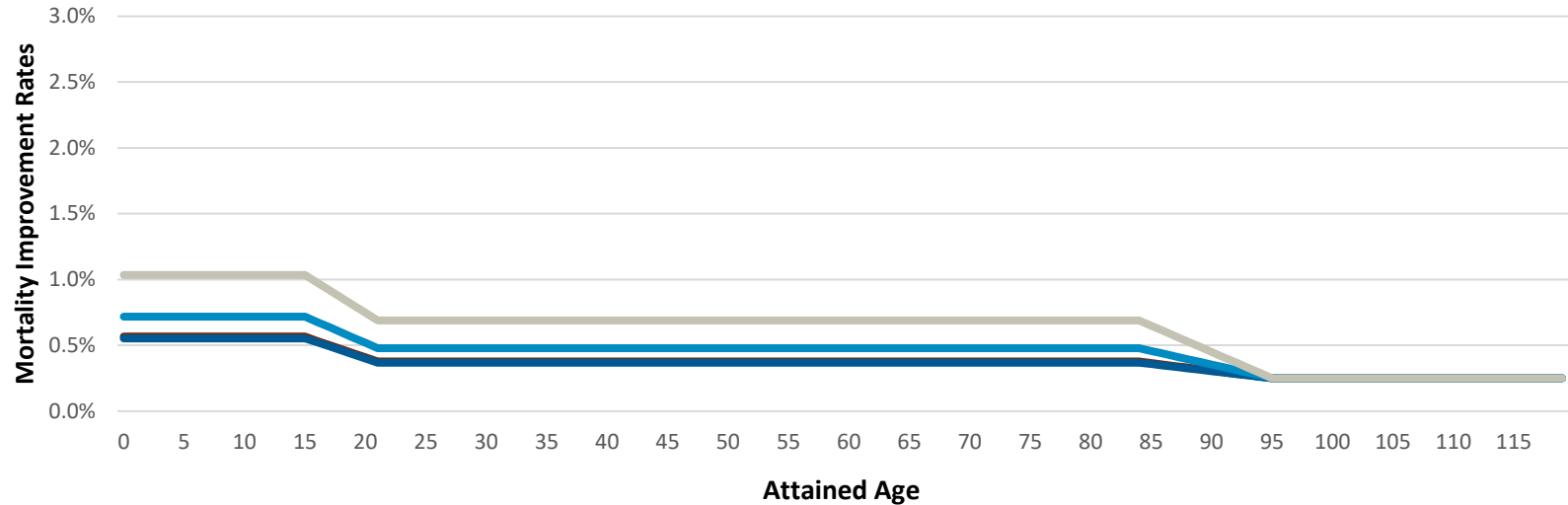
Males—Compare Smoothed Rates



Smoothed Preliminary—Female

Comparison by Scale Year

Females—Compare Smoothed Rates



F - 2021 F - 2020 F - 2019 F - 2018

Recommendation for Application of HMI Scale for 2021

Recommendation

- Use standard methodology for the published HMI scale for 2021
- Decrease the HMI scale for males for 2021 based on the application of the standard methodology
- Keep the HMI scale for females at 2020 level with no change for 2021 based non-materiality of change
- Recommend individual companies reflect their expectations around COVID-19 impacts for short-term mortality levels as part of a temporary mortality adjustment

Impact on the 12/31/21 Valuation

- Bring up to valuation date (standard Valuation Basic Table (VBT))
- Note: Companies start with different base mortality levels
 - ▣ Possibly higher mortality for the near term to reflect COVID-19
 - ▣ HMI scale would not attempt to adjust for COVID-19 as the exposure and the handling of deaths in the underlying company data will vary

Questions?



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