



AMERICAN ACADEMY *of* ACTUARIES

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Guaranteed Issue, Simplified Issue and Preneed Update

Joint American Academy of Actuaries Life Experience Committee
and Society of Actuaries Preferred Mortality Oversight Group

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Chairperson

November 17, 2015



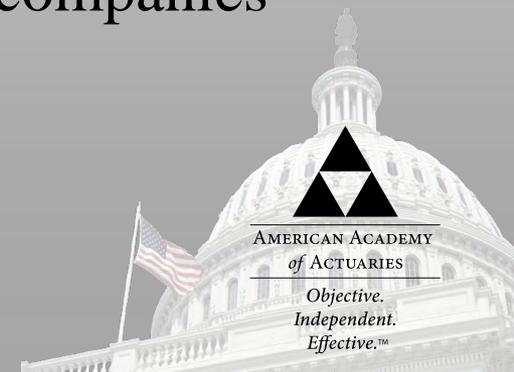
Agenda

- Status of GI/SI/Preneed table development to date
- Loading approach for each of the tables
- Inclusion of mortality improvement
- Potential uses for loaded tables (reserves, non-forfeiture, tax)



Guaranteed Issue (GI) - Background

- Data from calendar years 2005 - 2009
- 15 Contributing Companies
- Used aggregate smoking status data only
- Used data under 25 units (\$25,000) only
- Data essentially all direct marketed
- Excluded data had very different characteristics
 - Resulted in use of data from 11 contributing companies



GI - Background

- Relative to data used
 - 4.8 million policies exposed
 - 220,000 claims
 - 31 million units exposed
 - 1.3 million units in claims
 - 1 unit = \$1000 of ultimate death benefit



GI – Current Status

- Experience Basic Table created
 - Five year select and ultimate pattern
 - Actually an anti select pattern in first five years
 - Graduated results for ages 50 to 85
 - To review pattern at young ages – minimal experience
 - To confirm pattern at older ages
- Table validated against experience data
 - Count: 98.9% select and ultimate, 102.3% ultimate only
 - Units: 100.2% select and ultimate, 104.5% ultimate only
 - Wide range of results by company



GI – Current Status, cont'd

- Draft Valuation Table created
 - 2017 CSO loading formula as starting point
 - No mortality improvement suggested
 - Model Office calculations have been performed
 - Used aggregate data submitted as model office basis
- Re-ran draft table as expected basis to back-cast the fit to the underlying experience



GI – Current Status, cont'd

- Use of 2017 CSO loading may be too low to cover mortality of a sufficient number of companies experience
 - To cover mortality of 70-80% of the contributing companies, would need a margin of between 130%-160% rather than the ~118% in the 2017 CSO. Final loading will vary by age.
- Seeking input on the appropriate approach for determining margins and target coverage level.

