MEETING MATERIALS PACKET

LIFE ACTUARIAL (A) TASK FORCE

March 20-21, 2023

NAIC SPRING NATIONAL MEETING

March 20-21, 2023

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Draft date: 3/8/23

2023 Spring National Meeting
Louisville, Kentucky

LIFE ACTUARIAL (A) TASK FORCE
Monday, March 20. 2023
8:00 a.m. – 4:30 p.m. ET
Kentucky Convention Center—Ballroom A—Main Concourse Level

Tuesday, March 21, 2023
8:00 a.m. – 11:00 a.m. ET
Kentucky Convention Center—Ballroom A—Main Concourse Level

ROLL CALL

Member	Representative	State
Cassie Brown, Chair	Rachel Hemphill	Texas
Scott A. White, Vice Chair	Craig Chupp	Virginia
Mark Fowler	Sanjeev Chaudhuri	Alabama
Lori Wing-Heier	Sharon Comstock	Alaska
Ricardo Lara	Ahmad Kamil	California
Andrew N. Mais	Wanchin Chou	Connecticut
Dana Popish Severinghaus	Vincent Tsang	Illinois
Amy L. Beard	Scott Shover	Indiana
Doug Ommen	Mike Yanacheak	Iowa
Vicki Schmidt	Nicole Boyd	Kansas
Timothy N. Schott	Marti Hooper	Maine
Grace Arnold	Fred Andersen	Minnesota
Chlora Lindley-Myers	William Leung	Missouri
Eric Dunning	Michael Muldoon	Nebraska
Marlene Caride	Seong-min Eom	New Jersey
Adrienne A. Harris	Bill Carmello	New York
Judith L. French	Peter Weber	Ohio
Glen Mulready	Andrew Schallhorn	Oklahoma
Michael Humphreys	Steve Boston	Pennsylvania
Jon Pike	Tomasz Serbinowski	Utah
Allan L. McVey	Tim Sigman/Joylynn Fix	West Virginia

NAIC Support Staff: Scott O'Neal/Jennifer Frasier

Monday, March 20, 2023

8:00 – 8:20 a.m.

1. Call to Order/Roll Call/Consider Adoption of its Minutes and Written Subgroup Reports—*Rachel Hemphill (TX)*

8:20 – 9:20 a.m.	2.	Receive the Report of the Valuation Manual (VM)-22 Subgroup —*Ben Slutsker (MN)*
9:20 – 10:30 a.m.	3.	Hear Presentations on the Impact of a Rising Interest Rate Environment—*Ben Slutsker (MN), Fred Andersen (MN), and Dale Hall (Society of Actuaries—SOA)*
10:30 – 10:45 a.m.	4.	Hear an Update on the Review Plan for *Actuarial Guideline LIII—Application of the Valuation Manual for Testing the Adequacy of Life Insurer Reserves* (AG 53)—*Ben Slutsker (MN) and Fred Andersen (MN)*
10:45 – 11:00 a.m.		Break
11:00 – 11:30 a.m.	5.	Receive the Report of the Experience Reporting (A) Subgroup and Receive an Update on VM-50, Experience Reporting Requirements, and VM-51, Experience Reporting Formats, of the *Valuation Manual—Fred Andersen (MN) and Pat Allison (NAIC)*
11:30 – 12:00 p.m.	6.	Consider Re-Exposure of Amendment Proposal Form (APF) 2021-08, Reduction to VM-50/VM-51 Mortality Experience Collection Data Lag—*Larry Bruning (SOA)*
12:00 – 1:30 p.m.		Lunch
1:30 – 3:00 p.m.	7.	Hear a Presentation on the VM-21, Requirements for Principle-Based Reserves for Variable Annuities/C-3 Phase II Economic Scenario Generator Field Test Results—*Scott O'Neal (NAIC)*
3:00 – 3:30 p.m.		Break
3:30 – 3:50 p.m.	8.	Consider Exposure of the American Council of Life Insurers (ACLI) APF 2023-05 VM-21 Index Hedging—*Brian Bayerle (ACLI)*
3:50 – 4:10 p.m.	9.	Hear an Update from the American Academy of Actuaries (Academy) Life Practice Council —*Ben Slutsker (Academy)*
4:10 – 4:30 p.m.	10.	Hear an Update on the Activities of the Economic Scenario Generator Governance Drafting Group, the VM-20/VM-21 Economic Scenario Generator Technical Drafting Group, and the Standard Projection Amount Drafting Group—*Rachel Hemphill (TX)*

Tuesday, March 21, 2023

8:00 – 8:25 a.m.	11. Hear an Update on SOA Research and Education—*Dale Hall (SOA)*
8:25 – 8:50 a.m.	12. Hear an Update from the Academy Council on Professionalism and Education—*Rob Damler (Actuarial Standards Board—ASB) and Shawna Ackerman (Actuarial Board for Counseling and Discipline—ABCD)*
8:50 – 9:35 a.m.	13. Hear an Update on Mortality Improvement —*Marianne Purushotham (SOA)*
9:35 - 9:50 a.m.	Break
9:50 – 10:20 a.m.	14. Consider Partial Adoption of APF 2023-03 VM-20 Updates —*Rachel Hemphill (TX)*
10:20 – 10:30 a.m.	15. Consider Adoption of APF 2023-01—*Rachel Hemphill (TX)*
10:30 – 11:00 a.m.	16. Discuss Any Other Matters Brought Before the Task Force
11:00 a.m.	17. Adjournment

Agenda Item 1

Consider Adoption of its Minutes

and Written Subgroup Reports

Draft: 3/11/23

Life Actuarial (A) Task Force
Virtual Meeting
March 2, 2023

The Life Actuarial (A) Task Force met March 2, 2023. The following Task Force members participated: Cassie Brown, Chair, represented by Rachel Hemphill and Iris Huang (TX); Scott A. White, Vice Chair, represented by Craig Chupp (VA); Lori K. Wing-Heier represented by Sharon Comstock (AK); Mark Fowler represented by Sanjeev Chaudhuri (AL); Ricardo Lara represented by Ahmad Kamil (CA); Andrew N. Mais represented by Wanchin Chou and Manny Hidalgo (CT); Doug Ommen represented by Mike Yanacheak (IA); Dana Popish Severinghaus represented by Vincent Tsang (IL); Amy L. Beard represented by Scott Shover (IN); Vicki Schmidt represented by Nicole Boyd (KS); Timothy N. Schott represented by Marti Hooper (ME); Grace Arnold represented by Fred Andersen and Ben Slutsker (MN); Chlora Lindley-Myers represented by William Leung (MO); Eric Dunning represented by Michael Muldoon (NE); Adrienne A. Harris represented by Bill Carmello (NY); Judith L. French represented by Peter Weber (OH); Glen Mulready represented by Andrew Schallhorn (OK); Michael Humphreys represented by Steve Boston (PA); Jon Pike represented by Tomasz Serbinowski (UT); and Allan L. McVey represented by Tim Sigman (WV).

1. Exposed Referrals Received from the Valuation of Securities (E) Task Force

Charles Therriault (NAIC) walked through the first informational referral from the Valuation of Securities (E) Task Force to the Life Actuarial (A) Task Force proposing that the *Purposes and Procedures Manual of the NAIC Investment Analysis Office* (P&P Manual) be amended to define structured equity and fund investments and exclude these investments from filing exemption eligibility. Nancy Bennett (American Academy of Actuaries—Academy) asked if making these investments ineligible for a filing exemption would have an impact on the calculation of prescribed default costs or other unintended consequences. Therriault responded that any changes to reporting classification would be decided by the other task forces and working groups at the NAIC and that this proposal would strictly be looking at assessing a risk designation that is more consistent with the underlying risk of the investment.

Carmello made a motion, seconded by Tsang, to expose the first informational referral (Attachment A) for a 21-day public comment period ending March 22. The motion passed unanimously.

Therriault then walked through the second referral from Valuation of Securities (E) Task Force requesting that the Life Actuarial (A) Task Force respond with ideas on how it could use investment information on a proposed new analytical capability at the NAIC's Securities Valuation Office (SVO), and whether it is supportive of the initiative. Tsang asked if company-determined investment risk measures, such as asset duration, would be consistently reported. Therriault responded that one of the benefits of building out the proposed analytical capability at the SVO would be that these risk measures would be determined consistently by the SVO across all companies. Tsang then asked if the purpose of this capability would be to spot outliers. Therriault said that the initial purpose of the data would be to identify inconsistencies with ratings that were assigned to securities, but that part of the purpose of this referral is to see how other groups could make use of the data. Bennett then asked if this new capability would effectively make the SVO a rating agency. Therriault replied that this new capability would not make the SVO a rating agency in effect, and these additional risk measures that the SVO is seeking to obtain are common throughout the industry and have been for decades.

Leung made a motion, seconded by Hidalgo, to expose the second informational referral (Attachment B), with a cover letter added to explain that the Task Force is seeking commentary on the five questions outlined in the referral, for a 42-day public comment period ending April 14. The motion passed unanimously.

2. Exposed a VM-20/VM-21 ESG Technical Drafting Group Topics, Timing, and Decision Points Document

Hemphill walked through a document that outlined the timing for upcoming discussions of the VM-20/VM-21 Economic Scenario Generator (ESG) Technical Drafting Group and decisions that would need to be made.

Chupp made a motion, seconded by Leung, to expose the document (Attachment C) for a 21-day public comment period ending March 23. The motion passed unanimously.

3. Adopted APF 2022-09

Hemphill walked through amendment proposal form (APF) 2022-09, noting that one comment letter from the American Council of Life Insurers (ACLI) had been received and was supportive of the APF.

Hidalgo made a motion, seconded by Leung, to adopt APF 2022-09 (Attachment D). The motion passed unanimously.

4. Exposed APF 2023-04

Huang walked through APF 2023-04, which clarifies the VM-31 reporting requirements that support that the company experience mortality rates are not lower than what the company actually expects to occur.

Chupp made a motion, seconded by Leung, to expose the APF 2023-04 (Attachment E) for a 21-day public comment period ending March 23. The motion passed unanimously.

Having no further business, the Life Actuarial (A) Task Force adjourned.

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Draft: 3/7/23

Life Actuarial (A) Task Force
Virtual Meeting
February 23, 2023

The Life Actuarial (A) Task Force met Feb. 23, 2023. The following Task Force members participated: Cassie Brown, Chair, represented by Rachel Hemphill and Chonlada Pongpipattanachai (TX); Scott A. White, Vice Chair, represented by Craig Chupp (VA); Lori K. Wing-Heier represented by Sharon Comstock (AK); Ricardo Lara represented by Ahmad Kamil and Elaine Lam (CA); Andrew N. Mais represented by Wanchin Chou (CT); Doug Ommen represented by Mike Yanacheak (IA); Dana Popish Severinghaus represented by Vincent Tsang (IL); Vicki Schmidt represented by Nicole Boyd (KS); Timothy N. Schott represented by Marti Hooper (ME); Grace Arnold represented by Fred Andersen and Ben Slutsker (MN); Chlora Lindley-Myers represented by William Leung (MO); Eric Dunning represented by Michael Muldoon (NE); Marlene Caride represented by Seong-min Eom (NJ); Adrienne A. Harris represented by Bill Carmello (NY); Judith L. French represented by Peter Weber (OH); Michael Humphreys represented by Steve Boston (PA); Jon Pike represented by Tomasz Serbinowski (UT); and Allan L. McVey represented by Tim Sigman (WV).

1. Reported it Met Feb. 9 in Regulator-to-Regulator Session

Hemphill said that the Task Force met Feb. 9 in regulator-to-regulator session, pursuant to paragraph 6 (consultations with NAIC staff members related to NAIC technical guidance) of the NAIC Policy Statement on Open Meetings. Hemphill stated that Scott O'Neal (NAIC) provided the Task Force with technical guidance related to the economic scenario generator (ESG) corporate model and that state insurance regulators had a robust discussion of the American Academy of Actuaries' (Academy's) simplified corporate model and proposed acceptance criteria. Hemphill further said that regulators have two takeaways from the meeting: 1) they would like to understand the materiality of the difference between the results of the Academy's simplified corporate model and the Conning corporate model; and 2) they want to know more about any issues with incomplete documentation and/or lack of transparency for both the Academy and Conning corporate models.

