MEETING MATERIALS PACKET

LIFE ACTUARIAL (A) TASK FORCE (1)

August 3, 2020

NAIC SPRING NATIONAL MEETING

Virtual Meeting
# August 3, 2020

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2020 Summer National Meeting  
Virtual Meeting

LIFE ACTUARIAL (A) TASK FORCE  
Monday, August 3, 2020
11:00 a.m. – 2:00 p.m. ET / 10:00 a.m. – 1:00 p.m. CT / 9:00 a.m. – 12:00 p.m. MT / 8:00 – 11:00 a.m. PT

ROLL CALL

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<tr>
<td>Kent Sullivan, Chair</td>
<td>Mike Boerner</td>
<td>Texas</td>
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<td>Jillian Froment, Vice Chair</td>
<td>Peter Weber</td>
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<td>Jim L. Ridling</td>
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<td>Ricardo Lara</td>
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<td>Robert H. Muriel</td>
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<td>Stephen W. Robertson</td>
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<td>Doug Ommen</td>
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<td>Vicki Schmidt</td>
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<td>Steve Kelley</td>
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<td>Chlora Lindley-Myers</td>
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<td>Bruce R. Ramge</td>
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<td>Marlene Caride</td>
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<td>Russell Toal</td>
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<td>Linda A. Lacewell</td>
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<td>Todd E. Kiser</td>
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<td>Scott A. White</td>
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NAIC Support Staff: Reggie Mazyck/Eric King

AGENDA

10:00 – 10:05 a.m.  1. Call to Order/Roll Call/Consider Adoption of its Minutes—Mike Boerner (TX)

10:05 a.m. – 12:00 p.m.  2. Hear an Update on the Yearly Renewable Term (YRT) Field Test (Pt. 1)—Jason Kehrberg (American Academy of Actuaries [Academy] Life Practice Council), Chris Whitney (Oliver Wyman), Jennifer Frasier (NAIC), and Scott O’Neal (NAIC)

12:00 – 12:10 p.m.  Break

12:10 – 1:00 p.m.  3. Discuss Proposed Changes to the Standard Nonforfeiture Law for Individual Deferred Annuities (#805)—Mike Boerner (TX)
Adoption of Life Actuarial (A) Task Force Minutes
Draft: 7/22/20

The Life Actuarial (A) Task Force met via conference call June 25, 2020. The following Task Force members participated: Kent Sullivan, Chair, represented by Mike Boerner and Rachel Hemphill (TX); Jillian Froment, Vice Chair, represented by Peter Weber (OH); Jim L. Ridling represented by Steve Ostlund (AL); Ricardo Lara represented by Perry Kupferman and Ben Bock (CA); Michael Conway represented by Eric Unger (CO); Andrew N. Mais represented by Wanchin Chou and Jim Jakielo (CT); Doug Oommen represented by Mike Yanacheak (IA); Robert H. Muriel represented by Bruce Sartain (IL); Stephen W. Robertson represented by Karl Knable (IN); Vicki Schmidt represented by Nicole Boyd (KS); Steve Kelley represented by Fred Andersen and John Robinson (MN); Chlora Lindley-Myers represented by William Leung (MO); Bruce R. Ramge represented by Rhonda Ahrens (NE); Marlene Caride represented by Seong-min Eom (NJ); Russell Toal represented by Mark Hendrick (NM); Robert H. Muriel represented by Bruce Sartain (IL); Stephen W. Robertson represented by Karl Knable (IN); Vicki Schmidt represented by Nicole Boyd (KS); Steve Kelley represented by Fred Andersen and John Robinson (MN); Chlora Lindley-Myers represented by William Leung (MO); Bruce R. Ramge represented by Rhonda Ahrens (NE); Marlene Caride represented by Seong-min Eom (NJ); Russell Toal represented by Mark Hendrick (NM); Linda A. Lacewell represented by Bill Carmello (NY); Glen Mulready represented by Andrew Schallhorn (OK); Todd E. Kiser represented by Tomasz Serbinowski (UT); and Scott A. White represented by Craig Chupp (VA).

1. Adopted Revisions to AG 49

Mr. Andersen said AG 49-A, the proposed revision to Actuarial Guideline XLIX—The Application of the Life Illustrations Model Regulation to Policies with Index-Based Interest (AG 49), will reflect the Task Force charge that products with multipliers, cap buy ups and other index-linked enhancements should not illustrate more favorably than products without those features. AG 49-A also provides additional limits on the illustration of policy loan leverage. He said that given the constraints of the Life Insurance Illustrations Model Regulation (#582), AG 49-A strikes a balance between allowing product innovation and reducing potential loopholes without eliminating all index features. He recommended that if AG 49-A is adopted, the Task Force should observe market activities for first six to 12 months following the effective date to determine if Model #582, its associated illustrated scale and focus on historic returns make sense for the indexed universal life (IUL) product.

Mr. Andersen made a motion, seconded by Mr. Weber, to adopt AG 49-A, the revision to AG 49 effective for all policies issued after the AG 49-A effective date (Attachment A). The motion passed unanimously.

Mr. Boerner said, once AG 49-A is adopted by the Executive (EX) Committee and Plenary, and its effective date is set, the Task Force will consider exposure of a proposal to discontinue AG 49 for all policies issued after the effective date of AG 49-A.

2. Adopted Amendment Proposal 2020-07

Tom Kalmbach (Globe Life) discussed the Globe Life comment letter (Attachment B) on amendment 2020-07, which proposes to change the life nonforfeiture interest rate floor in VM-02, Minimum Nonforfeiture Mortality and Interest. He said the change will result in increases in cash values and higher premiums for consumers. He said higher premiums will make the products in the small face amount market less affordable. He said the only economic reason for the change is related to paid-up additions and in-kind benefits. He proposed allowing a lower interest rate to determine the amount of paid-up and in-kind benefits while retaining the current rate for calculation of the base cash value. Mr. Serbinowski said that lowering the interest rate for paid-up values and in-kind benefits results in lower values for both. He said the proposal should not receive regulatory consideration. Mr. Boerner said a change such as the one Mr. Kalmbach is proposing should not be pursued in the Valuation Manual. He said that type of modification should be addressed through a model law change.

Brian Bayerle (American Council of Life Insurers—ACLI) said the ACLI comment letter (Attachment C) responds to companies’ concerns about whether adoption of the proposal should be deferred to allow more time to prepare for the change. Mr. Bayerle said deferring the change to the 2022 Valuation Manual would provide companies less time to address the matter. He pointed out that if the change is adopted for the 2021 Valuation Manual, companies will have 18 months to comply with the change. He said it is important that the nonforfeiture rate link to Section 7702 of the Internal Revenue Code (IRC) be maintained.

Elizabeth Brill (New York Life) said the comment letter (Attachment D), jointly submitted with three other companies, supports amendment 2020-07. She said it is important that policyowners who surrender their policies receive equitable value in line with
the intent of the standard nonforfeiture law. She said that in this low interest rate environment, retaining a 4% nonforfeiture interest rate floor potentially hurts consumers.

Mr. Weber made a motion, seconded by Mr. Yanacheak, to adopt amendment proposal 2020-07 (Attachment E). The motion passed, with Ms. Ahrens dissenting.

3. Adopted Amendment Proposal 2020-06

Mr. Boerner said Task Force members will consider whether the option for companies to produce their own swap spread curves should remain in amendment proposal 2020-06. He said if the Task Force chooses to remove the company option from the amendment proposal, it will result in the removal of the word “calculated,” the restoration of the word “prescribed” and the removal of the language requiring the VM-31, PBR Actuarial Report Requirements for Business Subject to a Principle-Based Valuation, disclosures. Mr. Bayerle said the ACLI comment letter encourages the Task Force to adopt the amendment proposal in its entirety. He said the proposal was initiated because of the noted differences between the rates produced by the NAIC and the rates observed in the marketplace. He said allowing companies to use their market observable rates helps align their rates used in valuation with the rates used in their other internal processes. He said that with the disclosure provisions in the proposal providing a safety net, the risks are minimal. He said the disclosure would easily allow the NAIC to discover issues and quickly resolve them through discussion with the company.

Mr. Ostlund asked if a Valuation Manual change will be required to implement the replacement of the London Interbank Offered Rate (LIBOR). Pat Allison (NAIC) said adoption of the amendment proposal gives the Task Force the authority to adopt and implement a LIBOR replacement without further changes to the Valuation Manual. She said once the LIBOR replacement has been implemented, a Valuation Manual amendment could be submitted to capture the identity of the new data source for the sake of clarity.

Mr. Carmello made a motion, seconded by Mr. Robinson, to adopt amendment proposal 2020-06, with the “company may elect …” paragraph deleted, the word “calculated” removed, the word “prescribed” restored and the proposed revisions to VM-31 Section 3.D.6.v and Section 3.F.4.h deleted (Attachment F). The motion passed unanimously.