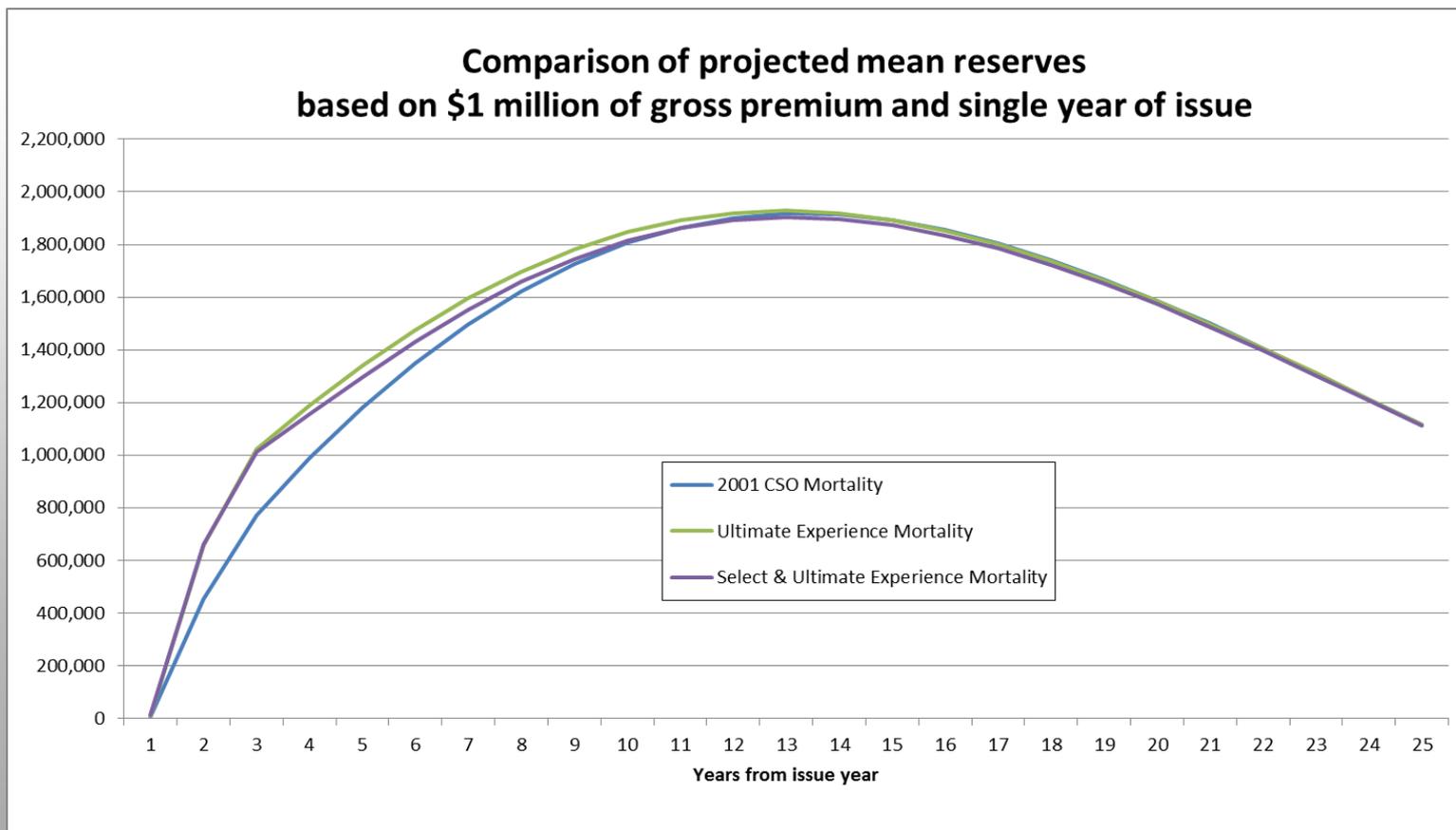


GI – Model Office Results

- Based on mean reserves:
 - The mean reserves on all tables developed using GI data are higher than those on 2001 CSO through year 9 then very similar
 - The excess in the third year is about 20% of single year of issue annual premium



GI – Model Office Results, cont'd



GI – Model Office Results, cont'd

- The net premiums are higher on the tables developed using GI experience data versus the 2001 CSO
- The mean reserve figures shown do not reflect the deferred premium offset to the mean reserve, which will be greater when net premium are higher
- To evaluate the impact of the higher net premiums, the model office was re-run using midterminal reserves and unearned premiums, assuming all contracts are on monthly mode

