

LIFE POST-NAIC UPDATE WEBINAR

Summer 2017



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AUGUST 25, 2017

Agenda

- Moderator—Dave Neve, MAAA, FSA, CERA
 - Chairperson, Academy’s Life Reserves Work Group

- NAIC LATF/PBR Update—Mike Boerner, MAAA, ASA
 - Director, Actuarial Office, Texas Department of Insurance
 - Chair, NAIC Life Actuarial (A) Task Force; PBR Review (EX) Working Group

- NAIC Risk-Based Capital Update—Philip Barlow, MAAA, FSA
 - Associate Commissioner, District of Columbia, Department of Insurance, Banking and Securities
 - Chair, NAIC Life Risk-Based Capital (E) Working Group

- Longevity Risk—Tricia Matson, MAAA, FSA
 - Chairperson, Academy’s Longevity Risk Task Force



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PBR Boot Camp

- September 11-13 in Las Vegas (Regulatory Focus)
- 2 ½ intense days covering what you need to know on PBR; includes lectures, case studies, and small group discussions
- Will discuss all the latest information on PBR
- Excellent faculty, including regulators and industry leaders in PBR

<https://www.actuary.org/content/pbr-fall-boot-camp>



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NAIC Update Summer 2017

Mike Boerner, MAAA, ASA
Actuarial Office Director
Texas Department of Insurance



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Topics

- ❑ Current State PBR Adoption Status
- ❑ NAIC Exec/Plenary Adoptions for 2018 Valuation Manual & Other Adoptions
 - ❑ VM-22 – SPIA maximum valuation interest rates beginning 1/1/2018
 - ❑ Table governance (14 days eliminated)
 - ❑ NPR clarification for AG48 and Model 787
 - ❑ AG38_8D_8E
 - ❑ VM-31 – Phase 1 & 2
 - ❑ Life PBR Companywide Exemption
 - ❑ VM-25
 - ❑ Actuarial Guideline LTC – Applies beginning year-end 2017
- ❑ Work in Progress
 - ❑ Mortality Tables: Guaranteed Issue, Simplified Issue (SI)
 - ❑ PBR Mortality Guidance / Revisions
 - ❑ Experience Reporting, VM-50 & VM-51
 - ❑ VM-31 Phase 3, Definitions Project, Economic Scenario Generator
 - ❑ Other



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State Adoption Status as of August 21, 2017

Legislative Session	#	States	% Premium Threshold
2013 - 7/20/17 Enacted	47	AL, AZ, AR, CA, CO, CT, DE, FL, GA, HI, IL, IN, IA, ID, KS, KY, LA, ME, MD, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WI, WV, WY	85.85%
2017 Introduced	3	MA NY DC	3.27% 9.20% 0.73%
Total enacted, introduced (Goal: 42 states & 75% premium)	50		99.05%

Source : NAIC



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VM-22 Maximum Valuation Interest Rates

Scope: Group, individual, directly written or assumed, including both life contingent and term certain only contracts

- Immediate annuity contracts;
- Deferred income annuity contracts;
- Structured settlements in payout or deferred status;
- Payout annuities from settlement options or annuitizations from other contracts
- Supplementary contracts; and
- Contracts containing other similar fixed income payment streams, including those attributable to contingent deferred annuities and guaranteed lifetime income benefits once the underlying contract funds are exhausted.



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VM-22 Maximum Valuation Interest Rates

Requirements derive a statutory maximum valuation interest rate as follows:

- Determine the Valuation Rate Bucket (A, B, C, or D), a function of issue age and length of Reference Period, which is the number of years from Premium Determination Date to the last non-life contingent payment (i.e., the term certain period).
- Calculate the Reference Rate (R), which is the weighted average of the Quarterly Treasury Rates using the weights in Table 3 for the applicable Valuation Rate Bucket.
- Calculate the Spread (S), which is the weighted average of the Expected Spreads using the weights in Table 4 for the applicable Valuation Rate Bucket. The Expected Spreads are 4 numbers (one for each number of years in Table 4), which are the weighted average using the Portfolio Credit Quality Distribution percentages as weights applied to the spreads by asset quality in VM-20, Table F, for the WAL in Table F corresponding to each number of years in Table 4.