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

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The Life Actuarial (A) Task Force met via conference call June 18, 2020. The following Task Force members participated: Kent Sullivan, Chair, represented by Mike Boerner and Rachel Hemphill (TX); Jillian Froment, Vice Chair, represented by Peter Weber (OH); Jim L. Ridling represented by Steve Ostlund (AL); Ricardo Lara represented by Perry Kupferman and Ben Bock (CA); Michael Conway represented by Eric Unger (CO); Andrew N. Mais represented by Wanchin Chou and Jim Jakielo (CT); Doug Ommen represented by Mike Yanacheak (IA); Robert H. Muriel represented by Bruce Sartain (IL); Stephen W. Robertson represented by Karl Knable (IN); Vicki Schmidt represented by Nicole Boyd (KS); Steve Kelley represented by Fred Andersen and John Robinson (MN); Chlora Lindley-Myers represented by William Leung (MO); Bruce R. Ramge represented by Rhonda Ahrens (NE); Marlene Caride represented by Seong-min Eom (NJ); Russell Toal represented by Mark Hendrick (NM); Linda A. Lacewell represented by Bill Carmello (NY); Glen Mulready represented by Andrew Schallhorn (OK); Todd E. Kiser represented by Tomasz Serbinowski (UT); and Scott A. White represented by Craig Chupp (VA).

1. Exposed the ACLI Revisions to AG 49-A

Mr. Andersen discussed the proposed loan leverage options. He said option 1 limits some of the good features available in policies and limits the ability to illustrate the loan leveraging aspects of those features. He said the illustrations allowed by option 1 permit relatively high values related to those features, which is contrary to the preferences of some state insurance regulators. He said option 2 eliminates some of the undesirable features that would inflate illustration values, but option 2 also limits some desirable features. Mr. Andersen said option 3 is like option 1, but the value of the option features would be mitigated by limiting the loan leverage.

Alex Silva (John Hancock) discussed the IUL Coalition examples (Attachment A) of the workings of each of the three loan leveraging options. He noted the IUL Coalition’s concern about an example (Attachment B) submitted by Securian Financial. He characterized the example as misleading. Graham Summerlee (Lincoln Financial), also a member of the IUL Coalition, provided examples (Attachment C) refuting the assertions of the Securian Financial examples. He said the Securian example shows fixed bonuses but fails to show the related costs. He reiterated the IUL Coalition’s support for option 1.

Seth Detert (Securian Financial) said he is concerned that there is no requirement for charges related to the bonuses. He said it is a mistake to assume that every company would choose to cover bonuses with specific costs tied to the value of the fixed bonuses. He said the examples Securian provided are representative of common industry scenarios. He said the fixed bonuses on loans creates a loophole. He said the Securian Financial comment letter (Attachment D) supports option 2 to close the loophole.

Mr. Yanacheak said it seems that option 2 goes too far and complicates consumer understanding of the illustration. He said the option 2 limit on wellness bonus credits is excessive. He said he supports option 1. When polled by Mr. Boerner, 14 Task Force members said they preferred an option more conservative than option 1.

Mr. Andersen said he supports option 2. Mr. Yanacheak said he does not fully agree with option 2 and thinks that option 3 relitigates the loan leverage discussion. He said he has previously stated his dislike for loan leveraging but does not consider wellness bonuses as loan leverage and would support option 3. Mr. Andersen was asked to consider allowing companies to use either option 2 or option 3 depending on the policy circumstances. Mr. Yanacheak said writing the language for allowing company choice would be difficult. Mr. Boerner asked whether Task Force members preferred option 2 or option 3. Eleven members preferred option 3. Five members voted for option 2. Three members abstained.

Brian Bayerle (American Council of Life Insurers—ACLI) discussed the technical edits (Attachment E) made to AG 49-A, the proposed revision of Actuarial Guideline XLIX—The Application of the Life Illustrations Model Regulation to Policies with Index-Based Interest (AG 49). Mr. Chupp suggested several non-substantive edits.

Mr. Andersen made a motion, seconded by Mr. Schallhorn, to expose the ACLI revisions to AG 49-A, including the language for option 3 and the edits suggested by Mr. Chupp, for a seven-day public comment period ending June 24. The motion passed unanimously.
Having no further business, the Life Actuarial (A) Task Force adjourned.

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The Life Actuarial (A) Task Force met via conference call June 11, 2020. The following Task Force members participated: Kent Sullivan, Chair, represented by Mike Boerner and Rachel Hemphill (TX); Jillian Froment, Vice Chair, represented by Peter Weber (OH); Jim L. Ridling represented by Steve Ostlund (AL); Ricardo Lara represented by Ben Bock (CA); Michael Conway represented by Eric Unger (CO); Andrew N. Mais represented by Wanchin Chou and Manny Hidalgo (CT); Doug Ommen represented by Mike Yanacheak (IA); Robert H. Muriel represented by Bruce Sartain (IL); Stephen W. Robertson represented by Karl Knable (IN); Vicki Schmidt represented by Nicole Boyd (KS); Steve Kelley represented by Fred Andersen and John Robinson (MN); Chlora Lindley-Myers represented by William Leung (MO); Bruce R. Ramge represented by Rhonda Ahrens (NE); Marlene Caride represented by Seong-min Eom (NJ); Russell Toal represented by Mark Hendrick (NM); Linda A. Lacewell represented by Bill Carmello (NY); Todd E. Kiser represented by Tomasz Serbinowski (UT); and Scott A. White represented by Craig Chupp (VA).

1. **Adopted Revisions to Model 805**

Jason Berkowitz (Insured Retirement Institute-IRI) said the IRI comment letter (Attachment A) supports the revision of the *Standard Nonforfeiture Law for Individual Deferred Annuities* (#805) that lowers the nonforfeiture interest rate floor 1% to 0%.

Brian Bayerle (American Council of Life Insurers—ACLI) said there is an urgent need for adoption of the revisions. He said the ACLI is open to revisiting the issue later if other considerations arise.

Mr. Chou made a motion, seconded by Mr. Carmello, to adopt the revisions to #805 (Attachment B). The motion passed unanimously.

2. **Re-exposed APF 2020-06**

Pat Allison (NAIC) said the NAIC calculates swap spreads using methodology outlined in the *Valuation Manual*. She said the first section of the proposal addresses how the NAIC use of JP Morgan and Bank of America values has become an issue, particularly for variable annuity (VA) writers. Amendment proposal 2020-06 changes the methodology for calculation of the 3-month and 6-month swap spreads to use market observable values for U.S. Treasury rates and the London Interbank Offered Rate (LIBOR), rather than the average of the values from JPMorgan and Bank of America. She said another section of the proposal provides language that facilitates the replacement of LIBOR, when NAIC staff determine that using LIBOR values is no longer feasible. The third section of the proposal allows companies to calculate their own swap spreads using market observable values. Ms. Allison noted that market observable values are available only at certain tenors of the swap rate curve. She said companies will have to decide how to determine the rates at points between tenors and will be required to disclose their methodologies. Mr. Bayerle said that, in addition to disclosing their methodologies, the proposal requires companies to disclose their data sources. He said the ACLI is open to revisiting the issue later if other considerations arise.

Mr. Ostlund suggested the word “calculated” be replaced with the word “prescribed.” Mr. Boerner said that the option of making that change could be included as part of the exposure. Mr. Ostlund also suggested that the language describing the replacement of LIBOR be revised. Mr. Allison worked Mr. Bayerle, Mr. Ostlund and Mr. Carmello to revise the wording for the exposure.

Mr. Ostlund made a motion, seconded by Mr. Carmello, to re-expose amendment proposal 2020-06 (Attachment C), with the edits suggested by Mr. Ostlund and provided by Ms. Allison, for a 7-day public comment period ending June 17. The motion passed unanimously.

3. **Re-exposed APF 2020-07**

Jim Hodges (National Alliance of Life Companies—NALC) said the NALC comment letter (Attachment D) opposes adoption of amendment proposal 2020-07. He suggested the Task Force pursue a comprehensive solution that modernizes the *Standard Nonforfeiture Law* (#808). He said the Task Force should wait until after the U.S. Congress takes official action on changes to Section 7702 of the Internal Revenue Code (IRC) before considering the amendment proposal. He said any change should consider
the effect on low to middle income consumers. Tom Kalmbach (Globe Life) said the Globe Life comment letter (Attachment E) also opposes the amendment proposal and asks for consideration of the impact on consumers of lowering the nonforfeiture rate floor. He suggested lowering the interest rate on in kind benefits as an alternative. He said that in an era of higher interest rates, setting the nonforfeiture rate at 125% of the valuation interest rate provided a sufficient margin between the rates. He said as interest rates declined the margin also declined. He suggested that a revision to the law may be warranted. Mr. Bayerle said the low interest environment presents several challenges. The ACLI comment letter (Attachment F) explains that the proposed change is in response to congressional legislative action and maintains the important relationship between the valuation rate and the nonforfeiture rate. Mr. Bayerle said as the valuation rate drops, there is an element of fairness in commensurately increasing the cash value. He said there have been discussions of revising #808, but that is a longer process that would not allow for a timely resolution of the issue. Mr. Kalmbach said companies can provide higher cash values even if the nonforfeiture floor remains at the current level. Ms. Ahrens said if companies are required to use a rate lower than the nonforfeiture rate floor to comply with the requirements of Section 7702 they would do so regardless of whether the amendment proposal is adopted.