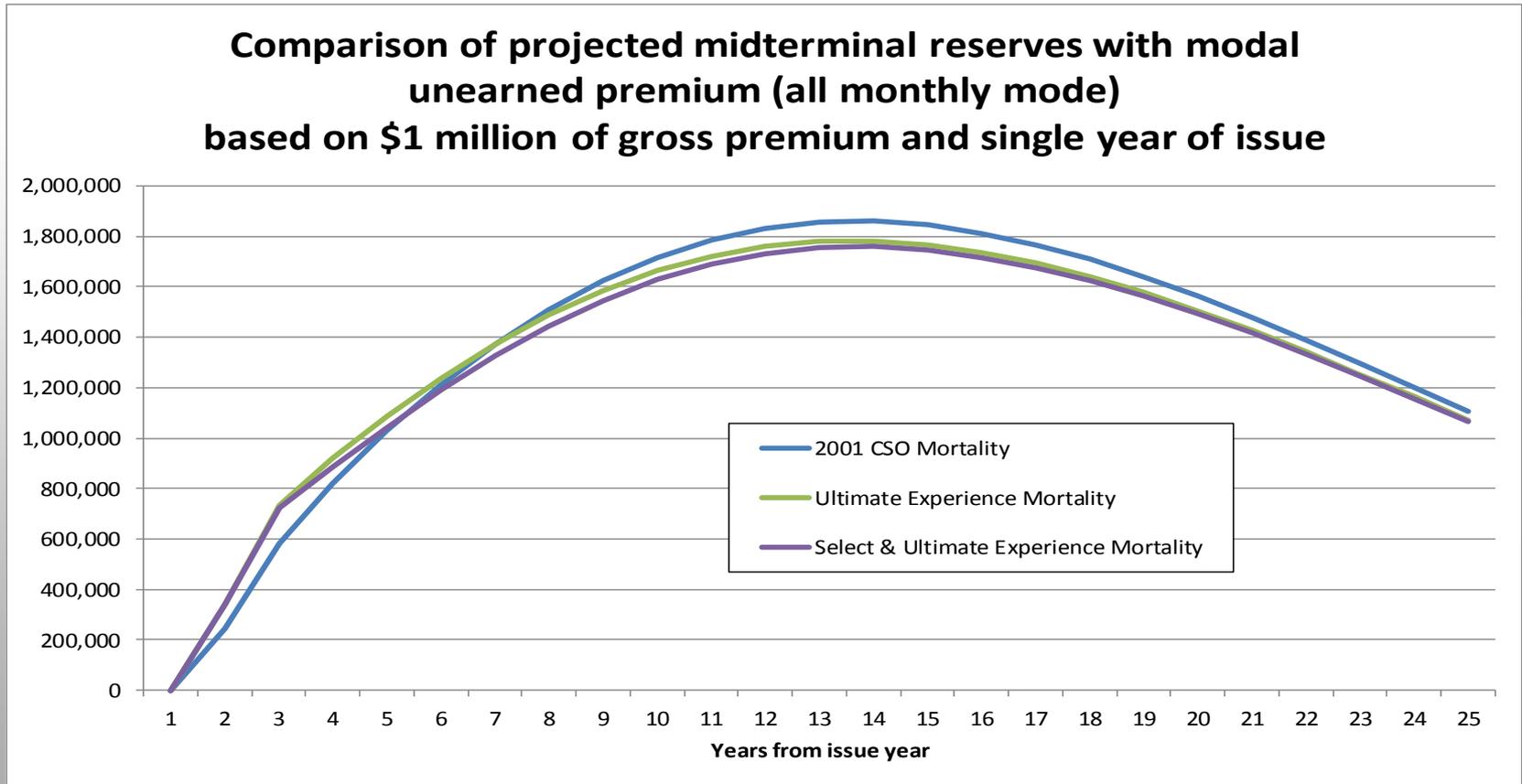


GI – Model Office Results, cont'd

- With change to midterminal reserves and unearned premiums:
 - Overall, reserve levels are lower (to be expected since only $1/24$ of annual net premium is included, rather than $1/2$)
 - The mean reserves on all tables developed using GI data are higher than those on 2001 CSO through roughly year 6 then are lower for all years starting in about year 8



GI - Model Office Results, cont'd



GI – Next Steps

- Address younger ages
- Consider older age values in conjunction with preneed mortality
- Finalize determination for mortality improvement and loading



Simplified Issue (SI) – Background

- Data from calendar years 2005 - 2009
- 30 companies overall
 - 26 companies by smoking status
 - 18 companies by aggregate smoking status
- 18 million policies exposed
- 270,000 claims
- 490 million units exposed
- 2.3 million units in claims



SI – Current Status

- Four data segments
 - Aggregate smoking status (smaller amounts)
 - Non smoker, all
 - Non smoker, \$25,000 and over
 - Different mortality pattern at high ages
 - Smoker
 - Majority of data is aggregate, small sizes



SI – Current Status, cont'd

- High level graduations completed
 - Individual attained ages
 - Select in ten year age groups – currently being expanded to individual ages
 - Limited data at longer durations
 - Limited data at younger ages



SI – Current Status, cont'd

- Preliminary analysis on loadings
 - Loading for approximately 70% coverage: 8%
 - Loading for approximately 80% coverage: 16%