2. Adopted its 2022 Fall National Meeting Minutes

Chupp made a motion, seconded by Yanacheak, to adopt the Task Force's Dec. 11–12, 2022, minutes (Attachment A). The motion passed unanimously.

3. Exposed the Proposed Charges for the Proposed Economic Scenarios (E/A) Subgroup

Hemphill said that the Economic Scenario Generator Governance Drafting Group held discussions where it became clear that there was a need for a joint subgroup of the Task Force and the Life Risk-Based Capital (E) Working Group to support the implementation of the ESG and take on a governance role. Hemphill then walked through the proposed charges for the Economic Scenarios (E/A) Subgroup.

Yanacheak made a motion, seconded by Slutsker, to expose the proposed charges (Attachment B) for the Economic Scenarios (E/A) Subgroup for a 21-day public comment period ending Mar 15. The motion passed unanimously.

4. Adopted APF 2022-10

Hemphill noted that the Task Force received a comment letter (Attachment C) from the American Council of Life Insurers (ACLI) that noted support for both amendment proposal form (APF) 2022-10 and APF 2023-02.

Slutsker made a motion, seconded by Chupp to adopt APF 2022-10 (Attachment D). The motion passed unanimously.

5. Adopted APF 2023-02

Lam made a motion, seconded by Chupp, to adopt APF 2023-02 (Attachment E). The motion passed unanimously.

6. Exposed APF 2023-01

Slutsker made a motion, seconded by Leung, to deem APF 2023-01 (Attachment F) non-substantive and expose it for a seven-day public comment period ending Mar 9. The motion passed unanimously.

Having no further business, the Life Actuarial (A) Task Force adjourned.

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Draft: 3/7/23

Life Actuarial (A) Task Force
Virtual Meeting
February 2, 2023

The Life Actuarial (A) Task Force met Feb. 2, 2023. The following Task Force members participated: Cassie Brown, Chair, represented by Rachel Hemphill and Iris Huang (TX); Scott A. White, Vice Chair, represented by Craig Chupp (VA); Lori Wing-Heier represented by Sharon Comstock (AK), Ricardo Lara represented by Ahmad Kamil and Elaine Lam (CA); Andrew N. Mais represented by Wanchin Chou (CT); Doug Ommen represented by Mike Yanacheak (IA); Amy L. Beard represented by Scott Shover (IN); Vicki Schmidt represented by Nicole Boyd (KS); Timothy N. Schott represented by Marti Hooper (ME); Grace Arnold represented by Fred Andersen and Ben Slutsker (MN); Chlora Lindley-Myers represented by William Leung (MO); Eric Dunning represented by Michael Muldoon (NE); Marlene Caride represented by Seong-min Eom (NJ); Adrienne A. Harris represented by Bill Carmello (NY); Judith L. French represented by Peter Weber (OH); Glen Mulready represented by Andrew Schallhorn (OK); Michael Humphreys represented by Steve Boston (PA); Jon Pike represented by Tomasz Serbinowski (UT).

1. Exposed APF 2022-09

Huang noted that amendment proposal form (APF) 2022-09 covers a series of VM-31, PBR Actuarial Report Requirements for Business Subject to a Principle-Based Valuation, issues. Chupp asked how the support required in the proposed new VM-31 Section 3.D.11.k would differ from the current requirement for a demonstration available on request that the impact of each approximation and/or simplification does not materially understate the reserves. Hemphill replied that the new VM-31 Section 3.D.11.k would require a holistic discussion of the simplifications, and interactions between simplifications, and why they would not materially understate or bias the reserve downwards in aggregate, whereas the current demonstration for each individual simplification that is available upon request requires a rigorous analysis with quantitative support. Chupp then also mentioned a drafting error he found after reviewing APF 2022-09.

Slutsker made a motion, seconded by Yanacheak, to expose APF 2022-09 with a correction of the drafting error for a 21-day public comment period ending Feb. 22 (Attachment A). The motion passed unanimously.

2. Exposed APF 2022-10

Slutsker introduced APF 2022-10, noting that it clarifies the VM-20, Requirements for Principle-Based Reserves for Life Products, valuation requirements for universal life with secondary guarantee (ULSG) policies with a non-material secondary guarantee and indexed universal life policies that pass exclusion tests.

Slutsker made a motion, seconded by Chupp, to expose APF 2022-10 for a 21-day public comment period ending Feb. 22 (Attachment B). The motion passed unanimously.

3. Exposed APF 2023-02

Lam said that the purpose of APF 2023-02 is to add additional disclosure requirements to VM-31 to reconcile reported values to the Annual Statement and to make a referral to the Blanks (E) Working Group to update the instructions for the VM-20 Reserves Supplement.

Lam made a motion, seconded by Chupp, to expose APF 2023-02 for a 21-day public comment period ending Feb. 22 (Attachment C). The motion passed unanimously.

4. Exposed APF 2023-03

Hemphill walked through the series of clean-up items in APF 2023-03 for VM-20; VM-21, Requirements for Principle-Based Reserves for Variable Annuities; and VM-31. Hemphill noted that the change to the net premium reserve (NPR) formula in VM-20 Section 3.B.5.c.ii.4 would not generally be expected to result in material changes to the NPR calculation.

Slutsker made a motion, seconded by Weber, to expose APF 2023-03 for a 21-day public comment period ending Feb. 22 (Attachment D). The motion passed unanimously.

Having no further business, the Life Actuarial (A) Task Force adjourned.

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Draft: 2/28/23

Life Actuarial (A) Task Force
Virtual Meeting
January 26, 2023

The Life Actuarial (A) Task Force met Jan. 26, 2023. The following Task Force members participated: Cassie Brown, Chair, represented by Rachel Hemphill (TX); Scott A. White, Vice Chair, represented by Craig Chupp (VA); Lori K. Wing-Heier represented by Sharon Comstock (AK); Ricardo Lara represented by Ahmad Kamil (CA); Andrew N. Mais represented by Wanchin Chou (CT); Doug Ommen represented by Mike Yanacheak (IA); Dana Popish Severinghaus represented by Vincent Tsang (IL); Amy L. Beard represented by Scott Shover (IN); Vicki Schmidt represented by Nicole Boyd (KS); Grace Arnold represented by Fred Andersen and Ben Slutsker (MN); Chlora Lindley-Myers represented by William Leung (MO); Eric Dunning represented by Michael Muldoon (NE); Marlene Caride represented by Seong-min Eom (NJ); Adrienne A. Harris represented by Bill Carmello (NY); Judith L. French represented by Peter Weber (OH); Glen Mulready represented by Andrew Schallhorn (OK); Michael Humphreys represented by Steve Boston (PA); and Jon Pike represented by Tomasz Serbinowski (UT).

1. Heard a Presentation on Practitioner Considerations for Guideline Excess Spread Under AG 53

Marc Altschull (Actuarial Risk Management) and Dave Bulin (Actuarial Risk Management) said that they would be delivering a presentation (Attachment A) based on a paper their organization produced for the Society of Actuaries' (SOA's) Financial Research Institute on the guideline excess spread methodology under *Actuarial Guideline LIII—Application of the Valuation Manual for Testing the Adequacy of Life Insurer Reserves* (AG 53). Altschull noted that the AG 53 requirements ask companies for additional documentation, including an excess spread attribution that is the main subject of the presentation. After Altschull and Bulin completed the presentation, Hemphill said that there was no one-size-fits-all approach to spread attribution and that companies would need to reflect their specific asset and risk profiles.

Tsang then asked if appointed actuaries would be able to get spread attribution analyses from their investment departments that they would have performed as part of their normal business functions. Bulin agreed that the appointed actuaries would be unlikely to have the deep investment knowledge required for the attribution analysis, and would likely need to work with investment departments, outside investment managers, and/or consultants. Bulin further stated that there was a lack of research on spread attribution and that it would be a challenge for companies to break out the spread into distinct liquidity, credit, and other risk components. Tsang questioned whether there were a small number of risk factors that would describe the majority of the spread variation. Altschull noted that the risk factors would be dependent on the asset class, to which Hemphill agreed.

2. Discussed a Referral from the Financial Regulation Standards and Accreditation (F) Committee

Dan Schelp (NAIC) said that he prepared a memorandum (Attachment B) in which he compared the significant elements of the *Actuarial Opinion and Memorandum Regulation* (#822) to the requirements laid out in VM-30, Actuarial Opinion and Memorandum Requirements, to assist the Task Force in responding to the referral from the Financial Regulation Standards and Accreditation (F) Committee. Schelp said that it is the opinion of the NAIC Legal Division that state adoption of the *Valuation Manual* should be considered substantially similar to Model #822 for accreditation purposes. Schelp then went through specific sections of both requirements that he had highlighted in the memorandum to support the opinion of the NAIC Legal Division.

Chupp made a motion, seconded by Weber, to recommend that NAIC staff prepare a memorandum conveying the Task Force's recommendation that Model #822 be removed as an accreditation standard. The motion passed unanimously.

3. Adopted APF 2022-07

Brian Bayerle (American Council of Life Insurers—ACLI) summarized amendment proposal form (APF) 2022-07 as a clarification of a previously adopted amendment to the *Valuation Manual* that requires adjustments to the mortality table used in the determination of the net premium reserve if the anticipated experience of the group of policies exceeds the table.

Chupp made a motion, seconded by Chou, to adopt APF 2022-07 (Attachment C). The motion passed unanimously.

4. Adopted APF 2022-08

Bayerle said that the purpose of APF 2022-08 was to clarify that companies that only utilize the Alternative Methodology under VM-21, Requirements for Principle-Based Reserves for Variable Annuities, are subject to limited governance requirements under VM-G, Appendix G — Corporate Guidance for Principle-Based Reserves.

Chupp made a motion, seconded by Schallhorn, to adopt APF 2022-08 (Attachment D). The motion passed unanimously.

Having no further business, the Life Actuarial (A) Task Force adjourned.

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March 20, 2023

From: Pete Weber, Chair
Index-Linked Variable Annuity (A) Subgroup

To: Rachel Hemphill, Chair
The Life Actuarial (A) Task Force

Subject: The Report of the Variable Annuities Capital and Reserve (E/A) Subgroup (VACR SG) to the Life Actuarial (A) Task Force

The ILVA SG has not met since the adoption of group's main work product, Actuarial Guideline 54 (ILVA), by the Life Actuarial (A) Task Force on December 11, 2022. Actuarial Guideline 54 was subsequently adopted by the Life Insurance and Annuities (A) Committee and will be considered by the NAIC's Executive (EX) Committee and Plenary at the upcoming Spring National Meeting on March 25. After full adoption of Actuarial Guideline 54, the Life Actuarial (A) Task Force will consider next steps for the ILVA SG, which could include folding any relevant remaining charges into those of the Task Force and/or disbanding the ILVA SG.

March 20, 2023

From: Fred Andersen, Chair
Indexed Universal Life (IUL) Illustration (A) Subgroup

To: Rachel Hemphill, Chair
The Life Actuarial (A) Task Force

Subject: The Report of the Indexed Universal Life (IUL) Illustration (A) Subgroup (IUL Illustration SG) to the Life Actuarial (A) Task Force

The IUL Illustration SG has not met since the adoption of group's main work product, revisions to Actuarial Guideline 49A, by the Life Actuarial (A) Task Force on December 11, 2022. The revisions to Actuarial Guideline 49A were subsequently adopted by the Life Insurance and Annuities (A) Committee and will be considered by the NAIC's Executive (EX) Committee and Plenary at the upcoming Spring National Meeting on March 25. The IUL Illustration SG will continue to meet after the Spring NAIC National Meeting to consider broader measures for improving IUL illustrations.

March 20th, 2023

From: Seong-min Eom, Chair
The Longevity Risk (E/A) Subgroup

To: Rachel Hemphill, Chair
The Life Actuarial (A) Task Force

Subject: The Report of the Longevity Risk (E/A) Subgroup to the Life Actuarial (A) Task Force

The Longevity Risk (E/A) Subgroup has not met since the Fall National Meeting. The subgroup will resume the meetings once the currently exposed VM-22 PBR methodology is finalized and adopted to develop and recommend longevity risk factor(s) for the product(s) that were excluded from the application of the current longevity risk factors.