Mr. Robinson suggested that the word “used” be replaced with “prescribed.” Mr. Bayerle agreed to the change.

Mr. Leung made a motion, seconded by Mr. Sartain, to re-expose amendment proposal 2020-07 (Attachment G) with the edits suggested by Mr. Robinson, for a 7-day public comment period ending June 17. The motion passed unanimously.

4. **Adopted APF 2020-05**

Amendment proposal 2020-05 clarifies that the net premium reserve (NPR) is intended to reflect continuous payment of premiums and immediate payment of death claims. Mr. Hidalgo said his comment letter (Attachment H) suggested adding wording to clarify that death claims on riders and supplemental benefits are intended to be reflected in the NPR. Jason Kehrberg (PolySystems, Inc.) agreed that the wording of the amendment proposal was intended to cover death claims on riders and supplemental benefits. The amendment proposal was edited to provide the clarification suggested by Mr. Hidalgo.

Mr. Ostlund made a motion, seconded by Mr. Robinson, to adopt amendment proposal 2020-05 (Attachment I) with the recommended edits. The motion passed unanimously.

5. **Discussed 2020-02**

Bill Wilton (unaffiliated) said his comment letter (Attachment J) makes the case that the amendment proposal is unnecessary because the requirements it attempts to clarify need no further clarification. He said he also has concerns about the use of the pre-tax interest maintenance reserve (IMR). Ms. Allison said the amendment proposal seeks to clarify that there are steps outlined in VM-20, Requirements for Principle-Based Reserves for Life Products, that cannot be skipped. She said reviews of PBR Actuarial Reports have revealed that some companies are skipping steps. Mr. Bock gave an example of companies holding zero reserves on small blocks of business, because they consider the block immaterial. He said that violates Section 2.G of VM-20, which says an approximation should not be biased in a downward direction. Mr. Carmello suggested the language in the proposed guidance note should be moved to the text. Philip Wunderlich (Nationwide) said the Nationwide comment letter (Attachment K) suggests that the requirements should be balanced with practicality. He also said that requirements demonstrated in one year should not require demonstration in future years if there has not been a material change. Mr. Bayerle said the ACLI comment letter (Attachment L) suggests that adding a new requirement when some companies are doing principle-based reserving (PBR) for the first time creates an additional burden. He said rather than adding prescription, state insurance regulators should approach specific companies with their issues. Mr. Robinson suggested that the companies should be able to consider the materiality of the pre-tax IMR. Ms. Ahrens advocated tabling the amendment proposal and expanding the use of VM-31, PBR Actuarial Report Requirements for Business Subject to a Principle-Based Valuation, instead of adding prescription. Mr. Boerner said the Task Force will resume the discussion on a future call.

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

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The Life Actuarial (A) Task Force met via conference call June 4, 2020. The following Task Force members participated: Kent Sullivan, Chair, represented by Mike Boerner and Rachel Hemphill (TX); Jillian Froment, Vice Chair, represented by Peter Weber (OH); Jim L. Ridling represented by Steve Ostlund (AL); Ricardo Lara represented by Perry Kupferman and Ben Bock (CA); Michael Conway represented by Eric Unger (CO); Andrew N. Mais represented by Wanchin Chou and Manny Hidalgo (CT); Doug Ommen represented by Mike Yanacheak (IA); Robert H. Muriel represented by Bruce Sartain (IL); Stephen W. Robertson represented by Karl Knable (IN); Vicki Schmidt represented by Nicole Boyd (KS); Steve Kelley represented by Fred Andersen and John Robinson (MN); Chlora Lindley-Myers represented by William Leung (MO); Bruce R. Ramge represented by Rhonda Ahrens (NE); Marlene Caride represented by Seong-min Eom (NJ); Russell Toal represented by Mark Hendrick (NM); Linda A. Lacewell represented by Bill Carmello (NY); Glen Mulready represented by Andrew Schallhorn (OK); Todd E. Kiser represented by Tomasz Serbinowski (UT); and Scott A. White represented by Craig Chupp (VA).

1. Exposed Revisions to AG 49

Brian Bayerle (American Council of Life Insurers—ACLI) said the language in Section 3.k of the proposed revisions to *Actuarial Guideline XLIX—The Application of the Life Illustrations Model Regulation to Policies with Index-Based Interest* (AG 49) requires tweaking to clarify how loan leverage option 2 applies to charge reductions. He said as it stands, the language may have unintended consequences. Seth Detert (Securian Financial) suggested removing references to charge reductions from the option 2 language. He said the opportunities for exploiting any loophole created by removing the language are small. Mr. Bayerle said the ACLI will review the language and propose revisions. Mr. Ostlund asked if there is also an issue with the “other enhancements” referenced in the option 2 language. Mr. Andersen said that concern could be addressed later.

Mr. Andersen said constraints were placed on loan arbitrage in 2015 when AG 49 was developed. He said prior to AG 49, loan arbitrage allowed interest credited on the loan values to be substantially higher than the loan interest charges. He said that resulted in illustrations that were inflated. AG 49 placed a limit on the differential between the credited rate and the loan interest rate to 1%. He said a current concern is that the relationship of the overall returns of the illustration and the loan interest rate is higher than when AG 49 was developed, leading to a higher probability of illustrated values being unrealized. He said the loan options being considered address these issues. Birny Birnbaum (Center for Economic Justice—CEJ) recommended that if option 1 is chosen, the differential between the loan rate and the crediting rate should be zero. Mr. Andersen recommended a third option, which would use a 50-basis point differential between the crediting rate and the policy loan interest rate. Mr. Bayerle said the third option could be included in the next exposure of edits.

Mr. Andersen suggested the Task Force decide whether the proposed revisions should apply only to new issues after a certain date or to all illustrations, including in-force illustrations. Mr. Birnbaum said the CEJ is advocating for application of the revisions to all illustrations, so as not to deprive illustrations of the benefits of the revisions. Mr. Serbinowski said the issue is not actuarial. He suggested the issue should be decided by the Life Insurance and Annuities (A) Committee. Mr. Bayerle said the ACLI favors applying the revisions to the illustration of new policies only. Mr. Boerner asked for a straw vote on whether the revisions will apply to illustrations of new policies only or to all illustrations. The Task Force voted to apply the revisions to illustrations of new policies only.

The Task Force agreed to expose the current set of proposed edits (Attachment A) for a seven-day public comment period ending June 12.

Having no further business, the Life Actuarial (A) Task Force adjourned.
The Life Actuarial (A) Task Force met via conference call May 28, 2020. The following Task Force members participated: Kent Sullivan, Chair, represented by Mike Boerner and Rachel Hemphill (TX); Jillian Froment, Vice Chair, represented by Peter Weber (OH); Jim L. Ridling represented by Steve Ostlund (AL); Ricardo Lara represented by Perry Kupferman and Ben Bock (CA); Michael Conway represented by Eric Unger (CO); Andrew N. Mais represented by Wanchin Chou and Jim Jakielo (CT); Doug Ommen represented by Mike Yanacheak (IA); Robert H. Muriel represented by Bruce Sartain (IL); Stephen W. Robertson represented by Karl Knable (IN); Vicki Schmidt represented by Nicole Boyd (KS); Steve Kelley represented by Fred Andersen and John Robinson (MN); Chlora Lindley-Myers represented by William Leung (MO); Bruce R. Rangge represented by Rhonda Ahrens (NE); Marlene Caride represented by Seong-min Eom (NJ); Russel Toal represented by Mark Hendrick (NM); Linda A. Lacewell represented by Bill Carmello (NY); and Scott A. White represented by Craig Chupp (VA).

1. Discussed Comments on the ACLI AG 49 Proposal

Mr. Andersen said a large number of comments were submitted in support of either the American Council of Life Insurers (ACLI) proposal (See May 14 Minutes) or the Independent Proposal (See May 14 Minutes). He said the comment letters (Attachment A), for and against the Independent Proposal, were summarized on a detailed list (Attachment A). He read the summarized list on the conference call.

Bobby Samuelson (The Life Product Review) said Mr. Andersen’s list captured the important points from his comment letter (Attachment A). Mr. Samuelson said the use of indexed universal life (IUL) multipliers and buy up caps is consistent with the requirements of Actuarial Guideline XLIX—The Application of the Life Illustrations Model Regulation to Policies with Index-Based Interest (AG 49). He said the incentives for using buy ups and caps are created by the hypothetical historical lookback methodology used in AG 49. He said the scope of the Independent Proposal broadly affects all IUL products because it is not possible to separate the guideline’s application to multiplier, buy up caps and other similar product features from its application to the base IUL product. Mr. Samuelson said the hypothetical historical lookback methodology applies to hypothetical assumptions about caps to historical data to create the maximum AG 49 rate. He indicated that industry often refers to the use of the hypothetical caps as a proxy for the risk premium. He noted that while a risk premium is created and illustrated in perpetuity, there is no parallel disclosure of the corresponding risk. He said IUL products illustrate better than universal life (UL) products because the reward is not risk-adjusted in the IUL illustration. He reiterated that the rewards of the policy should not be illustrated without illustrating the corresponding risks.