SI – Next Steps

- Develop S&U composite table
 - Select period likely between 10 and 15 years
- Back-test table against contributed data
- Expand composite table to smoker distinct tables
 - Smoker/Nonsmoker experience is very thin
 - Propose using age and duration patterns from aggregate table to complete smoker distinct tables where data is limited
- Seek input on loading targets and structure as well as mortality improvement.
 - Observed a slight improvement in underlying data over 2004 to 2009 period of 1% per annum



SI – Considerations

- Significant development in Simplified Issue products and processes since this data collected
 - More non-med information and underwriting algorithms used – Rx checks and rules engines, MVR, MIB, financial information
- Need industry feedback on best approach to develop appropriate prospective valuation standard as requiring use of SI tables may not be appropriate for certain carriers business as of 1-1-2017



Preneed – Background

- Data from calendar years 2005 - 2009
- 11 contributing companies
- 8.0 million policies exposed
- 640,000 claims
- 35 million units exposed
- 3.0 million units in claims
- Single premium about 60% of exposure and 75% of deaths



Preneed – Current Status

- Three product segments
 - Single premium
 - Multi pay, modified benefit
 - Multi pay, level benefit
- Observe varying levels of early duration anti-selection depending on product structure:
 - High anti-selective risks (67% of exposure)
 - Single pay guaranteed issue; or
 - Modified death benefits
 - Low anti-selective risks (33% of exposure)
 - Single pay simplified issue; or
 - Multi pay with level or increasing death benefits



Preneed – Current Status, cont'd

- Bulk of experience in Single Premium form
- Gender – Male, Female, Unisex
 - Majority of business issued on a Unisex basis
 - Unisex tables currently proposed
 - Gender distinct tables will follow once unisex finalized
- 10-year observed select period



Preneed – Current Status

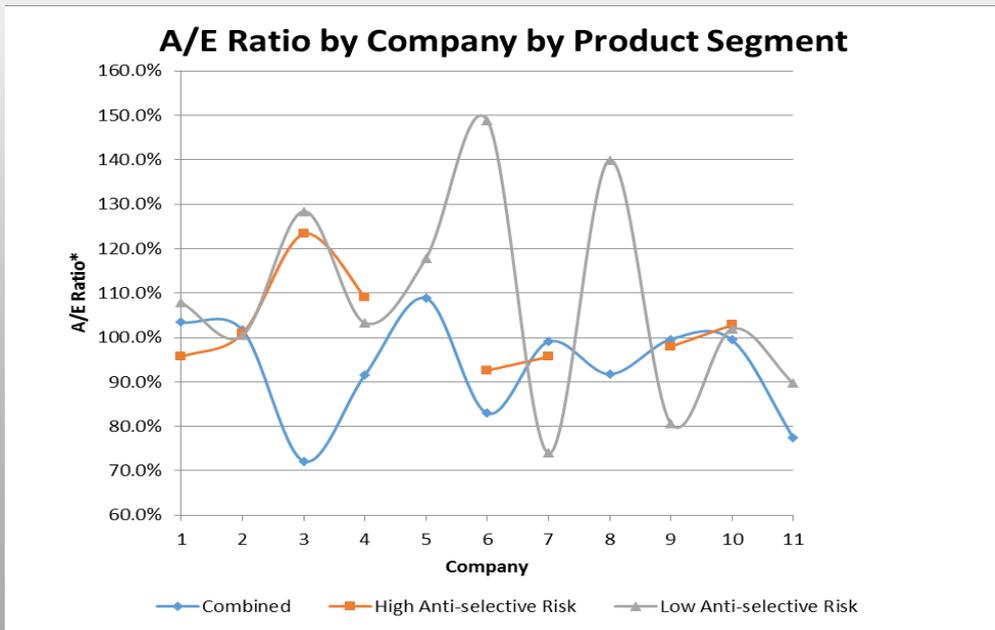
- While experience varied by the different product segments, recommending one composite structure
 - Pros for separate assumptions by product segment:
 - Better alignment of mortality with inherent level of anti-selection risk.
 - Pros for composite assumptions across product segments:
 - How companies differentiate their reporting of key risk information such as guaranteed issue and simplified issue may not be consistent;
 - Mortality results by company in the lower anti-selective class exhibited more volatility
 - Mortality results more consistent across all companies when compared to the composite assumptions



101.6% 106.6% 128.4%
 99.6% 102.6% 117.9%

Preneed – Current Status

- Seeking input for the appropriate loading target
 - Load varies significantly depending on whether use a combined product segment or separate product segment