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VM-22 Maximum Valuation Interest Rates

Calculation requirements (cont.):

- Calculate the Default Cost (D), which is the weighted average of the Expected Default Costs using the weights in Table 5 for the applicable Valuation Rate Bucket. The Expected Default Costs are 3 numbers (one for each number of years in Table 5), which are the weighted average using the Portfolio Credit Quality Distribution percentages as weights applied to the default percentages by asset quality in VM-20, Table A, for the WAL in Table F corresponding to each number of years in Table 5.



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VM-22 Maximum Valuation Interest Rates

Calculation requirements (cont.):

- Calculate the maximum valuation interest rate as $R+S-D-E$ where E is 0.25%
 - Calculate the maximum valuation interest rate quarterly
 - All weights are subject to change based on LATF review to better reflect changes in the shape of the yield curve and/or the level of market interest rates
 - Rates will be posted on NAIC website



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VM-22 Maximum Valuation Interest Rates

- ❑ Non-jumbo contracts use the quarterly maximum valuation interest rate.
- ❑ Jumbo contracts use a daily calculated maximum valuation interest rate where such daily rate is calculated as the applicable quarterly rate plus the Daily Corporate Rate less the Average Daily Corporate Rate.
- ❑ The requirements of VM-22 apply to policies, contracts, or supplementary contracts within the VM-22 Scope issued after 12/31/17.
- ❑ The new rates do not apply to disability income policies.
- ❑ The new rates are still considered “maximum” rates and there will be times when the use of a lower rate is both prudent and appropriate.



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VM-22 Maximum Valuation Interest Rates

- Status and timing of NAIC posting of rates:
 - ▣ Rates will be posted on the industry tab on the NAIC website
 - ▣ First posting of rates will be on 1/1/18
 - ▣ A possible trial posting may occur prior to 1/1/18



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Table Governance, NPR Clarification, & AG38

- Table Governance:
 - ▣ Amended VM, Section I, Introduction, Paragraph 6 to eliminate the 14-day exposure period and formal adoption by LATF for designated tables. Exposure & adoption not necessary as tables follow a prescribed process. (APF 2016-22)
- NPR clarification for AG48 and Model 787:
 - ▣ Amended AG48 to make clear that the NPR will use the 2017 CSO for the Actuarial Method. Similar clarification made in VM-20, Section 3.C.1 for Model 787. (APF 2017-53)
- AG38 changes to 8E & 8D:
 - ▣ 8E change excludes ULSG business for which VM-20 is applied for the reserve standard.
 - ▣ 8D change applies the VM applicable on the valuation date versus prior language that applied the VM with amendments adopted by the NAIC as of 7/1 preceding the valuation date.



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VM-31 Phase 1 & 2

- Based on feedback from the 2016 PBR Pilot the first phase was to minimize redundancies between the Overview Section and the Main Report. The second phase helped to standardize the report format and added section headers.
- An Executive Summary replaced the Overview Section and is required to be submitted to the domiciliary commissioner by 4/1 and to other commissioners on request. The full report is to be submitted to any commissioner upon request. The Executive Summary includes:
 - ▣ Description of policies &/or contracts subject to VM-20 or VM-21 and, for VM-20, the groups of policies covered by each sub-report.
 - ▣ Summary of critical content of all VM-20 sub-reports. This includes information regarding material risks, rationale for determining materiality, changes in amounts or methods, and information on assets and risk management.



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Life PBR ~~Companywide~~ Exemption (APF 2017-7)

- Changes to this exemption include:
 - ▣ Removal of the RBC 450% requirement for companies with less than \$50 million of ordinary life premium as defined in this exemption.
 - ▣ Commissioner discretion to allow the exemption to continue for up to two more years if exemption was passed in a year but not in each of the next two years due only to not meeting the RBC 450% requirement.
 - ▣ Changes and clarification that the ULSG exemption criteria only allow exemption if the company has ULSG policies issued, either directly or assumed, on and after 1/1/20, and through the rest of the calendar year that meet the definition of a non-material ULSG.