Larry Rybka (Valmark) said consumers do not understand the risks inherent in the IUL illustration. He advocated using a best interest standard for IUL illustrations. Steven Roth (Wealth Management International Inc.) said he is concerned that insurers are not required to disclose the basis for the assumptions on which the caps and participation rates are based nor are they required to justify decreases in caps and participation rates. He said the Independent Proposal remedies those shortcomings.

Mr. Andersen said an equally large number of comments against the Independent Proposal were received. Brian Bayerle (ACLI) said the IUL illustration discussions have been ongoing for a year and a half. He said at no time during that period was the Task Force directed to change the scope of the charge given by the Life Insurance and Annuities (A) Committee. He provided a 2014 ACLI letter (Attachment B) that indicates that several of the issues raised by the Independent Proposal were previously addressed by the Task Force. Scott Harrison (High Point Strategies LLC) said when the IUL illustration efforts were initiated more than a year ago the revisions to AG 49 was one of two tracks for addressing the IUL illustration issues. The other track was enhancing the required disclosures for IUL illustrations. He said the members of the IUL Coalition are looking forward to moving on to the disclosure efforts. Gayle Donato (Nationwide) said Nationwide supports the ACLI proposal. She said the proposal satisfies the directives issued by the Task Force and should be adopted. Seth Detert (Securian Financial) agreed with Ms. Donato and Mr. Harrison, and encouraged adopting the ACLI proposal and moving on to addressing disclosures. Birny Birnbaum (Center for Economic Justice—CEJ) said the Independent Proposal satisfies the Task Force directives and additionally resolves some systemic
problems of AG 49. He said the ACLI proposal is a massive rewrite of AG 49 and does not adhere to the Task Force directives. He said he doubts that disclosures will help consumers understand the IUL policy risks and rewards.

Mr. Andersen provided an explanation of the hypothetical historical lookback methodology. He said the 145% net investment interest rate test reflects the historic equity risk premium present in other NAIC standards. He said the returns on stocks can be replicated using a combination of a bond returns portfolio and a Standard & Poor’s (S&P) 500 call option. He said the risk for a call option is much higher than the risk of S&P 500 investments and the call option should have a higher return to reflect the higher risk. He said the return on the S&P call option has historically been roughly 45% but the investor must understand that 25% of the time the option will result in a complete loss. He said the Independent Proposal assumes the call option earns no more than the net investment earned rate due to the risk neutral assumption applied by the proposal. He said the Independent Proposal goes beyond the current Task Force charge by not only aligning IUL multiplier and cap buy ups illustrations with regular IUL illustrations, but also by aligning IUL multiplier and cap buy up illustrations with regular UL illustrations, even though returns for IUL products have historically outperformed returns for regular UL products. He noted that the Independent Proposal is more conservative than the Task Force desires but could be considered in the future if AG 49 abuses continue.

Brian Lessing (AXA-Equitable) said the Equitable proposal (Attachment C) blends elements of the ACLI and the Independent Proposals. He said the proposal uses the Black-Scholes methodology and proposes a 5% safe harbor for equity returns.

The Task Force conducted a straw vote to determine whether the Task Force favored the ACLI proposal or the Independent Proposal. The Task Force voted 15-2 to proceed with the ACLI proposal, with Mr. Carmello and Mr. Kupferman voting for the Independent Proposal. The representative from New Mexico did not respond when called to vote.

Having no further business, the Life Actuarial (A) Task Force adjourned.
The Life Actuarial (A) Task Force met via conference call May 21, 2020. The following Task Force members participated: Kent Sullivan, Chair, represented by Mike Boerner and Rachel Hemphill (TX); Jillian Froment, Vice Chair, represented by Peter Weber (OH); Ricardo Lara represented by Perry Kupferman and Ben Bock (CA); Michael Conway represented by Eric Unger (CO); Andrew N. Mais represented by Wanchin Chou and Jim Jakielo (CT); Doug Ommen represented by Mike Yanacheak (IA); Robert H. Muriel represented by Bruce Ahrens (NE); Marlene Caride represented by Seong-min Eom (NJ); Russell Toal represented by Mark Hendrick (NM); Steve Kelley represented by Fred Andersen and John Robinson (MN); Chlora Lindley-Myers represented by William Leung (MO); and Scott A. White represented by Craig Chupp (VA).

1. **Adopted the IUL Illustration (A) Subgroup Minutes**

The IUL Illustration (A) Subgroup met March 3 and Jan. 28 to discuss proposed revisions to *Actuarial Guideline XLIX—The Application of the Life Illustrations Model Regulation to Policies with Index-Based Interest* (AG 49).

Mr. Yanacheak made a motion, seconded by Mr. Weber, to adopt the Subgroup’s March 3 (Attachment A) and Jan. 28 (Attachment B) minutes. The motion passed unanimously.

2. **Exposed Amendment Proposal 2020-07**

Paul Graham (American Council of Life Insurers—ACLI) said the Heroes Act, a bill passed recently by the U.S. House of Representatives, contains a revision to Section 7702 of the Internal Revenue Code (IRC), which for tax purposes provides the definition of life insurance. The definition uses the cash value accumulation test (CVAT) to determine whether a policy qualifies as life insurance, allowing it to avoid being taxed as an investment. The interest rate used in the Section 7702 CVAT is currently floored at 4%. He noted that the 4% nonforfeiture interest rate floor in the *Standard Valuation Law* and the *Valuation Manual* was set to match the 4% floor in the Section 7702 CVAT. Mr. Graham further explained that the Heroes Act changes the CVAT by replacing the interest rate floor from the 4% static rate to an indexed rate. He said the change necessitates a similar change in the *Valuation Manual* for policies issued after the congressional bill is adopted by the U.S. Senate. He said the challenge is that the timing of the Senate adoption is uncertain. Brian Bayerle (ACLI) said amendment proposal 2020-07 (Attachment C) removes *Valuation Manual* references to the 4% interest rate floor and replaces it with language that sets the nonforfeiture rate floor in the *Valuation Manual* to the rate determined by Section 7702, eliminating the need for future adjustment to align the two sets of requirements. He reiterated that the change will not affect any existing policy.

Mr. Tsang said lowering the nonforfeiture rate will result in higher cash values. He asked if there is a business reason for lowering the rate. Mr. Graham said that as interest rates decline, premiums on new policies will increase. He said providing higher cash values as premiums increase is a matter of equity. John Norton (Globe Life) said Globe Life is not in favor of the change recommended in amendment proposal 2020-07. He said Globe Life is concerned the change will lead to higher costs that will affect the affordability of basic life protection. He said Globe Life is supportive of comprehensive reform of the nonforfeiture laws. Jim Hodges (National Alliance of Life Companies—NALC) said that the NALC agrees with the Globe Life viewpoint.

Mr. Yanacheak made a motion, seconded by Mr. Tsang, to expose amendment proposal 2020-07 for a 21-day public comment period ending June 10. The motion passed unanimously.

3. **Accepted Amendment Proposal 2020-04 As an Editorial Change**

Bill Wilton (unaffiliated) said amendment proposal 2020-04 (Attachment D) recommends reordering the rows of the Exhibit 7 reserve table in Section 3.A.5 of VM-30, Actuarial Opinion and Memorandum Requirements, to match the rows of Exhibit 7 in...
the Life and Health Annual Statement. The Task Force agreed, without objection, to accept the recommendation in amendment proposal 2020-04 as an editorial change.

4. **Exposed Amendment Proposal 2020-05**

Jason Kehrberg (PolySystems) said amendment proposal 2020-05 (Attachment E) recommends modifying VM-20, Requirement for Principle-Based Reserves for Life Products, to clarify that in Section 3.C.4, the net premium reserve reflects death claims and assumes continuous deaths and immediate payment of claims.

Mr. Leung made a motion, seconded by Mr. Yanacheak, to expose amendment proposal 2020-05 for a 21-day public comment period ending June 10. The motion passed unanimously.

5. **Exposed Amendment Proposal 2019-58**

Mr. Bock said amendment proposal 2019-58 (Attachment F) proposes revising Section A.1 of the Valuation Manual, Introduction, Section I, Process for Updating, to require that updates to templates prescribed by the Valuation Manual be considered substantive and, therefore, subject to the Valuation Manual change requirements.

Mr. Robinson made a motion, seconded by Mr. Chou, to adopt amendment proposal 2019-58. The motion passed unanimously.