March 20, 2023

From: Pete Weber, Chair
The Variable Annuities Capital and Reserve (E/A) Subgroup

To: Rachel Hemphill, Chair
The Life Actuarial (A) Task Force

Subject: The Report of the Variable Annuities Capital and Reserve (E/A) Subgroup (VACR SG) to the Life Actuarial (A) Task Force

The VACR SG has not met since the Fall National Meeting. At the request of LATF, the Chair has made a request to the Society of Actuaries to expand the work they are currently carrying out for the VM-22 Standard Projection Amount Mortality DG to include variable annuities. More specifically, to develop mortality rates to be used as prescribed assumptions within the VM-21 Standard Projection Amount. Work continues on this project and a report and recommendations are still several weeks away.

Agenda Item 2

Report of the Valuation Manual
(VM)-22 Subgroup

COMMERCE DEPARTMENT

VM-22 Project Overview

Ben Slutsker, Chair, NAIC VM-22 Subgroup

Agenda

- Introduction to Non-Variable Annuity PBR
- History and Project Plan
- Exposures and Upcoming Meetings
- Key Issues
- Standard Projection Amount
- Field Test and ESG

What is Non-Variable Annuity PBR?

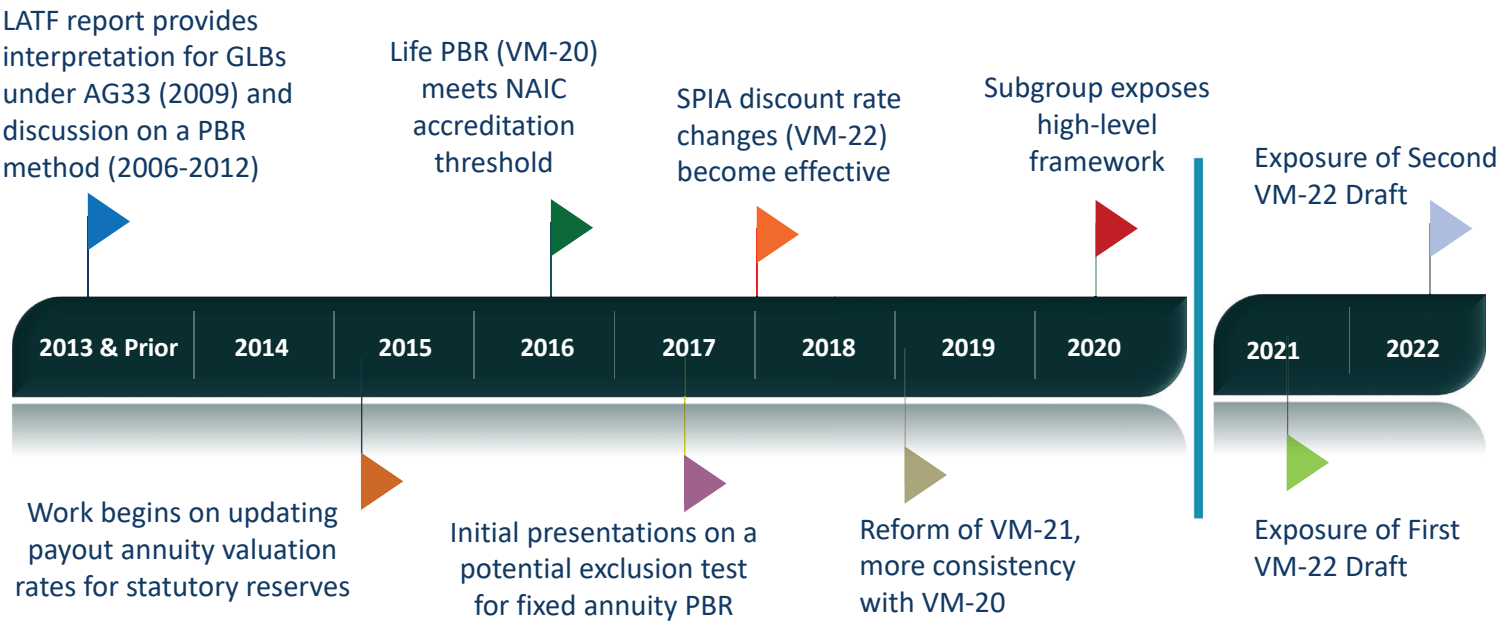
- **Principle-Based Reserving (PBR)**
  - Statutory reserve framework that uses company-specific assumptions
  - Multiple economic scenarios through stochastic reserving (CTE70)
  - Applicable to all fixed annuity contracts, except GICs and stable value contracts[1]
- **Contrast to current reserve framework**
  - Formulaic methodology: Actuarial Guideline 33
  - Highest present value of future guaranteed benefits less considerations across all possible product options and scenarios using prescribed assumptions
- **Requirements contained in NAIC Valuation Manual**
  - Process for adopting amendments to valuation manual permits streamlined updates

(1) RILAs and Contingent Deferred Annuities to follow VM-21 in latest draft

Why Non-Variable Annuity PBR?

- **PBR exists in life insurance and variable annuities**
  - All variable annuity contracts and only life contracts issued in 2020+ (or implementation date if earlier)
- **Advantage of PBR is addressing product complexity**
  - More guaranteed living benefits, index options, and other features
  - Contracts that are hybrid variable, indexed, and fixed annuities
- **One challenge is that additional resources are required to review and audit**
  - Two companies may have identical products and populations, but different views on future assumptions
  - More calculation detail: asset modeling, dynamic lapses, and rider utilization

History


LATF report provides interpretation for GLBs under AG33 (2009) and discussion on a PBR method (2006-2012)
Life PBR (VM-20) meets NAIC accreditation threshold
SPIA discount rate changes (VM-22) become effective
Subgroup exposes high-level framework
Exposure of Second VM-22 Draft
2013 & Prior
2014
2015
2016
2017
2018
2019
2020
2021
2022
Work begins on updating payout annuity valuation rates for statutory reserves
Initial presentations on a potential exclusion test for fixed annuity PBR
Reform of VM-21, more consistency with VM-20
Exposure of First VM-22 Draft

Project Plan – Milestone Target Dates

- **Field Test**
  - Targeting mid-2024
- **LATF Adoption**
  - Targeting Spring 2025
- **Implementation**
  - Companies *may* implement starting on 1/1/2026
  - Companies *must* implement by 1/1/2029

Project Plan – 2022 (past)

DRAFT TIMELINE	12 21	1 22	2 22	3 22	4 22	5 22	6 22	7 22	8 22	9 22	10 22	11 22	12 22
SPA DG - develop assumptions/methodology	■	■	■	■	■	■	■	■	■	■			
VM22 SG calls - Address comment letters and edits					■	■	■	■	■	■	■		
ESG Field Test #1							■	■	■	■	■		
Second VM-22 exposure											■	■	■
NAIC National Meeting December 12 - 15, Tampa FL													■
ESG Field Test #1 Analysis											■	■	■
SPA Discussions at VM-22 Subgroup											■	■	■

Project Plan – 2023 (present)

DRAFT TIMELINE	1 23	2 23	3 23	4 23	5 23	6 23	7 23	8 23	9 23	10 23	11 23	12 23
ESG Field Test #1 Analysis												
SPA Discussions at VM-22 Subgroup												
Discuss comments from Fall VM-22 draft exposure												
SPA Structure Exposure												
VM-31 DG meetings to prepare recommendation												
VM-31 Exposure												
Discuss Comments on SPA Structure Exposure												
ESG Field Test #2 (timeline estimate)												

Project Plan – 2024 (future)

DRAFT TIMELINE	1 24	2 24	3 24	4 24	5 24	6 24	7 24	8 24	9 24	10 24	11 24	12 24	1 24	2 24	3 25	4 25	5 25	6 25	7 25	8 25
ESG Field Test #2 Analysis																				
VM-22 and C3P1 Field Test																				
Compile/analyze Field Test results																				
Discuss field test results on public calls																				
Resolve outstanding items and changes from field test																				
LATF exposure and discussion																				
LATF Adoption																				
A Committee Adoption																				
NAIC Exec & Plenary Adoption																				

Upcoming Meetings

- **Scheduled to meet on a bi-weekly basis in 2023**
  - First meeting held on 3/1; next to be held on 4/12 (due to NAIC National Meeting)
- **Focus on comments for VM-22 Exposure**
  - Review on comment-by-comment basis
- **Firm up standard methodology mechanics**
  - Assumptions and Methodology

First Exposure Comments

- **Initial exposure in July 2021**
  - Academy proposal
  - NAIC VM-22 Subgroup aggregation categories
- **Eleven comment letters**
  - Nearly 400 comments
- **Categorized each comment into one of four tiers**
  - Based on priority
  - Determined order of discussion in NAIC VM-22 Subgroup

Second Exposure Comments

- **Exposure in October 2022**
  - Included revisions based on 2022 discussions
  - Reflects Subgroup decisions on how to address each comment in first exposure
- **Three comment letters**
  - Nearly 200 comments
- **Process to discuss comments will mirror the first exposure**
  - Categorized each comment into one of four tiers
  - For the fourth tier (less substantive or non-controversial), initial edits will be shared by the Subgroup and will be taken up on public calls upon request from interested parties

Key Issues Preliminarily Determined

- **Aggregation**
  - Payout vs. Accumulation vs. Longevity Reinsurance Reserving Categories
- **Exclusion test: applicability and concept**
  - Pass = option to use pre-PBR; fail = must use PBR
  - Stochastic exclusion ratio test, demonstration test, or certification method
- **Use of PBR Exemption**
  - Companies with volume of business below a threshold may be exempt
- **Different treatment for index credit hedging programs**
  - Reflect a hedge margin and, unlike other programs, no requirement to model without hedges

Key Issues in midst of Being Determined

- **Longevity reinsurance**
  - Currently discussing a “k-factor” methodology similar to CRVM
- **Exclusion test carveout for payout annuities**
  - Certain types of payout annuity contracts that can automatically pass exclusion testing?
- **Allocation of reserves to each contract**
  - Narrowed down to one proposed methodology based on an actuarial present value calculation
- **PBR Exemption level**
  - Decide the appropriate threshold to permit exemption eligibility
- **SPA mechanics**
  - Upcoming exposure and placeholder assumptions

Key Issues Yet to Be Determined

- **Reinvestment guardrail**
  - Use current VM-20/VM-21 or Academy proposal or something else?
- **Exclusion test threshold**
  - Passing level for the stochastic exclusion ratio text
- **Level of minimum index credit hedge margin**
  - To be determined based on future field test results
- **Standard Projection Amount treatment**
  - Minimum reserve floor or disclosure-only?

Standard Projection Amount

- **VM-22 Subgroup is recommending to develop calculation**
  - No recommendation on whether to use as a disclosure or floor
- **LATF to address how to use the standard projection amount**
  - Targeting consistency with VM-21
- **Drafting groups have presented initial mortality, policyholder behavior, and other liability assumptions**
  - Society of Actuaries have developed mortality factors upon drafting group requests
  - Willis Towers Watson and Academy presented proposed expense assumptions

Field Test

- **Jointly run by NAIC, Academy, ACLI**
  - Selecting consultant to manage field test
  - Targeting mid-2024
- **Will test both principle-based capital and reserves**
  - Comparison to today's standards (CARVM vs. C-3 Phase I)
  - Sensitivities and impact of margins
  - To inform decisions around exclusion ratio test and reinvestment mix
- **Applies to recently issued inforce business**
  - Will help approximate the impact to future written contracts

Relationship to Economic Scenario Generator

- **NAIC Economic Scenario Generator provides scenarios**
  - Generates assumptions for treasuries, equities, and bond funds
- **Currently under development**
  - Forming acceptance criteria
  - Already one field test and planning for a second field test
- **Dependency**
  - Field testing an economic scenario generator materially different than the one ultimately adopted could lead to results different than future reserve levels

Prospective vs Retrospective

- **Initially prospective**
  - For ease of project management and regulation changes
  - Start to review impact and work through mechanics
- **To explore retrospective implementation**
  - After initial prospective implementation
  - Consider the development of principle-based capital
- **Applicability of additional contracts out-of-scope**
  - GICs, funding agreements, and stable value contracts

Questions?