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Life PBR ~~Companywide~~ Exemption (cont.)

- Additional changes & clarification to this exemption include:
 - Removal of preneed from the ordinary life premium volume.
 - Removal of any reserve amount from the ordinary life premium volume due to reinsurance assumed where the reserve transferred due to the reinsurance assumed was reported in Exhibit 1 as ordinary life premium.
 - Clarification that the exemption applies to life insurance policies issued in the current calendar year that would otherwise be subject to VM-20.
 - Other clarification edits.



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VM-25 – Health Reserves

- VM-25 for the 2017 Valuation Manual uses applicable requirements in the APPM A-10 and applicable actuarial guidelines where several are referenced in VM-25. This provides health reserve requirements for policies issued on and after 1/1/17.
- States will have to use their own rulemaking or other process to apply VM-25 claim reserve requirements as appropriate for claims incurred on and after 1/1/17 under policies issued prior to 1/1/17.
- VM-25 amendment adopted by the Health Actuarial (B) Task Force preserves the valuation interest rate for claim reserves for policies not requiring contract reserves. Language for this valuation rate was explicitly provided versus referring to the interest rate for single premium immediate annuities as this was revised in the Valuation Manual's new VM-22.



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Actuarial Guideline LTC

- The guideline requires a stand-alone asset adequacy analysis for a company's LTC business when it has over 10,000 inforce lives covered by LTC contracts as of the valuation date.
- The asset adequacy analysis can be in the form of cash flow testing or non-cash flow testing such as a gross premium valuation.
- If non-cash flow testing is used then any additional reserves needed must be set up.
- If cash flow testing is used then any reserve deficiency may be aggregated with a reserve sufficiency from all significant non-LTC business that is also cash flow tested. Any remaining reserve deficiency must be set up.



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Actuarial Guideline LTC

- Required documentation is to be submitted to the commissioner of the company's state of domicile and provided on request to other states.
- Documentation includes:
 - Assumptions on mortality, voluntary lapse, morbidity, and investment returns and interest rates. Experience and support for the assumptions must be provided.
 - Assumptions on future rate increases must be documented by policy form or policy groupings and should adequately describe how these assumptions are developed. Any rate increases already approved must be documented by jurisdiction with approved implementation timelines.
 - Any other material assumptions with support along with documentation for assumptions that have changed significantly from the prior year's analysis.



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Work In Progress

- Mortality Tables:
 - Guaranteed Issue
 - Simplified Issue (SI)
- PBR Mortality Guidance / Revisions
- Experience Reporting, VM-50 & VM-51
- VM-31 Phase 3
- Definitions Project
- Economic Scenario Generator
- Other



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Guaranteed Issue Mortality Table

- LATF exposed for a 45-day comment period ending 10/24-the GI report, GI table, definition of GI, and the amendment to implement the GI table in the Valuation Manual.
- The amendment is one of two which was recommended by the Academy Life Experience Committee and SOA Preferred Mortality Oversight Group (Joint Committee). This amendment subjects GI business to VM-20 but allows any GI term business to use the deterministic reserve exclusion test. The amendment provides that the NPR for GI term business is pursuant to applicable requirements of VM-A and VM-C versus the different NPR requirements in VM-20 for other term life products. This amendment also applies the GI table for nonforfeiture.



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Guaranteed Issue Mortality Table

- ❑ The GI table is a five-year anti-select and ultimate table. The loaded ultimate table is to be used for reserves and nonforfeiture.
- ❑ Loading is approximately 17% and varies by attained age.
- ❑ Loading covers almost 99% of exposure and 55% of contributing companies.
- ❑ One comment from prior exposure was concern that mortality may be too low for final expense. The Joint Committee said final expense was excluded from the table. The Joint Committed added final expense may not be included as most final expense products have health conditions that must be met which conflicts with the definition of GI.