Having no further business, the Life Actuarial (A) Task Force adjourned.
The Life Actuarial (A) Task Force met via conference call May 14, 2020. The following Task Force members participated: Kent Sullivan, Chair, represented by Mike Boerner and Rachel Hemphill (TX); Jillian Froment, Vice Chair, represented by Peter Weber (OH); Jim L. Ridling represented by Steve Ostlund (AL); Ricardo Lara represented by Perry Kapferman and Ben Bock (CA); Michael Conway represented by Eric Unger (CO); Andrew N. Mais represented by Wanchin Chou and Jim Jakielo (CT); Doug Ommen represented by Mike Yanacheak (IA); Robert H. Muriel represented by Bruce Sartain (IL); Stephen W. Robertson represented by Karl Knable (IN); Vicki Schmidt represented by Nicole Boyd (KS); Steve Kelley represented by Fred Andersen and John Robinson (MN); Chlora Lindley-Myers represented by William Leung (MO); Bruce R. Ramge represented by Rhonda Ahrens (NE); Marlene Caride represented by Seong-min Eom (NJ); Russell Toal represented by Mark Hendrick (NM); Linda A. Lacewell represented by Bill Carmello (NY); Glen Mulready represented by Andrew Schallhorn (OK); Todd E. Kiser represented by Tomasz Serbinowski (UT); and Scott A. White represented by Craig Chupp (VA).

1. **Discussed Comments on the ACLI AG 49 Proposal**

Mr. Andersen said in 2018, the Life Insurance and Annuities (A) Committee identified features of indexed universal life (IUL) products, including multipliers, that should be illustrated in a manner consistent with *Actuarial Guideline XLIX—The Application of the Life Illustrations Model Regulation to Policies with Index-Based Interest* (AG 49). He said a series of public meetings of the Task Force and the IUL Illustration (A) Subgroup followed, resulting in several state insurance regulator decisions. The decisions included: 1) initially addressing issues related to the illustrated rate instead of focusing on disclosures; 2) not re-litigating current AG 49 concepts but focusing instead on newer product features, including multipliers and other product features that resulted in crediting rates greater than 6.75%; 3) prohibiting products with multiplier features from illustrating better than products without multiplier features; and 4) prohibiting products with cap buy up features from illustrating more favorably than products without cap buy up features. Mr. Andersen said preliminary discussions also included the possibility of tightening guidance related to loan arbitrage. He reiterated that actions that may lead to disclosures or more drastic changes to the structure of life illustrations would be deferred. He said that leading into spring 2020, it was determined that industry experts should work together to coalesce their divergent thoughts on enhancing AG 49 requirements. The American Council of Life Insurers (ACLI) gathered a broad cross-section of companies to work on the effort, resulting in the currently exposed ACLI proposal (Attachment A), which combines the best efforts of previous proposals submitted by numerous entities. Mr. Andersen expressed confidence that the ACLI proposal conforms to the direction provided by the Task Force and makes good progress in eliminating the problems that led to the charge from the Life Insurance and Annuities (A) Committee. He said the ultimate goal is to have a high likelihood that consumer expectations will be met, and the market will be fair and stable.

Brian Bayerle (ACLI) reviewed the highlights of the ACLI proposal. He noted that the document assumes the proposed changes are to be applied prospectively to minimize consumer confusion and to lessen the extent of the changes to AG 49. He pointed out that the industry participants did not reach a consensus on the treatment of policy loans. He said the proposal cover letter does offer a list of pros and cons of the two policy loan options. He provided a sample spreadsheet (Attachment B) that demonstrates the mechanics of the proposal. Mr. Bayerle acknowledged some outstanding commenter questions and agreed to attempt to address them later. He emphasized that the proposal does incorporate the earlier decisions made by the Task Force.

Bobby Samuelson (The Life Product Review) read prepared remarks (Attachment C) on behalf of the industry advocates, independent consultants and academicians who jointly authored an independent proposal (Attachment D). The independent proposal advocates the use of the Black-Scholes model to determine the maximum illustrated crediting rate. Ms. Ahrens asked how the Black-Scholes model input will be controlled. Mr. Samuelson responded that suggestions on how to standardize the input would be solicited from insurance companies and other experts. Mr. Tsang said the Black-Scholes model assumes a risk-neutral environment. He asked how the accumulation rate will be determined from the model results. Mr. Samuelson said the equity risk premium will be determined as a factor of the volatility. He said another alternative is to get independent experts to opine on the appropriate equity risk premium. Mr. Chupp asked if examples could be provided to demonstrate how the Black-Scholes model would be used. Mr. Samuelson agreed to provide examples. Birny Birnbaum (Center for Economic Justice—CEJ) discussed his comment letter (Attachment E) submitted in support of the independent proposal. He expressed concern that the proposal would not be reviewed fairly. He also opined that any changes to AG 49 should be applicable to in-force illustrations for existing policies.
as well as to new policies. Mr. Andersen said some companies agree with many of Mr. Birnbaum’s comments but have agreed to compromise in support of the ACLI proposal in order to advance the issue.

Donna Megregian (American Academy of Actuaries Illustration Work Group—IWG) discussed the contents of the IWG comment letter (Attachment F). Mr. Andersen said the Subgroup will consider the technical issues identified in the comment letter. Aaron Sarfatti (Equitable) said the Equitable proposal (Attachment G) is designed to address two state insurance regulator concerns about illustrations, the size of the option budget and the returns on the option budget. He suggested that the proposal is simpler than the ACLI proposal and could be blended with the independent proposal to form a revised AG 49. Neil Kulkarni (Global Atlantic) said the Global Atlantic comment letter supports the ACLI proposal Option 1 method for addressing loan leverage. Gayle Donato (Nationwide) said the ACLI proposal follows the guidance that the Task Force provided. She said its conformance with Task Force directives is the primary reason the Nationwide comment letter (Attachment H) expresses support for the proposal. Scott Harrison (High Point Strategies) spoke on behalf of the companies comprising the IUL Coalition. He said the companies worked closely with the ACLI to develop the proposal. The IUL Coalition’s comment letter (Attachment I) reflects its support for the ACLI proposal. Alex Silva (John Hancock) stated the IUL Coalition support for the ACLI proposal Option 1 method. Seth Detert (Securian Financial) said his comments (Attachment J) represent a group of companies. The companies support the ACLI proposal and recommend adoption of the ACLI Option 2 method for loan leveraging.

Mr. Andersen said the Subgroup will incorporate some of the technical aspects of the comments into the ACLI proposal.

Gary Sanders (National Association of Insurance and Financial Advisors—NAIFA) said that while it will not change the performance of the policy, retroactive application of the AG 49 revisions will cause harm to the producer/client relationship, the agent’s reputation and the client’s trust in the agent.

Mr. Birnbaum asked for exposure of the independent proposal. Subsequent to this conference call, the Task Force chair exposed the independent proposal for a 14-day public comment period ending May 27.

Having no further business, the Life Actuarial (A) Task Force adjourned.
The Life Actuarial (A) Task Force met via conference call May 7, 2020. The following Task Force members participated: Kent Sullivan, Chair, represented by Mike Boerner and Rachel Hemphill (TX); Jillian Froment, Vice Chair, represented by Peter Weber (OH); Jim L. Ridling represented by Steve Ostlund (AL); Ricardo Lara represented by Perry Kupferman and Ben Bock (CA); Michael Conway represented by Eric Unger (CO); Andrew N. Mais represented by Wanchin Chou and Jim Jakielo (CT); Robert H. Muriel represented by Bruce Sartain (IL); Stephen W. Robertson represented by Karl Knable (IN); Vicki Schmidt represented by Nicole Boyd (KS); Steve Kelley represented by Fred Andersen and John Robinson (MN); Chlora Lindley- Myers represented by William Leung (MO); Bruce R. Ramge represented by Rhonda Ahrens (NE); Marlene Caride represented by Seong-min Eom (NJ); Russell Toal represented by Mark Hendrick (NM); Linda A. Lacewell represented by William Carmello (NY); Glen Mulready represented by Andrew Schallhorn (OK); Todd E. Kiser represented by Tomasz Serbinowski (UT); and Scott A. White represented by Craig Chupp (VA).

1. Adopted its Minutes and the VM-22 (A) Subgroup’s Minutes

The Task Force met Feb. 27, Feb. 20, Feb. 13, Feb. 6, Jan. 30 and Jan. 23. During these meetings, the Task Force took the following action: 1) adopted its 2019 Fall National Meeting minutes; 2) adopted an amendment to allow the use of different credibility methods for significantly different blocks of business; 3) adopted an amendment to clarify that policies with universal life policies with secondary guarantees (ULSG) business are excluded from the life principle-based reserving (PBR) exemption, whether provided in the base policy or in a rider when the secondary guarantee is material; 4) adopted an amendment emphasizing the requirement for increasing the reserve to reflect the increase in risk for policies resulting from term conversions; and 5) adopted an amendment providing a guidance note to reference Excel examples of mortality aggregation and the reporting of assumptions.

The VM-22 (A) Subgroup met Feb. 26 to discuss potential revisions to VM-22, Statutory Maximum Valuation Interest Rates for Income Annuities.

Mr. Andersen made a motion, seconded by Mr. Weber, to adopt its minutes (Attachment One) and the VM-22 (A) Subgroup’s minutes (Attachment Two). The motion passed unanimously.