Draft: 3/11/23

Valuation Manual (VM)-22 (A) Subgroup
Virtual Meeting
March 1, 2023

The Valuation Manual (VM)-22 (A) Subgroup met Mar. 1, 2023. The following Subgroup members participated: Ben Slutsker, Chair (MN); Elaine Lam and Thomas Reedy (CA); Lei Rao-Knight (CT); Mike Yanacheak (IA); Vincent Tsang (IL); Nicole Boyd (KS); William Leung (MO); Bill Carmello and Amanda Fenwick (NY); Rachel Hemphill and Iris Huang (TX); Tomasz Serbinowski (UT); and Craig Chupp (VA).

1. Heard an Update on the VM-22 Project Plan

Slutsker walked through an updated project plan (Attachment A), including noting that a VM-22, Requirements for Principle-Based Reserves for Non-Variable Annuities, field test would not occur in 2023 due to dependencies on the economic scenario generator (ESG) project. Slutsker said that the latest target for adoption of VM-22 was 2025.

2. Discussed the VM-22 Exemption

Slutsker said that the Subgroup had voted last year to include an exemption for small companies in the draft VM-22 requirements and that now the Subgroup would need to decide on how the threshold would be defined. Chupp commented that for VM-20, Requirements for Principle-Based Reserves for Life Products, one of the goals was to right size reserves so that some companies would see increases and others would see decreases to reserves. Chupp then asked if one would expect reserves to be lower for the new VM-22 methodology compared to the current methodology. Slutsker noted that while there were no field test results to point to, there was a general expectation that reserves would be lower for the new VM-22 methodology for many, though not all, products. Chris Conrad (American Academy of Actuaries—Academy) noted that the Academy supports basing the exemption on gross of reinsurance values, to which a number of regulators agreed.

Carmello made a motion, seconded by Tsang, to use gross of reinsurance values to define the threshold. The motion passed unanimously.

Slutsker then stated that the next part of the exemption discussion to define was the level of the threshold. Conrad said the Academy supports level of $1 billion dollars of reserves based on comparisons made to the Life PBR Exemption. Brian Bayerle (American Council of Life Insurers—ACLI) said that the ACLI could be supportive of $1 billion to $2 billion dollars as the exemption threshold.

A roll call vote was then conducted on the threshold amount for an individual company, with Yanacheak and Carmello voting for a $3 billion statutory reserve exemption level and the remaining, and large majority of, Subgroup members present voting for a $1 billion exemption threshold.

Having no further business, the Subgroup adjourned.

SharePoint/NAIC Support Staff Hub/Member Meetings/A CMTE/LATF/ 2023-1-Spring/VM-22 Calls/03 01/Mar 1 Minutes.docx

Agenda Item 3

Hear Presentations on the Impact of a
Rising Interest Rate Environment

RISING INTEREST RATE ISSUES

March 2023

AGENDA

- Overview of Rising Interest Rate topic
  - Fred Andersen, Minnesota Department
- Dynamic Lapse and Other Relevant Experience
  - Dale Hall, Society of Actuaries
- Appointed Actuary Roundtable on Rising Interest Rate Impact
  - Ben Slutsker, Minnesota Department (Moderator)
  - Theresa Resnick, Everlake Life
  - Stephen McNamara, New York Life
  - Robert Egan, Global Atlantic

TREASURY RATES AT 15-YEAR PEAK

3

PAST 15 YEARS

- Annuities with high long-term guaranteed credited rates on the books of many life insurers
- Declining portfolio yields due to lower reinvestment rates
  - Due to declining Treasury rates and steady spreads
- With high guarantees, annuity liabilities thought of as "sticky"
- Increased illiquidity in supporting assets
  - Little perceived risk of people surrendering their rich-guarantee annuities

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2022 – RISING INTEREST RATES

- Insurers with deferred annuities model up interest rate scenarios
  - Disintermediation risk
    - Rising rates -> declining bond market values (higher discounting of bond coupons and par)
      - A particular concern with illiquid assets
    - Declining asset market values only matter if asset is sold
    - A company investing long may not be able to reinvest to take advantage of rising rates
    - A competitor may be positioned to offer favorable credited rates
    - Surprise surrenders may occur, triggering sale of "underwater" assets
      - Losses for the insurer

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DYNAMIC LAPSES – A:E

- Life insurers with deferred annuities have assumed dynamic lapses
- Question: how will dynamic lapse experience compare to assumptions?
  - Dale Hall will provide information from the Society of Actuaries and other research

6

OTHER RISING RATE ISSUES

- Accuracy of asset market values
  - Most assets have a deep secondary market – straightforward valuation
  - Some complex assets are valued internally
    - AG 53 contains a question on this issue – step-by-step description required
- Most issues should have been captured in past cash-flow testing
  - A reason for multiple interest rate scenario testing
- Some issues – wait and see
  - Appointed Actuary roundtable will provide perspectives

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Agenda Item 4

Hear an Update on the Review Plan
for Actuarial Guideline LIII
(No Materials)

Agenda Item 5

Receive the Report of the Experience Reporting (A) Subgroup and Receive an Update on VM-50, Experience Reporting Requirements, and VM-51, Experience Reporting Formats, of the Valuation Manual

Update on Mortality Experience Data Collection

Pat Allison, FSA, MAAA

March 20, 2023

NATIONAL ASSOCIATION OF INSURANCE COMMISSIONERS

Update on 2021 Data Collection

- NAIC actuarial staff has calculated Actual to Expected mortality ratios for each company based on their submitted data for observation years 2018 and 2019.
- We have asked companies to review their A/E's and let us know if they are in line with their expectations.
- During their review, some companies have identified corrections that needed to be made to their data. So far, 11 companies have resubmitted their 2018 and 2019 data and another 6 companies have indicated that they plan to do so.

Update on 2021 Data Collection

Status on company A/E approvals for observation years 2018 and 2019:

Companies that have approved their A/E	88
Companies that have resubmitted 2018 and 2019 and have been provided revised A/E ratios to review	4
Companies that have indicated they plan to resubmit 2018 and 2019 data	6
Companies that have not yet approved their A/E. NAIC staff is meeting with these companies to discuss further.	9
	107

Update on 2021 Data Collection

- NAIC staff is working with the SOA to verify the consistency and integrity of the data, initially focusing on analysis of data from companies that have approved their A/E ratios.
- Data analysis includes:
  - Comparison of 2018 and 2019 data collected by the NAIC vs. data collected prior to the 2018 observation year
  - Review of consistency of companies/data from year to year
  - Comparisons to population data
  - Statistical analysis

Update on 2022 Data Collection

- We have received initial data submissions from 105 companies (all companies selected for observation year 2020).
- This year we had 69 resubmissions compared to 125 last year. The reduction in resubmissions is a result of the data files being much cleaner this time.
- Many companies have communicated to the NAIC that they have implemented process improvements in order to provide better data.
- Approximately 25 companies have requested an extension in order to submit corrected data files and/or respond to NAIC feedback.

Update on 2022 Data Collection

- For the 2022 data collection, we asked companies to voluntarily use a new "Death due to Covid-19" cause of termination (this becomes mandatory in 2023). Many companies have done so.
- Similarly, we asked companies to voluntarily use new plan codes for Paid-Up Additions and One Year Term coverages purchased with dividends. Many companies have done this as well.
- The NAIC has hired 2 data scientists to assist with validations and data analysis.

Agenda Item 6

Consider Re-Exposure of Amendment Proposal Form (APF) 2021-08, Reduction to VM-50/VM-51 Mortality Experience Collection Data Lag

Dates: Received	Reviewed by Staff	Distributed	Considered
Notes:			

Life Actuarial (A) Task Force/ Health Actuarial (B) Task Force

Amendment Proposal Form*

1. Identify yourself, your affiliation and a very brief description (title) of the issue.

   Society of Actuaries Valuation Basic Table Team – Chair Larry Bruning

   Revisions to VM-51 to allow for the data experience reporting observation calendar year to be one year prior to the reporting calendar year.

2. Identify the document, including the date if the document is "released for comment," and the location in the document where the amendment is proposed:

   January 1,~~2021~~2023, version of the Valuation Manual – VM-51 Section 2.D.

3. Show what changes are needed by providing a red-line version of the original verbiage with deletions and identify the verbiage to be deleted, inserted or changed by providing a red-line (turn on "track changes" in Word®) version of the verbiage. (You may do this through an attachment.)

Section 2: Statistical Plan for Mortality

D. Process for Submitting Experience Data Under This Statistical Plan

Data for this statistical plan for mortality shall be submitted on an annual basis. Each company required to submit this data shall submit the data using the Regulatory Data Collection (RDC) online software submission application developed by the Experience Reporting Agent. For each data file submitted by a company, the Experience Reporting Agent will perform reasonability and completeness checks, as defined in Section 4 of VM-50, on the data. The Experience Reporting Agent will notify the company within 30 days following the data submission of any possible errors that need to be corrected. The Experience Reporting Agent will compile and send a report listing potential errors that need correction to the company.

Data for this statistical plan for mortality will be compiled using a calendar year method. The reporting calendar year is the calendar year that the company submits the experience data. The observation calendar year is the calendar year of the experience data that is reported. The observation calendar year will be ~~two~~one year~~s~~ prior to the reporting calendar year. For example, if the current calendar year is 20~~18~~22 and that is the reporting calendar year, the company is to report the experience data that was in-force or issued in calendar year 20~~16~~21, which is the observation calendar year. For the 2024 reporting calendar year, companies who are required to submit data for this statistical plan for mortality will be required to submit two observation calendar years of data, namely observation calendar year 2022 and observation calendar year 2023. For reporting calendar years after 2024, companies who are required to submit data for this statistical plan for mortality will be required to submit one observation calendar year of data.

Given an observation calendar year of 20XX, the calendar year method requires reporting of experience data as follows:

i. Report policies in force during or issued during calendar year 20XX.

Dates: Received	Reviewed by Staff	Distributed	Considered
Notes:			

ii. Report terminations that were incurred in calendar year 20XX and reported before July 1, 20XX+1. However, exclude rescinded policies (e.g., 10-day free look exercises) from the data submission. ~~For any reporting calendar year, the data call will occur during the second quarter, and data is to be submitted according to the requirements of the Valuation Manual in effect during that calendar year. Data submissions must be made by Sept. 30 of the reporting calendar year. Corrections of data submissions must be completed by Dec. 31 of the reporting calendar year.~~

For any reporting calendar year, the data call will occur during the second quarter, and the data is to be submitted according to the requirements of the *Valuation Manual* in effect during that calendar year. Data submissions must be made by Sept. 30 of the reporting calendar year. Corrections of data submissions must be completed by Dec. 31 of the reporting calendar year.

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4. State the reason for the proposed amendment? (You may do this through an attachment.)

This APF is needed for the following reasons:

1. There is a need to shorten the time period between data observation and data collection to facilitate more timely analysis and reporting of mortality experience.
2. Under a Principle Based Reserving methodology, valuation basic tables should reflect recent and current mortality experience.

Agenda Item 7

Hear a Presentation on the VM-21, Requirements for Principle-Based Reserves for Variable Annuities/C-3 Phase II Economic Scenario Generator Field Test Results (Materials Pending)

Agenda Item 8

Consider Exposure of the American Council of Life Insurers (ACLI) APF 2023-05 VM-21 Index Hedging

Dates: Received	Reviewed by Staff	Distributed	Considered
3/7/23	SO		
Notes: APF 2023-05			

Life Actuarial (A) Task Force/ Health Actuarial (B) Task Force
Amendment Proposal Form*

1. Identify yourself, your affiliation and a very brief description (title) of the issue.

Identification:
Brian Bayerle, ACLI

Title of the Issue:
Revise hedge modeling language to address index credit hedging.