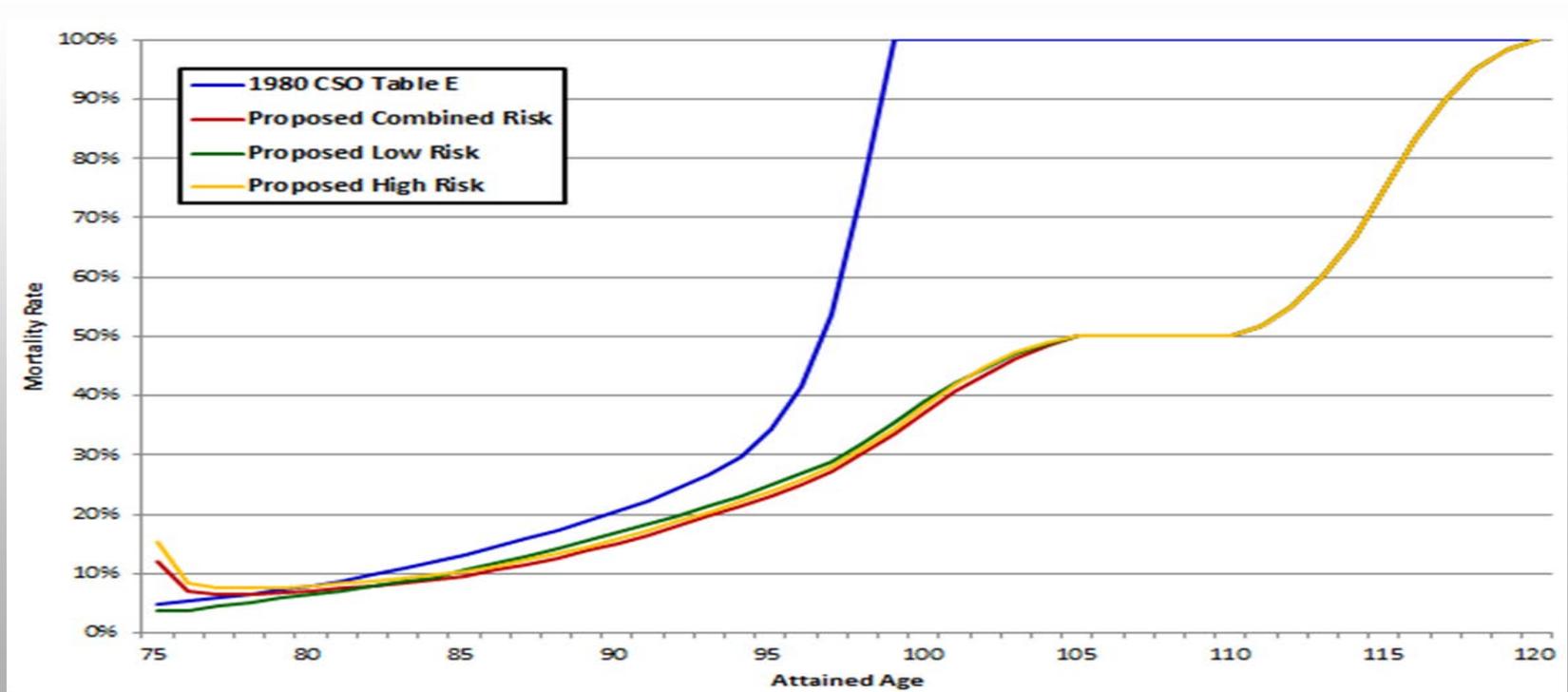


Product Segment	Margin @ 70% Coverage	Margin @ 80% Coverage
High Anti-selective Risk	2.6%	6.6%
Low Anti-selective Risk	17.9%	28.4%
Composite Risk	-0.4%	1.6%