2. Agreed to Forward the Recommendation to Delay Collection of Company Mortality Experience Data

Pat Allison (NAIC) updated the Task Force on the status of the collection of company mortality experience data. She said that NAIC life actuarial support staff presented information on the schedule for planned communications with companies that have been selected to report their mortality experience. The communications are intended to keep the companies engaged even though the reporting of data for the 2018 observation year, which would normally be collected in 2020, will be delayed until 2021.

Ms. Allison said a memorandum proposing the delay was exposed by the Task Force in April. She shared that the NAIC began serving as experience reporting agent on Jan. 1. She said that at a June 25, 2019, Task Force meeting, NAIC life actuarial support staff presented information on the selection of companies required to submit mortality experience data in 2020. A total of 176 companies were selected, representing 31 states of domicile. Since then, all selected companies were notified, and the data call was planned to begin during Q2, 2020. The memorandum proposes the delay, at the request of the American Council of Life Insurers (ACLI), because of the disruption experienced by life insurance companies due to the COVID-19 pandemic and the corresponding impact on company resources required to support the collection efforts. The memorandum recommends the collection of data for the 2018 and 2019 observation years in 2021. Ms. Allison indicated that section 5.A.3 of VM-50, Experience Reporting Requirements, states that the experience reporting agent “may modify or enlarge the requirements of the Valuation Manual,…… to accommodate changing needs and environments.” She suggested that the COVID-19 pandemic has resulted in “changing needs and environments.” She noted that collection of company mortality experience data remains a high priority regulatory issue for the NAIC. She said the proposed delay of data collection should not be interpreted as diminishing either the importance of the issue to the NAIC or the role of experience reporting as the foundation for PBR. Therefore, insurers are admonished to ensure the continuity and quality of experience reporting data submissions. Brian Bayerle (ACLI) said the ACLI comment letter expresses support for the proposed reporting delay.
Mr. Kupferman made a motion, seconded by Mr. Leung, to forward the memorandum proposing the delay of the 2020 experience data collection until 2021 to the Executive (EX) Committee. The motion passed unanimously.

3. **Heard an Update on the ESG**

Ms. Allison gave a presentation (Attachment Six) on the status of efforts to find a new economic scenario generator (ESG) to replace the American Academy of Actuaries (Academy) ESG. During the presentation, she reviewed the timeline of the request for proposal (RFP). She noted that six bids have been received, and they will be reviewed by the Task Force chair and vice chair and three NAIC PBR staff actuaries. Bids will be ranked based on the scoring criteria provided in the RFP. Ms. Allison said the review is expected to be completed by the end of May, and it will then be taken to the Executive (EX) Committee for funding approval in June. The implementation of the ESG is targeted for no earlier than 2022.

4. **Discussed the Cessation of LIBOR**

Ms. Allison provided a presentation (Attachment Seven) to raise awareness of the United Kingdom’s (UK’s) Financial Conduct Authority (FCA) intention to cease publishing the London Interbank Offered Rate (LIBOR) after 2021. She said the Alternative Reference Rates Committee (ARRC), formed in 2014 by the Federal Reserve Board and the Federal Reserve Bank of New York, is moving toward using the Secured Overnight Financing Rate (SOFR) as a replacement for LIBOR. She noted that insurance companies will need to inventory their products and processes that currently use LIBOR. She pointed out the need to revise the language in section 9.F.8.d of VM-20, Requirements for Principle-Based Reserves for Life Products, to eliminate the reference to LIBOR.

5. **Exposed Amendment Proposal 2020-06**

Mr. Bayerle discussed a slide presentation (Attachment Eight) on the interest rate swap spreads tables in the *Valuation Manual*. He said the *Valuation Manual* prescribes interest rate swap spreads for VM-20 and VM-21, Requirements for Principle-Based Reserves for Variable Annuities. He noted that the use of the NAIC published swap spreads increased substantially with the implementation of the new VM-21 reserve requirements for variable annuities. He said, while the NAIC three-month and six-month current swap spreads should track market observable data, there have been differences as large as 19 basis points (bps). He recommended several actions to address this issue and other issues, including increased clarity of the rate calculation process and the need for a LIBOR replacement.

Ms. Allison said the NAIC’s published data is calculated as an average of data obtained from JP Morgan and Bank of America. She said market observable data is only available at selected tenors of the yield curve, requiring interpolation for the points in between the selected tenors. JP Morgan and Bank of America use proprietary processes to provide data at all points along the U.S. Department of the Treasury (Treasury Department) yield curve. Differences can be expected compared to market observable data because these firms calculate their own Treasury Department yield curve and their own LIBOR values.

Mr. Bayerle introduced amendment proposal 2020-06 (Attachment Nine), which provides *Valuation Manual* revisions that address the swap spreads issues by allowing companies to determine their own swap rates from market observable sources. He said the amendment proposal also requires the disclosure of the market observable sources in the PBR Actuarial Report.

Mr. Leung made a motion, seconded by Mr. Kupferman, to expose amendment proposal 2020-06 for a 21-day public comment period ending May 27. The motion passed unanimously.

6. **Exposed Revisions to Model #805**

Mr. Bayerle said the *Standard Nonforfeiture Law for Individual Deferred Annuities (#805)* currently sets the floor for the nonforfeiture interest rate at 1%. He said the current economic environment necessitates lowering the nonforfeiture interest rate to 0% to allow companies to support the nonforfeiture guarantees in their deferred annuity contracts. He submitted a proposal to revise Model #805 to lower the nonforfeiture rate.

Mr. Carmello made a motion, seconded by Mr. Weber, to expose revisions to Model #805 (Attachment Ten) for a 21-day public comment period ending May 27. The motion passed unanimously.
Having no further business, the Life Actuarial (A) Task Force adjourned.

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Results and Analysis for Field Test and Interpretation Survey
LONG-TERM SOLUTION

Results and analysis for field test and interpretation survey

(YRT & VM-20)
QUALIFICATIONS, ASSUMPTIONS, AND LIMITING CONDITIONS

Oliver Wyman was engaged by the American Council of Life Insurers, the American Academy of Actuaries and the National Association of Insurance Commissioners to support an industry field test being conducted to aid the NAIC Life Actuarial (A) Task Force in the selection of a long-term solution for the treatment of non-guaranteed reinsurance under PBR.

Qualifications, Assumptions, and Limiting Conditions

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Reinsurance under PBR

Oliver Wyman was engaged by the American Council of Life Insurers, the American Academy of Actuaries and the National Association of Insurance Commissioners to support an industry field test being conducted to aid the NAIC Life Actuarial (A) Task Force in the selection of a long-term solution for the treatment of non-guaranteed reinsurance under PBR.

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01 Executive summary
02 Review of proposed solutions
03 Field test results and analysis
04 Interpretation survey results and additional analysis

Appendix A: Supporting reports and presentations
A.1: Academy reports
A.2: Prior reports

Appendix B: Model design and assumptions
B.1: Prior reports

Appendix C: Supplemental results
C.1: Field test results and analysis
C.2: Interpretation survey results and additional analysis

Appendix D: Project team
Following the delivery of this report, Oliver Wyman, NAIC and the Academy have been closely collaborating over the past 3 months to prepare a supplement to the initial report expanding an initial report focused on the range of responses received, developing and co-administering a representative PBR model and initial insights gained, field test and interpretation survey, field test and interpretation survey, field test and interpretation survey, field test and interpretation survey, field test and interpretation survey.

### Executive Summary

Following the delivery of this report, Oliver Wyman, NAIC and the Academy have been closely collaborating over the past 3 months to prepare a supplement to the initial report focused on the range of responses received, developing and co-administering a representative PBR model and initial insights gained, field test and interpretation survey, field test and interpretation survey, field test and interpretation survey, field test and interpretation survey.

### Focus of Report (and upcoming LATF meetings)

- Initial education and support for industry field test
- For industry field test
- Overview of non-guaranteed reinsurance under PBR and the NAIC Life Actuarial (A) Task Force ("LATF") in the selection of a longer-term solution for the treatment of non-guaranteed reinsurance under PBR

### Education and Analysis

- Prepared a supplement to the initial report focused on the range of responses received, developing and co-administering a representative PBR model and initial insights gained
- Field test and interpretation survey, field test and interpretation survey, field test and interpretation survey, field test and interpretation survey

### Initial education and support for industry field test

- Resolved received analyses in light of the range of responses received, performing additional analysis and performing additional analysis of interpretation survey results
- Field test and interpretation survey, field test and interpretation survey, field test and interpretation survey, field test and interpretation survey

### OVERVIEW

This report contains results and additional analysis for the industry field test and interpretation survey which will aid the NAIC Life Actuarial (A) Task Force ("LATF") in the selection of a longer-term solution for the treatment of non-guaranteed reinsurance under PBR.
Executive Summary

Section Contents and Objectives

02 Review of Proposed Solutions

• Contains a description and representative language from the three amendment proposals (APFs) evaluated in the field test and interpretation survey (APF 2019-40, 41 and 42).