2. Identify the document, including the date if the document is "released for comment," and the location in the document where the amendment is proposed:

VM-01, VM-21 Section 4.A.4, VM-21 Section 9, VM-21 Section 9.C.2, VM-31 Section 3.F.8.d

January 1, 2023 NAIC Valuation Manual, APF 2020-12

3. Show what changes are needed by providing a red-line version of the original verbiage with deletions and identify the verbiage to be deleted, inserted or changed by providing a red-line (turn on "track changes" in Word®) version of the verbiage. (You may do this through an attachment.)

See attached.

4. State the reason for the proposed amendment? (You may do this through an attachment.)

Index credit hedging is fundamentally different than the dynamic GMxB hedging which formed the conceptual underpinnings for VM-21. For example, the relatively fixed parameters of traditional GMxBs drive the hedging approach. In contrast, indexed products (including RILAs) have flexible crediting parameters which are continually reset based on hedge availability and costs, as well as current market conditions. In short, GMxB contract features drive hedging, while index product hedging drives contract features.

Since the reforms of VM-21 and C3P2, ILVA products have experienced major market growth. Several carriers, with the agreement of regulators and auditors, have interpreted the current VM-21 guidance as permitting the effects of index credit hedging to be reflected in product cash flows instead of within the "best efforts" and "adjusted" scenarios. Both regulators and industry would benefit from the codification of this approach within VM-21.

ACLI's proposal borrows heavily from the Academy's draft VM-22. The "error" for index credit hedging is describes as a percentage reduction to hedge payoffs. The percentage reduction must be supported by relevant, credible, and documented experience. A minimum of 1% is proposed as a regulatory guardrail.

The ACLI proposal would subject index credit hedging to the "clearly defined" documentation requirements of VM-21. Substantively, the change would (a) include index credit hedge purchases with the VM-21 "adjusted" run, and (b) permit index credit hedging to reflect a different, and potentially lower, level of ineffectiveness.

Dates: Received	Reviewed by Staff	Distributed	Considered
3/7/23	SO		
Notes: APF 2023-05			

ACLI supports aligning the index credit hedging guidance between VM-21 and VM-22. We started with draft VM-22 verbiage in creating this APF. In a few areas, our members have suggested technical improvements to the draft VM-22 definitions. It may be appropriate to carry these over to VM-22.

* This form is not intended for minor corrections, such as formatting, grammar, cross–references or spelling. Those types of changes do not require action by the entire group and may be submitted via letter or email to the NAIC staff support person for the NAIC group where the document originated.

NAIC Staff Comments:

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Dates: Received	Reviewed by Staff	Distributed	Considered
3/7/23	SO		
Notes: APF 2023-05			

VM-01

The term "Index Credit Hedge Margin" means a margin capturing the risk of inefficiencies in the company's hedging program supporting index credits. This includes basis risk, persistency risk, and the risk associated with modeling decisions and simplifications. It also includes any uncertainty of costs associated with managing the hedging program and changes due to investment and management decisions.

The term "Index Credit" means any interest credit, multiplier, factor, bonus, charge reduction, or other enhancement to policy values that is directly linked to one or more indices. Amounts credited to the policy resulting from a floor on an index account are included. An Index Credit may be positive or negative.

The term 'Index Crediting Strategies" means the strategies defined in a contract to determine index credits for a contract. For example, this may refer to underlying index, index parameters, date, timing, performance triggers, and other elements of the crediting method.

VM-21 Section 4.A.4

4. Modeling of Hedges
   a. For a company that does not have a future hedging strategy supporting the contracts tied directly to the contracts falling under the scope of VM-21 stochastic reserve requirements:

      i. The company shall not consider the cash flows from any future hedge purchases or any rebalancing of existing hedge assets in its modeling, since they are not included in the company's investment strategy supporting the contracts.

      ii. Existing hedging instruments that are currently held by the company in support of the contracts falling under the scope of these requirements shall be included in the starting assets.

   b. For a company with one or more future hedging strategies supporting the contracts tied directly to the contracts falling under the scope of VM-21 stochastic reserve requirements:

      i. For a future hedging strategy with hedge payoffs that solely offset interest credits associated with indexed interest strategies (indexed interest credits):

         a) In modeling cash flows, the company shall include the cash flows from future hedge purchases or any rebalancing of existing hedge assets that are intended solely to offset interest credits to contract holders.

         b) Existing hedging instruments that are currently held by the company for offsetting the indexed credits in support of the contracts falling under the scope of these requirements shall be included in the starting assets.

         c) An Index Credit Hedge Margin for these hedge instruments shall be reflected in both the "best efforts" and the "adjusted" runs by reducing index interest credit hedge payoffs by a margin multiple that shall be justified by sufficient and credible company experience and account for model error. It shall be no less than [1%] multiplicatively of the interest credited. In the absence of sufficient and credible company experience, a margin of

Dates: Received	Reviewed by Staff	Distributed	Considered
3/7/23	SO		
Notes: APF 2023-05			

[20%] shall be assumed. There is no cap on the index credit hedge margin if company experience indicates actual error is greater than [20%].

ii. For a company with one or more future hedging strategies supporting the contracts that do not solely offset indexed interest credits, the detailed requirements for the modeling of the hedges are defined in Section 9. The following requirements do not supersede the detailed requirements.

a) The appropriate costs and benefits of hedging instruments that are currently held by the company in support of the contracts falling under the scope of these requirements shall be included in the projections used in the determination of the SR.

b) The projections shall take into account the appropriate costs and benefits of hedge positions expected to be held in the future through the execution of the future hedging strategies supporting the contracts. Because models do not always accurately portray the results of hedge programs, the company shall, through back-testing and other means, assess the accuracy of the hedge modeling. The company shall determine a SR as the weighted average of two CTE values; first, a CTE70 ("best efforts") representing the company's projection of all of the hedge cash flows, including future hedge purchases, and a second CTE70 ("adjusted") which shall use only hedge assets held by the company on the valuation date and only no future hedge purchases associated solely with indexed interest credited. These are discussed in greater detail in Section 9. The SR shall be the weighted average of the two CTE70 values, where the weights reflect the error factor determined following the guidance of Section 9.C.4.

c) The company is responsible for verifying compliance with all requirements in Section 9 for all hedging instruments included in the projections.

d) The use of products not falling under the scope of these requirements (e.g., equity-indexed annuities) as a hedge shall not be recognized in the determination of accumulated deficiencies.

iii. If a company has a more comprehensive hedge strategy combining index credits, guaranteed benefit, and other risks (e.g., full fair value or economic hedging), an appropriate and documented bifurcation method should be used in the application of sections 4.A.4.b.i and 4.A.4.b.ii above for the hedge modeling and justification. Such bifurcation methods may quantify the specific risk exposure attributable to index credit liabilities versus other liabilities such as guaranteed living benefits, and apply such for the basis for allocation.

VM-21 Section 9

Section 9: Modeling Hedges under a Future Non-Index Credit Hedging Strategy

A. Initial Considerations

1. This section applies to modeling of hedges other than situations where the company only hedges index credits. If the company clearly separates index credit hedging from other hedging, then this section only applies to the other hedging if the index hedging follows the requirements in Section

Dates: Received	Reviewed by Staff	Distributed	Considered
3/7/23	SO		
Notes: APF 2023-05			

4.A.4.b.i. If the company does not clearly separate index credit hedging from other hedging, then this section is applicable for modeling of all hedges.

2. Subject to Section 9.C.2, the appropriate costs and benefits of hedging instruments that are currently held by the company in support of the contracts falling under the scope of these requirements shall be included in the calculation of the SR, determined in accordance with Section3.D and Section 4.D.

(Subsequent sections to be renumbered)

VM-21 Section 9.C.2

2. The company shall calculate a CTE70 (adjusted) by recalculating the CTE70 assuming the company has no future hedging strategies supporting the contracts except hedge purchases solely related to strategies to hedge index credits, therefore following the requirements of Section 4.A.4.a and 4.A.4.b.i.

VM-31 Section 3.F.8.d.x (new subsection)

x. Justification for the margin for any future hedging strategy that offsets interest credits associated with indexed interest strategies (indexed interest credits), including relevant experience, other relevant analysis, and an assessment of potential model error.

y. The method used to bifurcate comprehensive hedge strategies (i.e., strategies combining index credits, guaranteed benefit, and other risks (e.g., full fair value or economic hedging), per section 4.A.4.c

Agenda Item 9

Hear an Update from the American Academy of Actuaries (Academy) Life Practice Council

Life Practice Council Update

Ben Slutsker, MAAA, FSA
Vice President, Life Practice Council
Amanda Barry-Moilanen
Policy Analyst, Life

Life Actuarial Task Force (LATF) Meeting

March 21, 2023

American Academy of Actuaries

Academy Webinars and Events

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- Recent
  - PBR Bootcamp: Governance and Reporting—March 15
- Upcoming
  - Post-NAIC update on asset topics—April 4
  - PBR Bootcamp: Assets (Part 1)—April 19
  - PBR Bootcamp: Assets (Part 2)—April 26
  - Bank-Owned Life Insurance/Corporate Owned Life Insurance (BOLI/COLI) webinar—TBD
  - Additional PBR webinars in 2023

American Academy of Actuaries

Recent Activity

- Created a new group, the Asset Adequacy and Reinsurance Issues Task Force
  - Will focus on issues related to emerging reinsurance transactions and follow-ups to Actuarial Guideline (AG) 53 and asset adequacy testing
- Delivered recommended edits to the fixed annuity principle-based reserving framework to the Valuation Manual (VM)-22 (A) Subgroup
- Developed a white paper on considerations for market risk benefits in new accounting standards on targeted improvements for long-duration contracts in U.S. GAAP accounting

American Academy of Actuaries

Recent Activity

- Presented to the Risk-Based Capital Investment Risk and Evaluation (E) Working Group on considerations for collateralized loan obligation C-1 factors at the Fall National Meeting
  - As a follow-up, submitted clarification questions for the working group to consider for developing a framework
- Proposed to the Life Risk-Based Capital (E) Working Group structural updates, revisions to instructions, and a new financial statement note to address the newly adopted C-2 mortality factors

American Academy of Actuaries

Ongoing Activity

5

- Developed multiple education sessions on economic scenario generators and acceptance criteria for the Life Actuarial (A) Task Force
- Engaging in the discussions on a fixed annuity principle-based reserving framework in the VM-22 (A) Subgroup
- Revisiting the covariance methodology in life risk-based capital
- Creating a discussion brief related to asset assumptions
- Updating the asset adequacy analysis practice note

American Academy of Actuaries

Thank you

Questions?

- For more information, please contact the Academy's life policy analyst, Amanda Barry-Moilanen, at barrymoilanen@actuary.org.

American Academy of Actuaries

Agenda Item 10

Hear an Update on the Activities of the Economic Scenario Generator Governance Drafting Group, the VM-20/VM-21 Economic Scenario Generator Technical Drafting Group, and the Standard Projection Amount Drafting Group
(No Materials)

Agenda Item 11

Hear an Update on SOA Research and Education

SOCIETY OF ACTUARIES RESEARCH UPDATE TO LATF

March 21, 2023

R. DALE HALL, FSA, MAAA, CERA, CFA
Managing Director of Research

Presentation Disclaimer

The material and information contained in this presentation is for general information only. It does not replace independent professional judgment and should not be used as the basis for making any business, legal or other decisions. The Society of Actuaries assumes no responsibility for the content, accuracy or completeness of the information presented.