Preneed – Current Status

Comparison of Loaded Mortality Rates to 1980 CSO Table E by Product Segment

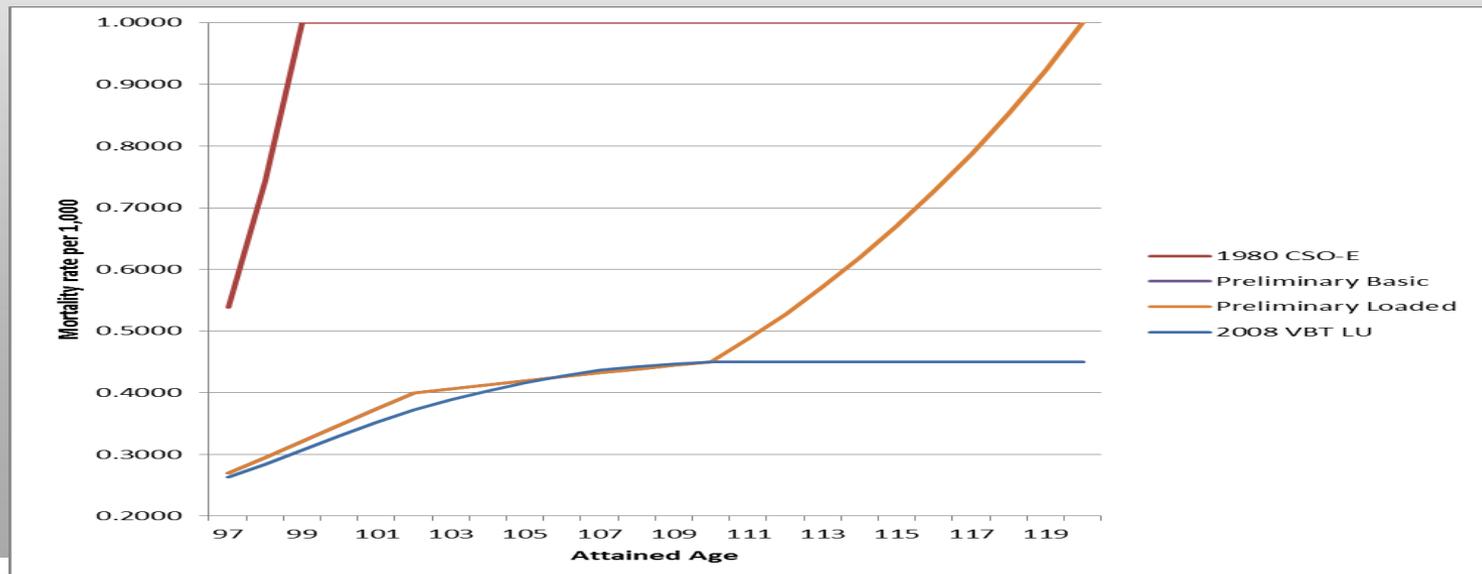


Note: Proposed tables show prior version which graded to 0.500 per 1000 whereas current tables at 0.450 per 1000, consistent with 2008 VBT LU tables