• Objective is to review the key details of the solutions under consideration.

03 Field Test Results and Analysis

• Contains results of field test and additional analysis performed using the representative PBR model in light of the range of responses received. Analysis includes refinements made to the representative PBR model informed by field test responses.

• Objectives are to build understanding of field test scenarios and detail the refinements of APFs. Objectives are to provide an understanding of the range of variation in results.

04 Interpretation Survey Results and Additional Analysis

• Contains results of interpretation survey and additional analysis performed using the representative PBR model in light of the range of responses received. Analytical includes asymmetries in reserves.

• Objectives are to provide a broader view of long-term solutions on a consistent basis (e.g., perspectives using the representative PBR model) from both a direct writer and assuming reinsurers’ perspectives.
### Executive Summary

Reinsurer reaction scenarios can produce reserve credits in excess of \( \frac{1}{2} Cx \) (Report from 2019 Fall NAIC meeting and supplemental analysis (See Appendix A.2)).

It is important to look at long-term projections of reserves when evaluating the impact of differences in modeled reserves are primarily driven by the relationship between the current scale of YRT premiums and PBR mortality (anticipated experience and the level of margin).

Variation in surveyed approaches points to several considerations including level of prescription, modeling complexity, variation in results and others in a long-term solution.

Differences in ceded “reserve credits” and assumed reserves are minimized when a mechanical approach to reinsurance is used by both parties.

### Key Takeaways

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<tr>
<th>Takeaway</th>
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<td><strong>1</strong></td>
<td>Reinsurer reaction scenarios can produce reserve credits in excess of ( \frac{1}{2} Cx )</td>
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<td><strong>2</strong></td>
<td>It is important to look at long-term projections of reserves when evaluating the impact of differences in modeled reserves are primarily driven by the relationship between the current scale of YRT premiums and PBR mortality (anticipated experience and the level of margin)</td>
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<td><strong>3</strong></td>
<td>Differences in reserve credits and assumed reserves under PBR are likely to occur for multiple reasons</td>
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<td><strong>4</strong></td>
<td>Differences in modeled reserves are minimized when a mechanical approach to reinsurance is used by both parties</td>
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<td><strong>5</strong></td>
<td>Variation in surveyed approaches points to several considerations including level of prescription, modeling complexity, variation in results and others in a long-term solution</td>
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<tr>
<td><strong>6</strong></td>
<td>Differences in ceded “reserve credits” and assumed reserves are minimized when a mechanical approach to reinsurance is used by both parties</td>
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## COMPARISON OF PROPOSED SOLUTIONS

This comparison is informed by results and analysis contained in this report.

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<tr>
<th>Level of prescription</th>
<th>Modeling complexity</th>
<th>Variation in results</th>
<th>Potential for asymmetry</th>
<th>Potential APF revisions</th>
<th>Ceded Interpretation between assumed and ceded interpretation</th>
<th>Defined level of risk sharing</th>
</tr>
</thead>
</table>

Executive summary
Non-Guaranteed Reinsurance Premiums

Companies are responsible for developing their own margins used in the projection of future

Representative Language

- Principles/guidance and actuarial judgment
- Model YRT premiums using anticipated experience with margins based on clarifed modeling

APF 2019-40 Section 8.5

The company shall base its company and counterparty action assumptions relating to YRT reinsurance treaty changes reflecting that, in general, there is no relevant company or industry experience currently available upon which to base the anticipated experience assumption (APF 2019-40, Section 8.6).

The assuming company shall not be assumed to incur indefinite losses if treaty terms allow adjustment of the underlying economics (APF 2019-40, Section 8.7).

APF 2019-40 Section 9.B.2 applies such that greater uncertainty in the anticipated experience requires a larger margin.
Historical rate increases and/or relationship with reinsurer scale and the company’s anticipated experience mortality, with consideration for treaty provisions.

Non-Guaranteed Reinsurance premiums are based on the relationship between the current premium and the company’s best estimate of mortality improvement.

Settlements shall equal the company’s anticipated experience assumptions adjusted to reflect the best mortality rates used to determine the prudent estimate assumptions for YRT Reinsurance claims.

a. Use the reinsurance rates and provisions from the relevant reinsurance agreement as the initial prudent estimate assumption for YRT reinsurance premiums paid, and project future reinsurance rate increases and decreases using what the company actually expects will occur, based on treaty provisions, past reinsurance experience, and ongoing relationship with the reinsurer.

b. The mortality rates used to determine the prudent estimate assumptions for YRT reinsurance claim settlements shall equal the company’s anticipated experience mortality assumptions adjusted to reflect the company’s best estimate of mortality improvement.

c. Use the mortality assumptions for YRT reinsurance claim settlements received, using the following procedure: to Section 8.C.12 through Section 8.C.18, as the prudent estimate assumptions for YRT Reinsurance premiums. The company shall use best estimates with no implicit or explicit margins, except margins pursuant to Section 8.C.16 through Section 8.C.18.

Representative Language (APF 2019-41 section 8.C.8)
Provisions

Non-Guaranteed Reinsurance Premiums are modeled as the current scale plus a margin, which is developed based on prescribed inputs, with some flexibility to make adjustments to reflect contract

The formula for the prescribed margin (additive to current rates) from APF 2019-42 is summarized below:

\[ f(x) = \gamma \times \frac{(current\ RTT\ rate)}{(1 - \frac{ii}{ii + 1})} \]

1. Companies that have greater than the minimum credibility/SDP will use their own credibility, but companies with lower credibility/SDP will use the minimum

- Baseline credibility assumes a minimum level of credibility and sufficient data period to avoid bias against small companies
- Prudent estimate mortality and company experience mortality between „baseline credibility“ prudent estimate mortality and company experience mortality
- Use current VRT premium rates, plus a prescribed margin for non-Guaranteed rates based on the difference

YRT Premium development

- Mortality improvement beyond the valuation date
- Mortality experience for non-Guaranteed rates

APF 2019-42
FIELD TEST RESULTS AND ANALYSIS
<table>
<thead>
<tr>
<th>Field test scenarios</th>
<th>2019-41</th>
<th>2019-42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action A</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Action B</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Action C</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Action D</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Loss Trigger</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

**Submit point-in-time and projected reserves for Term and/or ULSG products, using the 2020 Valuation Manual with modifications to the treatment of non-guaranteed reinsurance.**

| Source: 2018 individual life insurance sales |

**Participating reinsurers**

<table>
<thead>
<tr>
<th>Mortality assumption credibility (%)</th>
<th>Not included</th>
<th>Included</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 50%</td>
<td>%8</td>
<td>%92</td>
</tr>
<tr>
<td>50% - 90%</td>
<td>%5</td>
<td>%95</td>
</tr>
<tr>
<td>&gt; 90%</td>
<td>%0</td>
<td>%0</td>
</tr>
</tbody>
</table>

**Participating entities**

<table>
<thead>
<tr>
<th>Mortality assumption credibility (%)</th>
<th>&lt; 50%</th>
<th>50% - 90%</th>
<th>&gt; 90%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-20 years</td>
<td>%5</td>
<td>%5</td>
<td>%0</td>
</tr>
<tr>
<td>21+ years</td>
<td>%0</td>
<td>%0</td>
<td>%0</td>
</tr>
</tbody>
</table>

**Participation**

- 187 entities invited to participate
- 11 participating reinsurers

**Submissions**

- 8 submissions for ULSG
- 7 submissions for Term

**OVERVIEW**

- Sophisticated modeling, extensive analysis and resource constraints led to low participation in the field test. However, participating companies are broadly distributed as highlighted below.

Field test results and analysis

<table>
<thead>
<tr>
<th>Individual life sales</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 50%</td>
<td>1</td>
</tr>
<tr>
<td>50% - 90%</td>
<td>2</td>
</tr>
<tr>
<td>&gt; 90%</td>
<td>3</td>
</tr>
</tbody>
</table>

*One Term submission and one ULSG submission did not include projected reserves*
REFINEMENTS TO REPRESENTATIVE PBR MODEL

Field test submissions were used to refine the granularity of certain methodology analysis dimensions in the representative PBR model. The refined model was used to confirm the integrity of submissions and provide insights into the variability in results.

Properties of reinsurance

Observation: Submissions reflected a range of underlying mortality assumptions and underlying levels of credibility observed in field test submissions. Refining the range in levels of credibility observed in field test submissions reflected two credibility scenarios in the representative PBR model.

Model refinements:
• Normalize reinsurance reserve credits per 1,000 of ceded NAAR
• Adjust YRT rate scales to reflect key relationships observed in participant submissions

Mortality

Observation: Submissions reflected a range of underwriting mortality assumptions.

Model refinements:
• Adjust YRT rate scales to reflect key mortality relationships observed in participant submissions
• Normalize reinsurance reserve credits per 1,000 of ceded NAAR
• Model refinements that included the current scale of rates reinsured and the relationships between the current scale of rates reinsured and the relationships between the current and future scales of rates reinsured in particular, the position of business reinsured.