SOA Research INSTITUTE

SOA Research INSTITUTE

2014-19 Individual Payout Annuity Experience Study – Report

Mortality and Longevity

3

2014-2019 Payout Annuity Mortality Study

- Study was published in December 2022
- This is the first study released under Experience Studies Pro, the partnership between the SOA Research Institute and LIMRA
- For access to full report and detailed study results in Tableau, companies must purchase the Standard Data Package (SDP)

SOA Research INSTITUTE

2014-2019 Payout Annuity Mortality Study

- High-level results:

Metric	Current Study, 2014-2019	Previous Study, 2009-2013
Exposure in contract years	4,323,432	4,494,272
Exposure in annual income years	33,639,077,075	26,831,330,765
Number of deaths	236,331	230,019

A/E by Amount, Expected Basis = 2012 IAM Basic w/Scale G2	Current Study, 2014-2019	Previous Study, 2009-2013
Overall	108.7%	106.4%
Females	106.7%	104.8%
Males	110.9%	107.7%

SOA Research INSTITUTE

2014-2019 Payout Annuity Mortality Study

- Additional detail available in the full report:
  - Expected bases:
    - 2012 IAM Basic Table
    - 2012 IAM Basic Table with Scale G2
    - 2012 IAM Period Table
    - 2012 IAM Period Table with Scale G2
    - 2019 SSA Table
  - Data breakouts:
    - Sex
    - Attained age group
    - Contract year group
    - Study year
    - Tax class
    - Annual income group
    - Contract type
    - Refund feature
    - Benefit class
    - Annuitant status

SOA Research INSTITUTE

2014-2019 Payout Annuity Mortality Study

- This completed study will be the basis for VM-22 Mortality SPA development for Payout Annuities
- Mortality adjustment factors by sex and attained age groups are being reviewed and developed
  - Previous factors were developed based on the 2009-2013 study
  - Will analyze any material differences in factors from 2009-13 study to current study
- Does the mortality experience in this study demonstrate the need for a new base table?
  - Would be an update to the 2012 Individual Annuity Mortality (IAM) Basic Table
  - Has not been discussed or decided on yet
  - Would a new table be the expected basis for Fixed and Variable annuities as well, or does each product line need its own table?

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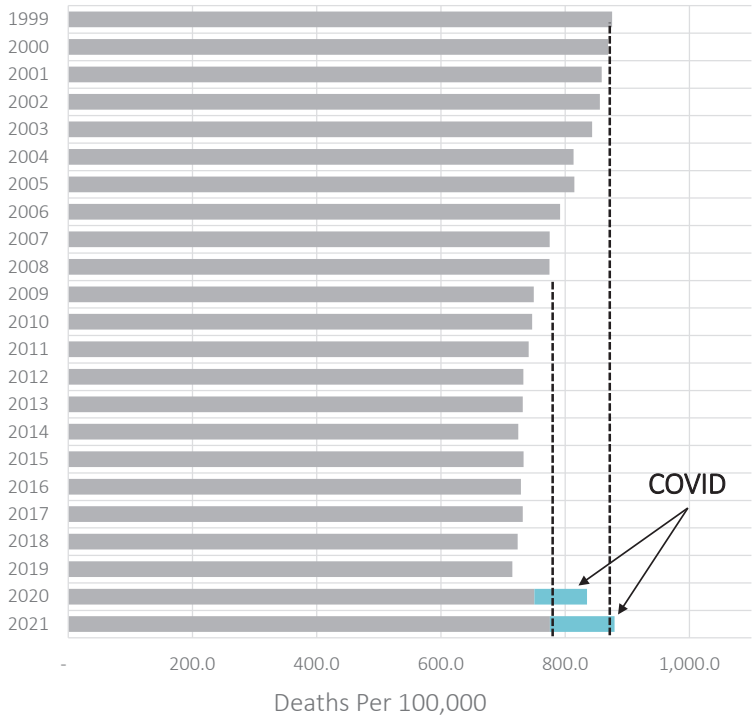
US Population Mortality Observations: Updated with 2021 Experience

Mortality and Longevity

8

Historical U.S. Population Mortality

- Total Population
  - 2021 mortality rate of 879.7/100,000 (0.9%)
  - 5.3% increase over 2020 (2019 to 2020 was 16.8%)
  - 23% higher in 2021 than 2019
  - highest rate in last 23 years
- COVID
  - 2021 mortality rate of 104.1 deaths/100,000
  - 22.6% increase over 2020
  - 8% decrease if 2020 'annualized'
- Without COVID
  - 2021 mortality rate of 775.6 deaths/100,000
  - 3.3% increase over 2020 (2019 to 2020 was 4.9%)
  - Highest since 2008



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Change in Mortality Rates by Cause of Death

- Heart disease: 3.3% increase in 2021 following 4.1% increase in 2020
- Cancer: 2021 had first increase in last 22 years
- Accidents, diabetes, liver, hypertension, assaults 2021 increases over very large 2020 increases
- Deaths from suicides back up after decrease in 2020
- Good news in Alzheimer's, pulmonary and flu/pneumonia

Cause of Death	2021 Deaths %	Change in Age-Adjusted Mortality Rates	
		2019-2020	2020-2021
Heart Disease	20.1%	4.1%	3.3%
Cancer	17.5%	-1.4%	1.7%
COVID	12.0%	n/a	22.6%
Alzheimer's/Dementia	6.7%	7.9%	-4.5%
Accidents	6.5%	16.8%	12.4%
Stroke	4.7%	5.1%	5.9%
Pulmonary	4.1%	-4.6%	-4.7%
Diabetes	3.0%	14.9%	2.4%
Liver	1.6%	16.9%	9.1%
Suicide	1.4%	-3.0%	4.2%
Hypertension	1.2%	13.1%	6.1%
Flu & Pneumonia	1.2%	5.9%	-19.3%
Assault	0.8%	28.9%	5.1%
Other	19.3%	6.2%	6.2%
All CODs	100.0%	16.8%	5.3%

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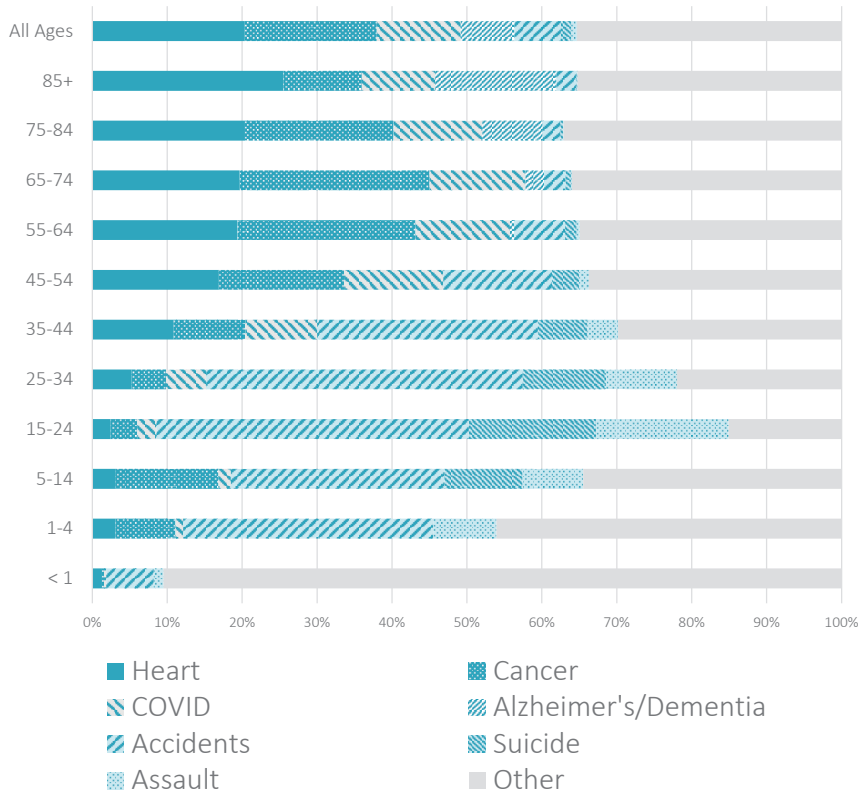
2020 & 2021 Causes of Death by Age Group

- Heart disease, cancer and COVID dominate ages 55-84
- Ages 45-54
  - #1 is Heart disease, then cancer, accidents & COVID
- Accidents dominate ages 1-44
- Suicide and assault are prominent for ages 5-34
- COVID not in top 3 for ages <35



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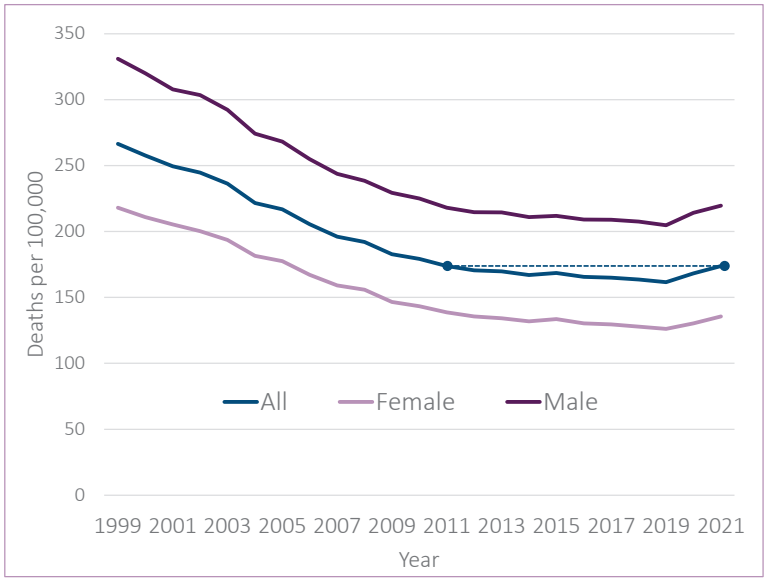
Heart Disease



All Ages	Average Annual Improvement		Cumulative Improvement	Average Annual Improvement	
	1999-2009	2009-2019	2019-2021	2019-2020	2020-2021
All	3.7%	1.2%	-7.6%	**-4.1%**	**-3.3%**
Male	3.6%	1.1%	-7.2%	-4.6%	-2.5%
Female	3.9%	1.5%	-7.5%	-3.2%	-4.1%
Age Group (includes both sexes)					
< 1	3.5%	3.0%	-4.9%	8.5%	-14.7%
1 - 4	2.3%	1.2%	9.7%	14.6%	-5.6%
5 - 14	2.4%	2.0%	-9.3%	6.2%	-16.4%
15 - 24	1.5%	1.5%	-7.2%	-0.1%	-7.2%
25 - 34	-0.2%	0.2%	-20.0%	**-13.7%**	-5.6%
35 - 44	1.2%	0.6%	-16.6%	**-14.7%**	-1.7%
45 - 54	1.5%	0.8%	-11.4%	**-11.1%**	-0.3%
55 - 64	3.4%	0.0%	-9.6%	**-9.7%**	0.0%
65 - 74	4.9%	0.8%	-7.1%	-6.5%	-0.6%
75 - 84	4.1%	2.0%	-5.4%	-2.6%	-2.7%
85+	3.3%	1.3%	-7.4%	-0.6%	-6.7%

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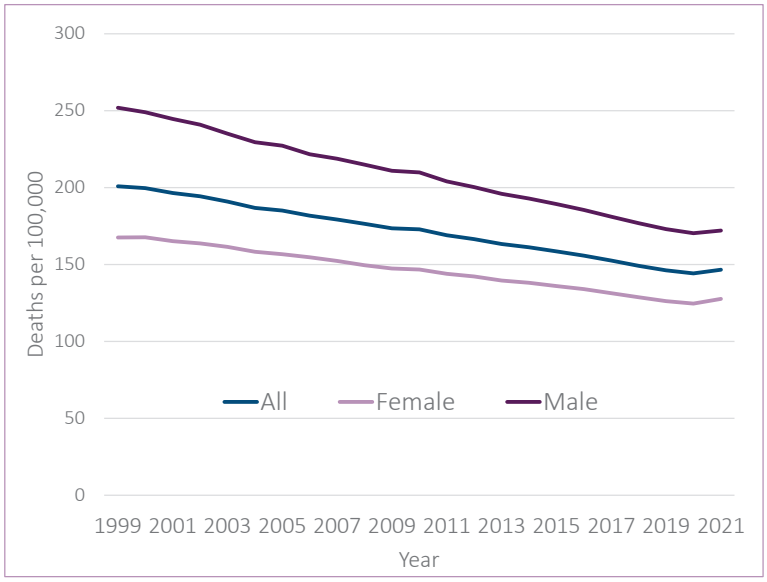
Cancer