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Simplified Issue Mortality Table

- LATF exposed for a 45-day comment period ending 9/21 the SI report, SI mortality tables, SI definition and a request for comment regarding whether the SI tables should be used for nonforfeiture.
- The SI table is a 5-year anti-select and ultimate basic table and an ultimate only table. The loaded ultimate table is to be used for reserves and may be used for nonforfeiture.
- The SI table applies to simplified issue business versus simplified underwritten business, which includes more health questions or provides authorization for the underwriter to obtain potentially invasive and non-invasive information on the applicant, but stops short of being accelerated underwriting.



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PBR Mortality Guidance / Revisions

- The VM contains a number of key cites that provide requirements regarding use of a company's mortality experience for PBR.
- These cites include requirements for establishing mortality segments, use of and sources for company experience, and guidance/requirements relating to aggregation of company experience for determining the credibility percentage and the sufficient data period.
- Some of these cites in VM-20 are: 9C1a, 9C4b, 9C2d, and 9C6b(ii)



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PBR Mortality Guidance / Revisions

Questions discussed with the LATF VM Review Group include:

- Is there enough clarity for companies to know when they can or cannot use a more aggregate level of mortality experience to determine the credibility percentage and the sufficient data period?
- VM-20 9C2d appears to require only a top down approach to determine mortality segments from more aggregate experience using certain techniques. Is there sufficient clarity here and is only a top down approach allowed?
- Could two companies with identical actual mortality experience develop two different prudent mortality assumptions?
- Should the prudent mortality assumption based on an aggregate level be different than the prudent mortality assumption based on more granular level?



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PBR Mortality Guidance / Revisions

- The Academy/SOA Joint Committee is working on this topic, and at the NAIC Summer LATF meeting provided drafts of questions and possible interpretations responsive to these questions.
- The LATF VM Review Drafting Group has been working on this topic to recommend any appropriate guidance / revisions to LATF. This drafting group will review the input from the Academy/SOA Joint Committee to help in forming a recommendations to LATF.
- For 2017 PBR reviews companies will need to have provided adequate documentation and support for the use of their own mortality experience for PBR. These reviews and in any work with LATF, PBRRWG, and VAWG can help to supplement any additional guidance / revisions for PBR mortality.



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Experience Reporting

- VM-50: As reported by Larry Bruning, the NAIC Executive Committee voted at the Summer meeting to proceed with work to implement the role of the NAIC into VM-50 for future NAIC Exec/Plenary adoption. LATF will consider these edits to VM-50 on a future call.
- VM-51: LATF exposed for a 90-day comment period a report and list of data elements for AUW submitted by the Academy/SOA Joint Committee. Comments could lead to further refinement for future exposure of an amendment to VM-51 to incorporate such data reporting related to AUW.



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VM-31 Phase 3

- ❑ Phase 3 will review the newly adopted VM-31 (effective 1/1/2018) in its entirety and propose changes as needed throughout.
- ❑ It is expected that Phase 3 changes to VM-31 will be less structurally sweeping than the changes enacted during Phases 1 and 2.
- ❑ Phase 3 aims to clarify existing requirements and deploy more precise, consistent, and less redundant language.
- ❑ In particular, clarifications are expected to more directly address the requirements for VM-21 and exclusion tests. There are proposals within several subsections for additional sub-requirements, but the scale and scope of such additional requirements are not expected to be considerable.



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VM-31 Phase 3 (Examples under Consideration)

- Additional information in the Executive Summary. This includes, as appropriate, a description of any material differences in methods, assumptions, or risk management practices between groups of policies covered in separate sub-reports
- Clarifications such as relating to documentation of exclusion testing and VM-21 reporting requirements
- Minimizing restatement of VM-20 requirements in VM-31
- Identify the Deterministic Reserve method used



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Definitions Project

- VM Review Drafting Group has been working on recommendations to LATF regarding two phases of this project.
- The first phase is a recommendation of definitions that are not changed but simply moved or provided only in VM-01. These were exposed for a 21-day comment period ending 8/29. (APF 2017-60)
- The second phase is a recommendation for clarification or other changes to definitions. These were exposed for a 30-day comment period ending 9/7. (APF 2017-61).