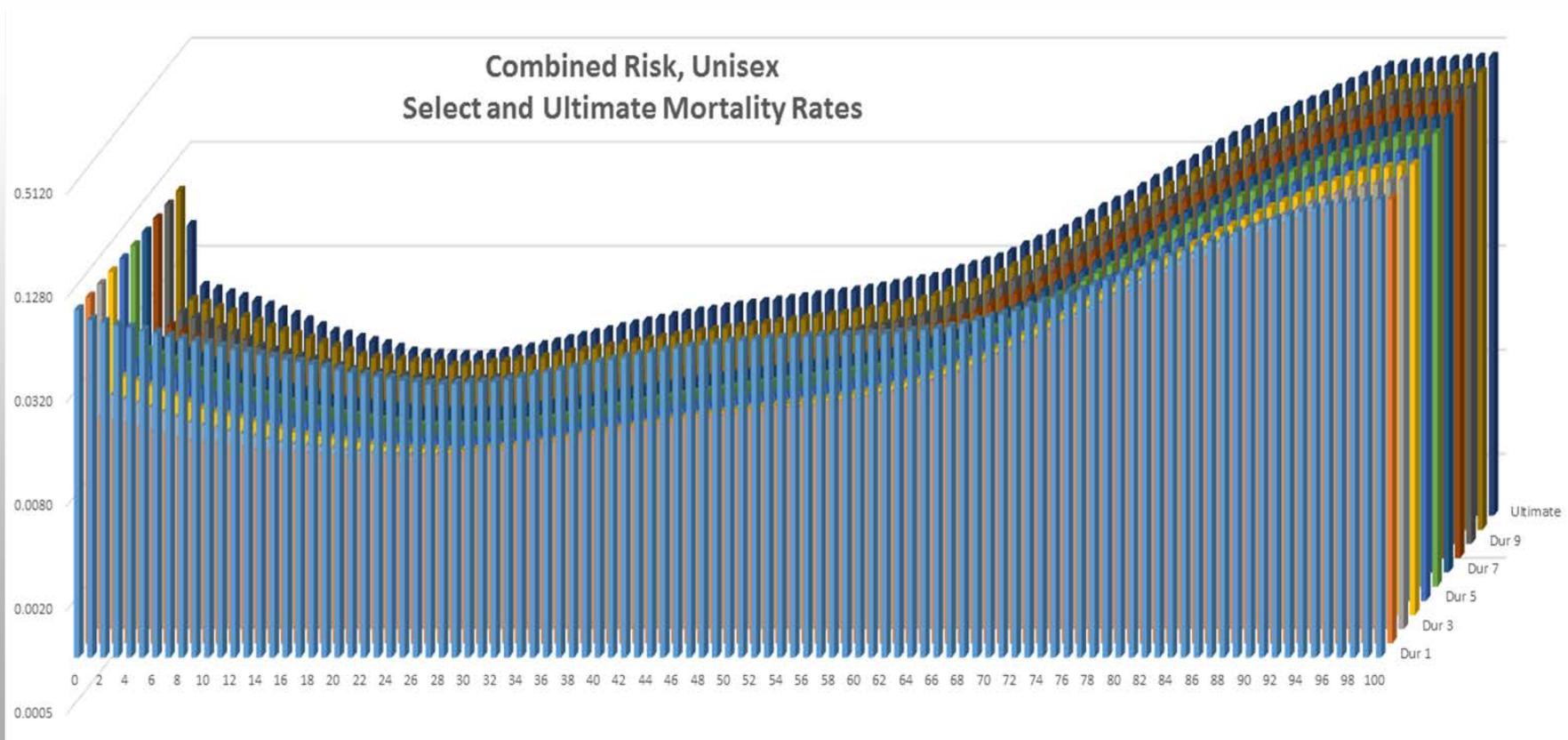


Preneed – Current Status, cont'd

- Data available to highest ages, 100+
 - Considered appropriate pattern of mortality for attained ages 97-120
 - Pattern significantly varies from that in the 1980 CSO table (current table)
 - Recommending pattern which more closely follows the 2008 VBT Limited Underwriting table.



Preneed – Example of preliminary mortality rates



Preneed - Year 1 Mean Reserve Impact vs 1980 CSO-E

Impact Summary

Single Pay

Issue Age	Low Risk	High Risk	Comb Risk	Ult Only
65	-\$32	+\$25	-\$6	+\$28
75	-\$32	+\$10	-\$6	+\$6
85	-\$17	+\$5	-\$0	-\$4

Ten Pay Full DB

Issue Age	Low Risk	High Risk	Comb Risk	Ult Only
65	-\$3	+\$11	+\$9	+\$7
75	-\$5	+\$16	+\$13	+\$4
85	+\$5	+\$27	+\$22	+\$3

Estimated Year 1 mean reserve increase per \$ 1000 face amount

Mean reserves calculated using Low/High/Comb/Ult Only mortality , CRVM method, 3.50% interest

Reserve increases projected with Low/High/Comb/Ult Only basic mortality

“Ult Only” values based on reshaped mortality that excludes a select period



Preneed – Next Steps

- Finalize target loading
- Obtain guidance from LATF on:
 - Inclusion/exclusion of mortality improvement to valuation date – observed modest deterioration over 2004 to 2009 period
 - Target loading level and structure
 - Use of the table for non-forfeiture or reserves only
- Develop gender specific tables



For all tables

- Need to consider approach to loading
 - GI used 2017 loading as first approach
 - Level of loading varies significantly by table and coverage target
 - Coverage level versus percentage load
- Need to consider appropriateness of mortality improvement
 - Varies from modest deterioration observed to slight improvement, depending on table
- GI/SI products will likely meet the deterministic exclusion test; however, if not, and required to calculate a deterministic reserve
 - PBR margins may need to be reconsidered as designed specifically for the underlying VBT/fully underwritten business and alignment with CSO loading for lowest credibility
- Current NPR lapse rates may not be appropriate for the GI/SI business – preneed already excluded