All Ages	Average Annual Improvement		Cumulative Improvement	Average Annual Improvement	
	1999-2009	2009-2019	2019-2021	2019-2020	2020-2021
All	1.4%	1.7%	-0.3%	1.4%	**-1.7%**
Male	1.8%	2.0%	0.5%	1.5%	-1.0%
Female	1.3%	1.5%	-1.2%	1.3%	-2.5%
Age Group (includes both sexes)					
< 1	-0.3%	2.4%	-0.3%	0.6%	-0.9%
1 - 4	2.3%	1.8%	-2.4%	-9.3%	6.3%
5 - 14	1.2%	1.5%	-0.9%	-2.2%	1.3%
15 - 24	1.7%	1.4%	5.6%	5.6%	0.0%
25 - 34	1.0%	1.4%	-2.1%	0.4%	**-2.5%**
35 - 44	2.0%	1.6%	-0.5%	0.8%	**-1.3%**
45 - 54	1.2%	2.6%	5.2%	1.6%	3.7%
55 - 64	2.1%	1.4%	4.1%	1.3%	2.9%
65 - 74	2.1%	2.0%	2.1%	0.8%	1.3%
75 - 84	0.9%	1.9%	-1.1%	1.6%	**-2.7%**
85+	0.6%	0.8%	-9.0%	2.1%	**-11.4%**

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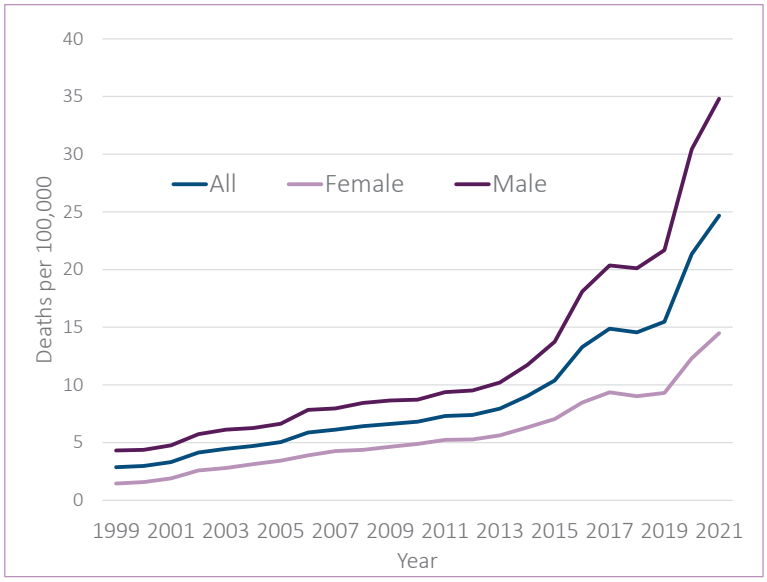
Opioids



All Ages	Average Annual Improvement		Cumulative Improvement	Average Annual Improvement	
	1999-2009	2009-2019	2019-2021	2019-2020	2020-2021
All	-8.7%	-8.9%	-59.5%	**-38.0%**	**-15.6%**
Male	-7.2%	-9.6%	-60.5%	-40.3%	-14.4%
Female	-12.3%	-7.2%	-55.7%	-32.4%	-17.7%
Age Group (includes both sexes)					
< 1					-87.7%
1 - 4		-4.0%	-175.9%	-50.9%	-82.9%
5 - 14		-2.6%	-128.1%	-96.8%	-15.9%
15 - 24	-12.3%	-5.5%	-67.9%	**-61.2%**	-4.1%
25 - 34	-10.0%	-10.5%	-53.9%	**-36.7%**	**-12.6%**
35 - 44	-4.7%	-10.2%	-63.0%	**-40.6%**	**-16.0%**
45 - 54	-9.5%	-6.2%	-56.5%	**-34.0%**	**-16.7%**
55 - 64	-16.8%	-10.4%	-62.6%	**-31.1%**	**-24.1%**
65 - 74	-13.8%	-12.7%	-61.8%	**-25.0%**	**-29.5%**
75 - 84	-7.4%	-6.3%	-16.0%	7.0%	**-24.7%**
85+		-3.1%	-25.9%	-4.7%	**-20.2%**

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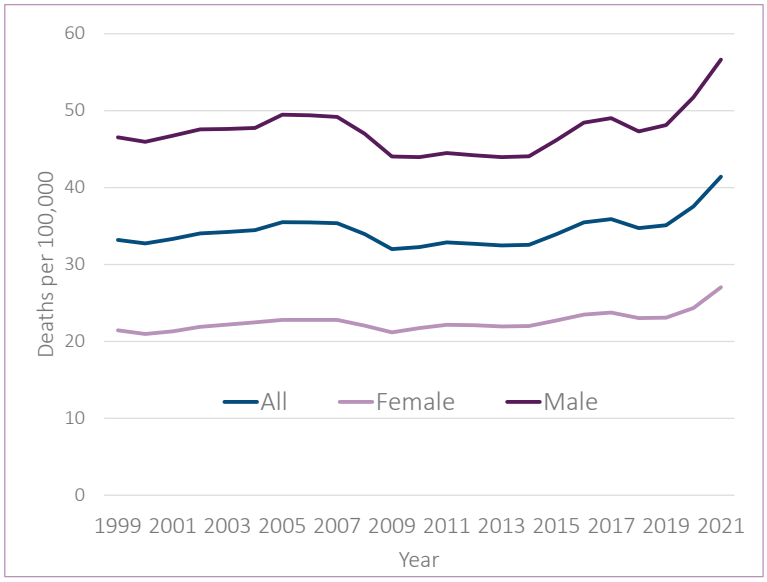
Accidents excluding Opioids



All Ages	Average Annual Improvement		Cumulative Improvement	Average Annual Improvement	
	1999-2009	2009-2019	2019-2021	2019-2020	2020-2021
All	0.4%	-0.9%	-18.0%	**-7.0%**	**-10.3%**
Male	0.5%	-0.9%	-17.7%	-7.5%	-9.5%
Female	0.1%	-0.9%	-17.1%	-5.3%	-11.2%
Age Group (includes both sexes)					
< 1					
1 - 4			-16.2%	-1.3%	-14.7%
5 - 14		1.3%	-12.2%	-3.2%	-8.8%
15 - 24	3.4%	2.2%	-16.9%	**-13.7%**	-2.8%
25 - 34	0.5%	-0.3%	-27.1%	**-16.3%**	**-9.3%**
35 - 44	0.6%	-1.1%	-25.6%	**-13.3%**	**-10.9%**
45 - 54	-1.9%	-0.4%	-17.8%	**-9.8%**	**-7.3%**
55 - 64	-0.5%	-3.0%	-17.8%	**-8.3%**	**-8.7%**
65 - 74	0.8%	-1.9%	-12.7%	-2.1%	-10.4%
75 - 84	-0.3%	-1.1%	-9.6%	1.9%	-11.8%
85+		-2.0%	-18.1%	-1.6%	-16.2%

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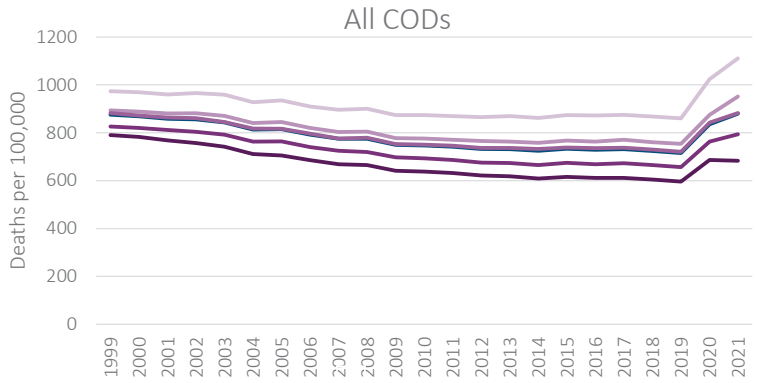
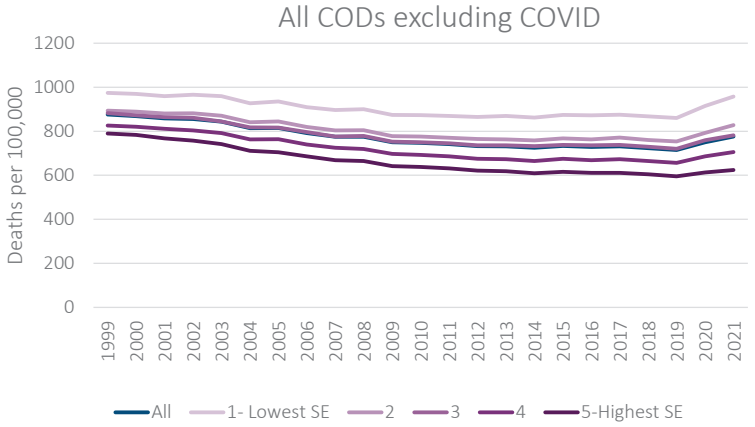
Mortality by Socioeconomic (SE) Group

Quintile	Average Annual Improvement		Cumulative 2021 Improvement			
			With COVID		Without COVID	
	1999-2009	2009-2019	Since 2019	Since 2020	Since 2019	Since 2020
1 – Lowest SE	1.1%	0.2%	-29.1%	-8.5%	-11.3%	-4.7%
2	1.4%	0.3%	-26.2%	-8.8%	-9.9%	-4.4%
3	1.6%	0.4%	-22.5%	-4.7%	-8.5%	-2.9%
4	1.7%	0.6%	-20.8%	-3.9%	-7.4%	-2.8%
5 – Highest SE	2.1%	0.7%	-14.7%	0.5%	-4.7%	-1.8%
All	1.5%	0.5%	-23.0%	-5.3%	-8.4%	-3.3%
High-Low	1.0%	0.6%	14.4%	9.2%	6.6%	3.0%





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US Population Mortality Observations: Updated with 2021 Experience

QR code to final report:

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Additional Life Research

Experience Studies

Project Name	Objective	Link/Expected Completion Date
2014-19 Individual Payout Annuity Experience Study - Report	Examine the mortality experience from 2014-19 under individual payout annuity contracts.	https://www.soa.org/resources/experience-studies/2022/14-19-payout-annuity-mortality/#public
COVID-19 Cause of Death Study - 2021 Q4 Update	Publish a cause of death study for individual life insurance.	https://www.soa.org/resources/experience-studies/2022/cause-of-death-q4/
COVID-19 Reported Claim Study - 2Q 2022 Update	Draft a research study reviewing Covid-19 reported deaths by quarter.	https://www.soa.org/resources/experience-studies/2022/us-ind-life-covid-rca-q2/
Group Life COVID-19 Mortality Survey Update - through June 2022	Complete an update on a mortality study assessing the impact of COVID-19 on Group Life Insurance.	https://www.soa.org/resources/experience-studies/2022/group-life-covid-19-mortality-06-2022/
US Population Mortality Observations: Updated with 2021 Experience	Explore observations from the release of the 2021 U.S. population mortality data.	https://www.soa.org/resources/research-reports/2023/us-population-mortality/
COVID-19 Individual Life Mortality Study - Experience Study Report - 2022 Q1	Complete a mortality study assessing the impact of COVID-19 on Individual Life Insurance.	3/16/2023
COVID-19 Reported Claim Study - 3Q 2022 Update	Draft a research study reviewing Covid-19 reported deaths by quarter	3/16/2023
2011-2015 Deferred Annuity Mortality Study	Examine the mortality experience from 2011-2015 in deferred annuity contracts and release a report with the findings and a database with the experience data.	3/31/2023
2019-20 Fixed Indexed Annuity Study - Report	Examine lapse and the utilization of guaranteed living withdrawal benefit options on fixed index annuity policies under a Joint SOA/LIMRA project and release Tableau visualizations with the observations from the study.	4/15/2023
COVID-19 Cause of Death Study - 2022 Q1 Update	Publish a cause of death study for individual life insurance	4/15/2023

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Practice Research & Data Driven In-house Research

Project Name	Objective	Link/Expected Completion Date
2022 Mortality Improvement Company Survey	Survey life insureers and annuity companies to see how mortality improvement assumptions have changed in light of COVID.	https://www.soa.org/resources/research-reports/2022/mort-improve-survey/
Guideline Excess Spread Attribution Analysis	Specify general considerations to guide the development of a methodology to attribute spread to different investment risks related to AG53.	https://www.soa.org/resources/research-reports/2023/methodology-ag53/
Mortality and Mental Illness	Examine the impact on mortality of mental illness during the COVID-19 pandemic.	https://www.soa.org/resources/research-reports/2022/2022-mental-illness-us-mort-long/
International Comparison of Regulatory Requirements Study Note; 2021.08	Capital Adequacy Regulatory Requirements in Life Insurance across 4 key models in the US, Canada, EU and Bermuda.	3/13/2023
Mortality and Race	Summarize available literature on mortality and race and discuss actuarial aspects.	4/17/2023
Maternal Mortality	Study maternal mortality in US and compare to other countries.	4/30/2023
Unhealthy Longevity	Examine differences in mortality/longevity between impaired vs healthy lives.	4/30/2023
Expert Opinion on Impact of COVID-19 on Future Mortality - Survey 2	Survey panel of experts on short and mid term thoughts on future population and insured mortality.	5/31/2023

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Agenda Item 12

Hear an Update from the Academy Council on Professionalism and Education
(No Materials)

Agenda Item 13

Hear an Update on Mortality Improvement
(Materials Pending)

Agenda Item 14

Consider Partial Adoption of
APF 2023-03 VM-20 Updates

Life Actuarial (A) Task Force/ Health Actuarial (B) Task Force
Amendment Proposal Form*

1. Identify yourself, your affiliation and a very brief description (title) of the issue.

Identification:
PBR Staff of Texas Department of Insurance

Title of the Issue:
Address several clean-up items for VM-20, as well as related VM-21 and VM-31 Sections.