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Economic Scenario Generator

- Larry Bruning will lead an informal group to discuss interest and equity Economic Scenario Generators used for reserves as well as capital. This informal group will provide any recommendations as appropriate to LATF and the Life RBC (E) Working Group.



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Other

- AG43 / C3P2 Subgroup
- 2018 GRET (Exposed for comment to 9/7)
- Consideration for removing VM-05 from the Valuation Manual and replacing references to VM-05 with applicable references to Model 820.



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Capital Update

Philip Barlow, MAAA, FSA

Associate Commissioner for Insurance

District of Columbia Department of Insurance, Securities and Banking



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Agenda

- Life Risked-Based Capital (LRBC) Working Group
- Investment Risk-Based Capital (IRBC) Working Group
- Capital Adequacy Task Force
- Group Capital Calculation Working Group
- Valuation of Securities Task Force



Life Risked-Based Capital Working Group

- On conference calls prior to the meeting, the LRBCWG:
 - Discussed the primary security shortfall instructional change. There were suggested changes in the instructions prior to the 6/9 call concerning where the language noting the calculation is not required is located and to clarify that only cessions regulated under AG48 needed to be listed. A short re-exposure for the changes was made; no comments were received and the entire instructional change was adopted on 6/19.
 - The FHLB proposal was revised to incorporate guardrails around the amount of activity in which an insurer could engage without a higher RBC charge. There was also a suggestion that NAIC staff produce a report for the WG on FHLB advance activity. The revised proposal was exposed and no comments were received.
 - The working agenda was revised to eliminate the Stress Testing Subgroup and move the subgroup's charge back to the LRBCWG.



Life Risked-Based Capital Working Group

- At the Meeting in Philadelphia:
 - Adopted the 2017 life and fraternal RBC newsletters which discuss the changes to the 2017 formulas.
 - Adopted the 2017 Working Agenda
 - Heard update from Academy Longevity Risk Task Force
 - Heard update from Academy C2 Work Group
 - Continued discussion of the FHLB proposal – NAIC staff will produce a report using 2016 data by 10/1.
 - Heard from NAIC legal staff about obstacles and concerns regarding information sharing of RBC data for analysis of the RBC formula and factors with actuarial groups.
 - Reviewed 2017 life and fraternal aggregate RBC statistics.



Life Risked-Based Capital Working Group

- C-2 Life Mortality RBC Work Group
 - The C-2 work group was formed to review the current NAIC C-2 RBC requirement for life insurance. The group is reviewing assumptions and methodology and will recommend revisions, as appropriate, which may include structure and factor updates.
 - In-Scope: Individual & Industrial, Group & Credit Life
 - Out-of-Scope: A&H, Annuities
 - Work to date
 - Compiled list of mortality risk considerations
 - Reviewed other regimes
 - Reviewed potential methods, structures, and approaches
 - Next step is to analyze mortality risk using a Monte-Carlo simulation model



Investment Risk-Based Capital Working Group

- On conference calls prior to the meeting, the IRBCWG:
 - Exposed Academy C1 Work Group's 6/8 report on bond factors
 - Discussed referrals sent to SAPWG and VOSTF to inform them of the increase granularity of the bond factors and determine what impact that would have on them.
 - SAPWG responded that the project would not impact the measurement guidance in the Accounting Practices and Procedures Manual.
 - VOSTF has a recommendation from the Investment Analysis Office under consideration.