2. Identify the document, including the date if the document is "released for comment," and the location in the document where the amendment is proposed:

VM- 20 Section 3.B.5.c.ii.4, VM-20 Section 5.B.3, VM-20 Section 7.E.2 and Guidance Note below, VM-21 Section 4.D.4.c, VM-20 Section 7.K.3, VM-31 Section 3.D.6.f, VM-20 Section 9.A.4

January 1, 2023 NAIC Valuation Manual

3. Show what changes are needed by providing a red-line version of the original verbiage with deletions and identify the verbiage to be deleted, inserted or changed by providing a red-line (turn on "track changes" in Word®) version of the verbiage. (You may do this through an attachment.)

See attached.

4. State the reason for the proposed amendment? (You may do this through an attachment.)

   1. The formula for calculating the NPR for ULSG based on the value of the SG in VM-20 Section 3.B.5.c.ii.4 excludes the EA from the scaling of the NPR. This is inconsistent with the formula for calculating the NPR for ULSG disregarding the SG in VM-20 Section 3.B.5.d.iv. The scale is the prefunding ratio of actual SG (denoted ASG) to fully funded SG (denoted FFSG), and it makes intuitive sense that the NPR would be scaled to decrease or increase relative to the level of funding of the SG.

   2. The VM-20 Section 5.B.3 stochastic reserve methodology is missing an aggregate cash surrender value (CSV) floor for scenario reserves before calculating CTE70. This allows scenario reserves that exceed the CSV to be dampened or eliminated by being averaged with scenario reserves. A CSV floor in the NPR does not address this concern, because it does not reflect the scenario reserves in the SR that exceed the CSV. In contrast, in VM-21 Section 4.B.1 scenario reserves are floored at the aggregate CSV as appropriate. Scenario reserves, as the asset requirement for specific scenarios, should be held at or above the CSV.

   3. Add consideration to VM-20 Section 7.E.2 consistent with VM-21 Section 4.D.4.c's requirement on the company's assumed cost of borrowing along with the associated Guidance Note. Editorial clarifications to the existing Guidance Note in VM-21.

   4. VM-20 Section 7.K.3 should clarify the requirement to reflect the hedge modeling error or insufficiency. Related to this change, more discussion about the hedging strategy and hedge modeling should be added to the Life Report section of the VM-31 Section 3.D.6.f report.

5. VM-20 Section 9.A.4 implies companies can elect to stochastically model risk factors other than interest rates & equities. Stochastic assumptions are not subject to the requirements of Section 9 relating to prudent estimate assumptions. Nor are any guidance/specific requirements provided if companies elect to stochastically model other risk factors. Add consideration to VM-20 consistent with VM-21 Section 12.B.4's requirement about the risk factors other than interest rates & equities that are stochastically modelled, which was added to VM-21 for this same reasoning.

* This form is not intended for minor corrections, such as formatting, grammar, cross–references or spelling. Those types of changes do not require action by the entire group and may be submitted via letter or email to the NAIC staff support person for the NAIC group where the document originated.

NAIC Staff Comments:

Dates: Received	Reviewed by Staff	Distributed	Considered
1/30/23	SO		
Notes: APF 2023-03			

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VM-20 Section 3.B.5.c.ii.4

4) The NPR for an insured age x at issue at time t shall be according to the formula below:

$\cancel{Min\,[\,ASG_{x+t}/FFSG_{x+t}\,,\,1]\bullet NSP_{x+t} - E_{x+t}}$

$Min\,[\,ASG_{x+t}/FFSG_{x+t}\,,\,1]\bullet(NSP_{x+t} - E_{x+t})$

VM-20 Section 5.B.3

3. Set the scenario reserve equal to the sum of the statement value of the starting assets across all model segments and the maximum of the amounts calculated in Subparagraph 2 above.

   The scenario reserve for any given scenario shall not be less than the cash surrender value in aggregate on the valuation date for the group of contracts modeled in the projection.

VM-20 Section 7.E.2

2. Model at each projection interval any disinvestment in a manner that is consistent with the company's investment policy and that reflects the company's cost of borrowing where applicable, provided that the assumed cost of borrowing is not lower than the rate at which positive cash flows are reinvested in the same time period, taking into account duration, ratings, and other attributes of the borrowing mechanism. Gross asset spreads used in computing market values of assets sold in the model shall be consistent with, but not necessarily the same as, the gross asset spreads in Section 7.E.1.d and Section 7.E.1.f above, recognizing that starting assets may have different characteristics than modeled reinvestment assets.

   Guidance Note: The simple language above "provided that the assumed cost of borrowing is not lower than the rate at which positive cash flows are reinvested in the same time period" is intended to prevent excessively optimistic borrowing assumptions. If in any case, the assumed cost of borrowing restriction cannot be fully applied or followed precisely, then as with all other simplifications/approximations, the company shall not allow borrowing assumptions to materially reduce the reserve.

VM-21 Section 4.D.4.c

Guidance Note: ~~This limitation is being referred to Life Actuarial (A) Task Force for review.~~ The simple language above "provided that the assumed cost of borrowing is not lower than the rate at which positive cash flows are reinvested in the same time period" is ~~not intended to impose a literal requirement. It is~~ intended ~~to reflect a general concept~~ to prevent excessively optimistic borrowing assumptions. ~~It is recognized that borrowing parameters and rules can be complicated, such that modeling limitations may not allow for literal compliance, in every time step, as long as the reserve is not materially affected. However, if~~If in any case, ~~the company is unable to fully apply this~~the assumed cost of borrowing restriction cannot be fully applied or followed precisely, then as with all other simplifications/approximations, ~~prudence dictates that a~~the company shall not allow borrowing assumptions to materially reduce the reserve.

VM-20 Section 7.K.3

3. In circumstances where one or more material risk factors related to a derivative program are not fully captured within the cash-flow model used to calculate CTE 70, the company shall reflect the approximation, simplification or model limitations in the modeling of such risk factors by increasing the SR as described in Section 5.E. The company shall also be able to justify that the method appropriately reflects the potential error using historical experience, e.g., analysis of historical performance or backtesting.

VM-31 Section 3.D.6.f

f. Risk Management – Detailed description of model risk management strategies, such as hedging and other derivative programs, including any future hedging strategies supporting the policies and any adjustments to the SR pursuant to VM-20, Section 7.K3 and VM-20, Section 7.K.4, specific to the groups of policies covered in this sub-report and not discussed in the Life Summary Section 3.C.5. Documentation of any future hedging strategies should include documentation addressing each of the CDHS documentation attributes. The following should be included in the documentation:

i. Descriptions of basis risk, gap risk, price risk and assumption risk.

ii. Methods and criteria for estimating the a priori effectiveness of the strategy.

iii. Results of any reviews of actual historical hedging effectiveness.

iv. Strategy Changes – Discussion of any changes to the hedging strategy during the past 12 months, including identification of the change, reasons for the change, and the implementation date of the change.

v. Hedge Modeling – Description of how the hedge strategy was incorporated into modeling, including:

- Differences in timing between model and actual strategy implementation.
- For a company that does not have a future hedging strategy supporting the contracts, confirmation that currently held hedge assets were included in the starting assets.
- Evaluations of the appropriateness of the assumptions on future trading, transaction costs, other elements of the model, the strategy, and other items that are likely to result in materially adverse results.
- Discussion of the projection horizon for the future hedging strategy as modeled and a comparison to the timeline for any anticipated future changes in the company's hedging strategy.
- If residual risks and frictional costs are assumed to have a value of zero, a demonstration that a value of zero is an appropriate expectation.

- Any discontinuous hedging strategies modeled, and where such discontinuous hedging strategies contribute materially to a reduction in the SR, any evaluations of the interaction of future trigger definitions and the discontinuous hedging strategy, including any analyses of model assumptions that, when combined with the reliance on the discontinuous hedging strategy, may result in adverse results relative to those modeled.

- The approach and rationale used to reflect the hedge modeling error(s).

VM-20 Section 9.A.4

4. If the company elects to stochastically model risk factors in addition to those listed in Section 9.A.3 above, the requirements in this section for determining prudent estimate assumptions for these risk factors do not apply.

   It is expected that companies will not stochastically model risk factors other than the economic scenarios, such as policyholder behavior or mortality, until VM-20 has more specific guidance and requirements available. Companies shall discuss with domiciliary regulators if they wish to stochastically model other risk factors.

Agenda Item 15

Consider Adoption of APF 2023-01

Life Actuarial (A) Task Force/ Health Actuarial (B) Task Force
Amendment Proposal Form*

1. Identify yourself, your affiliation and a very brief description (title) of the issue.

Identification:
PBR Staff of Texas Department of Insurance

Title of the Issue:
The values of the starting assets defined in the two sentences in VM-21 Section 4.D.1.a are not identical.

2. Identify the document, including the date if the document is "released for comment," and the location in the document where the amendment is proposed:

VM-21 Section 4.D.1.a.iii in January 1, 2023 NAIC Valuation Manual

3. Show what changes are needed by providing a red-line version of the original verbiage with deletions and identify the verbiage to be deleted, inserted or changed by providing a red-line (turn on "track changes" in Word®) version of the verbiage. (You may do this through an attachment.)

1. Starting Asset Amount
a. For the projections of accumulated deficiencies, the value of assets at the start of the projection shall be set equal to the approximate value of statutory reserves at the start of the projection plus the allocated amount of PIMR attributable to the assets selected. Assets shall be valued consistently with their annual statement values. The amount of such asset values shall equal the sum of the following items, all as of the start of the projection:

i. All of the separate account assets supporting the contracts;

ii. Any hedge instruments held in support of the contracts being valued; and

iii. An amount of assets held in the general account equal to the approximate value of statutory reserves as of the start of the projections plus the allocated amount of PIMR attributable to the assets selected less the amount in (i) and (ii).

4. State the reason for the proposed amendment? (You may do this through an attachment.)

The edit is necessary to have the identical value of the assets at the start of the projection as in the first sentence (i.e., For the projections of accumulated deficiencies, the value of assets at the start of the projection shall be set equal to the approximate value of statutory reserves at the start of the projection **plus the allocated amount of PIMR attributable to the assets selected**).

* This form is not intended for minor corrections, such as formatting, grammar, cross–references or spelling. Those types of changes do not require action by the entire group and may be submitted via letter or email to the NAIC staff support person for the NAIC group where the document originated.

NAIC Staff Comments:

Dates: Received	Reviewed by Staff	Distributed	Considered
1/9/23. 2/7/23, 3/2/23	SO		
Notes: APF 2023-01 2/23/23 edit was to move the "plus the allocated amount of PIMR attributable to the assets selected" down to 4.D.1.a.iii from 4.D.1.a.			

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Agenda Item 16

Other Matters