Investment Risk-Based Capital Working Group

- At the Meeting in Philadelphia:
 - Reviewed comments on the C1 Work Group's 6/8 report
 - Academy will revise portfolio adjustment and bond factors
 - IRBCWG will hold calls to discuss other material issues
 - Discussed a joint meeting of all RBC WGs will be held regarding implementation of increased bond granularity
 - Discussed comments on the ACLI proposal on real estate treatment in the life RBC formula
 - ACLI will update proposal for items in the Academy letter and provide the revised proposal to the WG.

Capital Adequacy Task Force

- On a conference call prior to the meeting, the Capital Adequacy Task Force:
 - Adopted the structure for an operational risk charge in RBC, but set the charge to 0 for 2017 to provide time to address some final issues with the calculation.
 - Adopted a proposal to remove the factor for Non-Government Money Market Mutual Funds (MMMMFs) avoid double-counting.
- At the Meeting in Philadelphia:
 - Received a status update from the ad hoc group regarding the analysis of the affiliate investment page in all formulas in order to clarify the instructions and functionality of the formula page.



Group Capital Calculation Working Group

- Received an update on the baseline exercise.
- Exposed an NAIC staff memo on the treatment of captives for a 30-day comment period, ending 9/5. The memo includes specific proposed adjustments for captives that assume XXX/AXXX business.
- Discussed how permitted and prescribed accounting practices should be treated and agreed to collect data from Note 1 of the annual financial statements to determine the extent of permitted and prescribed practices.
- Discussed a compiled listing of recommended jurisdictions for which a scalar should be developed. The listing includes recommended data sources from which the jurisdiction's average capital ratio may be obtained.



Group Capital Calculation Working Group

Jurisdiction	Source of Data
Solvency II	SNL
U.S. RBC	SNL
U.S. Basel III	SNL
Australia	APRA GI Statistics ¹
Bermuda	SEC (Company 10Ks)
Brazil	IMF FSAP (2012)
Canada MCCSR	IMF FSAP (2014)
India	Private company data
Japan SMR	Private company data
Mexico	Private company data
Singapore	Monetary Authority of Singapore
South Korea	AXCO
Switzerland SST	IMF FSAP (2014)
Chile	SVS
Malaysia	BNM
Colombia	SFC



Group Capital Calculation Working Group

- NAIC President Ted Nickel announced that the Federal Reserve has accepted an NAIC invitation to work with the NAIC on approaches to group capital.
 - The Fed supervises 2 systemically important insurers and 12 insurers that own a bank or thrift.
 - In 2016 the Fed approved an advance notice of proposed rule-making on a framework for capital standards.
 - The NAIC submitted comments on the proposal, which prompted the desire to meet and discuss.



Valuation of Securities Task Force

- A couple of relevant items were discussed at the VOSTF meeting in Philadelphia:
 - BlackRock Solutions made enhancements to its CMBS model
 - Preliminary analysis shows the new model is somewhat more conservative
 - The model will be used for 2017
 - Heard a report from the Structured Securities Group (SSG) that no technical comments have been received on the proposed application of “through-the-cycle” macroeconomic scenarios to financial modeling of the RMBS and CMBS



Fall National Meeting

- All of the RBC working groups, the Group Capital Working Group, and the Capital Adequacy Task Force are not currently on the agenda for the Fall NAIC meeting.
 - There may be an attempt to get more done through conference calls through the rest of this year and early next year.
 - The next opportunity for face-to-face meetings will be March 2018.



Longevity Risk

Tricia Matson, MAAA, FSA

Chairperson, Academy's Longevity Risk Task Force



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Background

- ❑ NAIC's Longevity Risk Subgroup (LRSG) formed to evaluate potential RBC charge for longevity risk
- ❑ LRSG's direction to the Academy's Longevity Risk Task Force (LRTF) is for us to evaluate:
 - ❑ A potential risk charge based on the difference between reported statutory reserves and statutory reserves using stressed mortality (converted to a factor)
 - ❑ A risk charge amount split between:
 - Reserve component = difference between locked in Stat mortality basis and 2016 Stat mortality basis
 - RBC component = difference between 2016 mortality basis and stressed "tail" mortality basis
- ❑ In addition, LRTF has been asked to define an appropriate tail stress event and how to apply in statutory valuation or RBC
- ❑ LRTF will focus on methodology; the statistical safety level for the risk charge (i.e., time horizon and confidence level) will be defined by the regulators



Overview

- April presentation to LRBC provided an overview of the LRTF's analysis of historical mortality improvement data to derive a 95th percentile improvement stress event
 - LRTF considered both direct use of the underlying data as well as use of an assumed normal distribution
 - Overall calibration using normal model results in a 25% shock (165% at 95th less 140% at 85th). The shock for older ages (85+) would be 50%
 - LRTF performing additional work to determine which approach is most appropriate
- Work since April includes:
 - Further evaluation of the historical data
 - Development of specifications for a field study
 - Re-evaluation of which risks should be included in the RBC charge



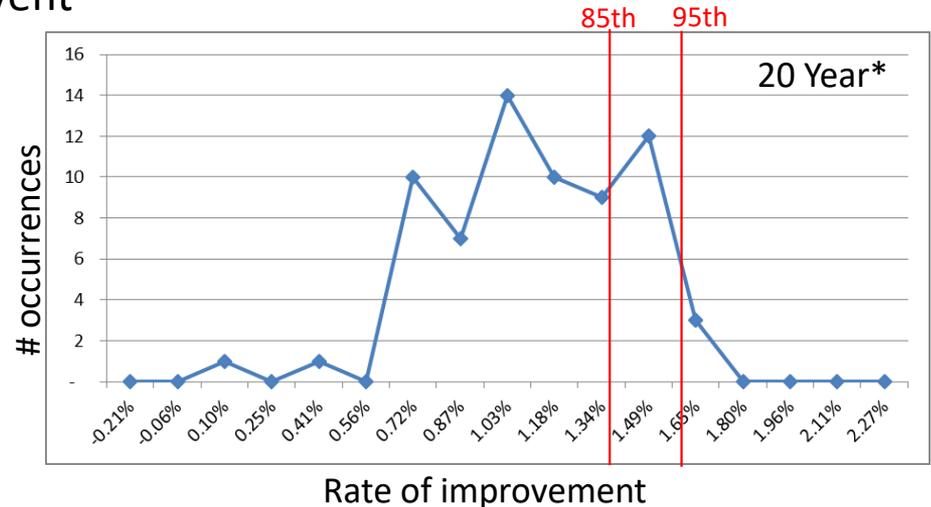
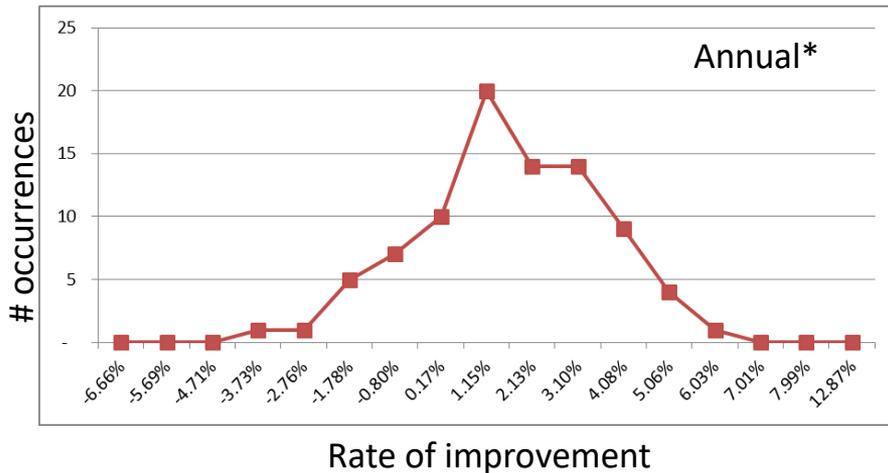
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Distribution of Mortality Improvement Data

Below is the distribution of annual and 20-year mortality improvement data from 1940-2013 used to develop the shock event



*Annual is improvement over historical one year periods

*20 year is improvement over historical 20 year periods, converted to an annual rate



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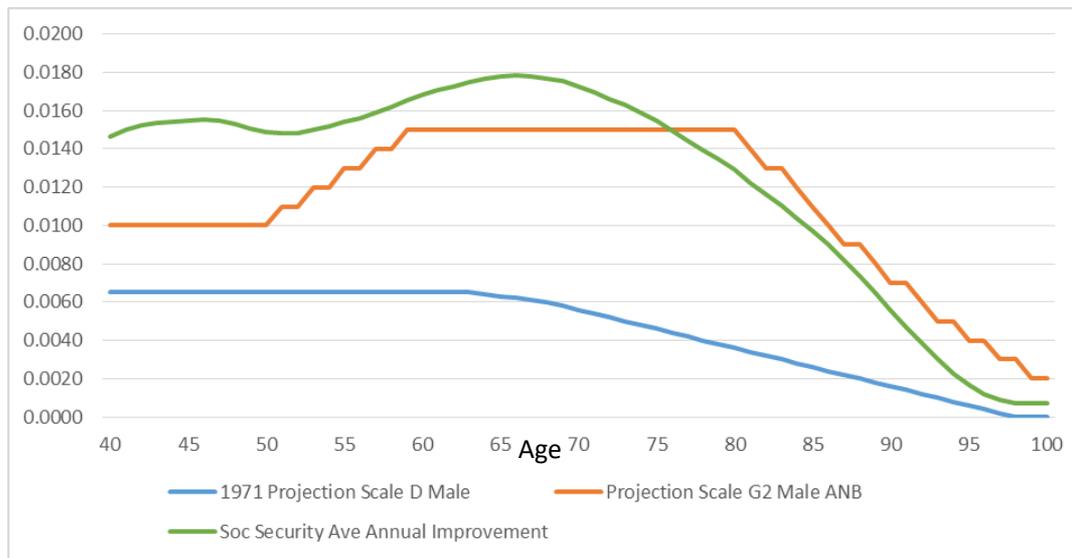
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Backtesting

We also compared certain improvement scales to social security-average improvement from actual historical data (1971 to 2013). The original scale developed in 1971 was clearly insufficient relative to experience now available. Scale G2, at least at retirement ages, is aligned with the social security data we evaluated

Rate of improvement



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Field Study

- LRTF suggests that the NAIC's LRSG conduct a study to evaluate results of applying the agreed upon approach to actual company blocks of business
- LRTF developed instructions and a template to be completed to enable LRSG to conduct a field study on individual and group annuities
- Pending determination of stress event to be evaluated



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Field Study Details

Request Dec. 31, 2016 statutory reserve amounts calculated on the following 2 assumption bases, under a range of valuation interest rate, issue age, duration since issue, and gender combinations:

Run A – 2016 CARVM Valuation Basis (assumed to be 85th %ile)

- CARVM methodology
- 2012 IAM Table (1994 GAR for Group business)
- Projection Scale G2 (Projection Scale AA for Group business)

Run B – 95th Percentile Stress

- CARVM methodology
- 2012 IAM Table (1994 GAR for Group business)
- Projection Scale G2 (Projection Scale AA for Group business), all improvement factors adjusted for our defined stress event



Risks To Be Included

- ❑ Previously determined that focus should be on trend risk only (mortality improvement)
- ❑ However, current reserve basis (2012 IAM) appears to only include a margin for basis risk (risk that actual company mortality varies from the table)
- ❑ Considerations for longevity charge:
 - ❑ Should RBC charge for longevity risk include both?
 - ❑ Should reserve basis include margin for trend risk?



Immediate Next Steps for LRTF

- Determine whether to include basis risk
- Develop recommendation for stress event
- Finalize specifications for field study
- Support LRSG with field study
- Continue to evaluate approach for a potential RBC charge for lifetime income benefits



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LIFE POST-NAIC UPDATE WEBINAR

Questions & Answers

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