Reserves

Observation: A majority of submissions (all but one participant) did not reflect unlocking of mortality up to future valuation dates.

Model refinements:
• Turn off mortality assumption unlocking

Initial model design

Field test results and analysis

REFINEMENTS TO REPRESENTATIVE PBR MODEL
Reinsurance:

- Utilized own company YRT rate scales

Mortality:

Field test responses: Utilized own company YRT rate scales.

- High Credibility: 100% credibility (Limited Fluctuation method)
- Low Credibility: 50% credibility (Limited Fluctuation method)

Developed two credibility scenarios based on analysis of field test responses:

- Baseline YRT scale: Current scale of YRT rates is greater than anticipated mortality experience without FMI.
- Lower YRT scale: Current scale of YRT rates is in line with anticipated mortality experience including FMI.

For further details, see page 12.

Reserves:

- Only one participant included unlocking of the mortality assumption (sufficient data period, credibility and improvement, valuation dates up to future).

Developed three separate rate scales for each product.

Field test submissions:

- Examined based on information provided in current YRT scale.
- Relationship between current scale of YRT and anticipated mortality experience was developed.
- Turned off dynamic assumption unlocking method.

Dimension:

Refinements to Representative PBR model.

Further details on refinements made to methodology and analyses dimensions in the Representative PBR model are shown along with details on field test submissions used to inform them.

Dimension Field test submissions

- Valuation dates

Refinements to Representative PBR model

- Credibility of underlying mortality assumption ranged between 40–100% (See table on page 12 for further details).
- Developed two credibility scenarios based on analysis of field test responses:
  - High Credibility: 100% credibility (Limited Fluctuation method)
  - Low Credibility: 50% credibility (Limited Fluctuation method)

- Relationship between current scale of YRT and anticipated mortality experience was developed.
- Turned off dynamic assumption unlocking method.

- Only one participant included unlocking of the mortality assumption (sufficient data period, credibility and improvement, valuation dates up to future).

- Developed three separate rate scales for each product.
The representative PBR model explains the variance in impacts of reinsurance on modeled reserves observed in field test submissions.

- No change to YRT rates

Field test results and analysis

Commentary

- Deviation driven primarily by attained age and issue month
- Coverage range (Representative PBR model)
  - Lower bound = 1/2 Cx
  - Upper bound = 1/24 Cx

Derivations of the unitized reduction to DR can be found in Appendix A.

Test submissions

The representative PBR model explains the variance in impacts of reinsurance on modeled reserves observed in field test submissions.
Action A produces only a slight shift in the impact of reinsurance on modeled reserves relative to the baseline, as default, recapture, and other counterparty actions such as anticipated counterparty actions are modeled current YRT rates for all projection years; apply the APF only with regards to other counterparty actions such as default, recapture or other terminations.

Range of results is wider compared to other field test scenarios, as there are no adjustments to YRT rates for default, recapture or other terminations, as the APF is to model current YRT rates for all projection years; apply the APF only with regards to other counterparty actions such as default, recapture or other terminations.

Some field test results reflected recapture in later years which reduced reserve credits in later durations.

Commentary:

- Action A and therefore results are the same as the baseline.
- Representative test results (Baseline YRT scale) are current YRT rates (Baseline scale) and assume no counterparty actions.
- Range of results is wider compared to other field test scenarios, as there are no adjustments to YRT rates for default, recapture or other terminations.

Gross DR – Net DR (per 1000 of projected ceded NAAR)

APF 2019-40 (ACTION A) | ULSG RESULTS
The impact of reinsurance on modeled reserves is dependent on the range of participant prudent estimates used in modeling counterparty actions.

Field test results and analysis

APF 2019-40 (ACTION B) | ULSG RESULTS
Applying a “loss ratio” trigger to determine the timing of reinsurer reaction leads to a narrower range of DR reserve credits relative to the baseline, but may be inconsistent with contractual terms.

- The lower bound of the coverage range is similar compared to the baseline, but upper bound is substantially reduced.
- The trigger is never reached for the “higher YRT scale” (upper bound).
- The “loss ratio” trigger is reached earlier in the projection for “lower YRT scale” (lower bound) compared to “Baseline YRT scale” and mortality after reaching the loss ratio trigger.
- In the representative PBR model, margins were applied based on the difference between the valuation mortality and best estimate calculated by reviewing cumulative projected reinsurance cash flows from the assuming company perspective.
- Action C is to model a prudent estimate of rate changes only after reaching a “loss ratio” trigger equal to 115%. The loss ratio is calculated by reviewing cumulative projected reinsurance cash flows from the assuming company perspective.

Field test results and analysis

APF 2019-40 (ACTION C) | ULSG RESULTS
Applying a "consecutive losses" approach to determine the timing of reinsurer reaction reduces variability in the impact that reinsurance has on modeled reserves relative to the baseline, albeit to a lesser extent than the application of a "loss ratio" trigger.

Commentary

- **Action D** is to model prudent estimate of rate changes only after reaching a "consecutive years of loss" trigger equal to 5 years. The losses are calculated by reviewing annual projected reinsurance cash flows from the assuming company perspective.
- Similar to **Action C**, application of prudent estimates are driven by the relationship between YRT rates and valuation mortality during the projection.
- Prudent estimate margins are not applied ubiquitously, therefore the results are less dependent on the relationship of current YRT rates and valuation mortality compared to other solutions.
Variation in YRT rate scales and credibility impact results in a similar manner.

Mortality improvement is applied for 15 years.

50bps of incremental mortality improvement reduces the DR reserve credit to close to zero in initial projection years for the neutral rate scale.

The representative PBR model included margins in addition to YRT premiums as a modeling simplification rather than an interpretation of the APF. The representative PBR model included margins in addition to the neutral rate scale.

Introducing future mortality improvement to the projected claims reduces reinsurance gains, given the current scale of reinsurance premiums is held constant.

Field test results and analyses.
When a margin is defined as the relationship between DR "reserve credit" with no future mortality improvement and DR "reserve credit" by roughly 50% (relative to DR "reserve credit") with 5-years of incremental mortality improvement reduces the main variations driven by the application of mortality improvement (magnitude and length).

APF 2019-41 and APF 2019-42 produce similar results, with

Commentary

Similar to APF 2019-41, increasing the level of future mortality improvement decreases reserve credits.
**Takeaway Details**

1. Reinsurer reaction scenarios can produce reserve credits in excess of ½ Cx. 
   - ½ Cx represents the cost of reinsurance that corresponds to the period for which the reinsurance premium has been paid, but not yet earned by the reinsurer, with no provision for reinsurance beyond the paid to date.

2. Differences in reserve credits and assumed reserves under PBR are likely to occur for multiple reasons.
   - Reserves between direct writers and reinsurers will not be mirrored, primarily due to differences in valuation assumptions (including changes to non-guaranteed YRT premiums).
   - Other drivers include the mechanics of computing final PBR reserves, and reinsurers aggregating results across different treaties and lines of business.

3. Differences in modeled reserves are primarily driven by the relationship between the current scale of reinsurance premiums and expected mortality, and the level of mortality margin, as well as the level of mortality margin risk.
   - Differences in reserve credits and assumed reserves under PBR will change the impact of reinsurance on modeled reserves, which is driven by the risk-sharing agreements between the parties involved.

4. Differences in reserve credits and assumed reserves under PBR will change the impact of reinsurance on modeled reserves, which is driven by the risk-sharing agreements between the parties involved.
   - Differences in reserve credits and assumed reserves under PBR will change the impact of reinsurance on modeled reserves, which is driven by the risk-sharing agreements between the parties involved.

**Additional Key Takeaways**

- **Details**

  - Reinsurer reaction scenarios can produce reserve credits in excess of ½ Cx.
  - Differences in reserve credits and assumed reserves under PBR are likely to occur for multiple reasons.
  - Differences in modeled reserves are primarily driven by the relationship between the current scale of reinsurance premiums and expected mortality, and the level of mortality margin, as well as the level of mortality margin risk.

- **KEY TAKEAWAYS**

  - Differences in reserve credits and assumed reserves under PBR will change the impact of reinsurance on modeled reserves, which is driven by the risk-sharing agreements between the parties involved.
  - Differences in reserve credits and assumed reserves under PBR will change the impact of reinsurance on modeled reserves, which is driven by the risk-sharing agreements between the parties involved.

- **Additional key takeaways from analysis of field test results are highlighted below in addition to those previously established.**
INTERPRETATION SURVEY RESULTS AND ADDITIONAL ANALYSIS
Survey covered approximately 55% of the industry measured by total face amount on new business.

Survey purpose

- Poll companies on the modeling approach they would use to implement APFs 2019-40, 2019-41, and 2019-42
- Supplement and broaden range of practice outside of the participation of field test responses

High level description of questions

- Several options were provided for projecting changes to YRT rates. Participants were asked to select the option that best fits their intended approach. Options included:
  - No change to YRT premiums
  - Increasing rates by a specified amount of the prescribed mortality margin after a specified period of time and every X years thereafter, with and without future mortality improvement
  - Increasing rates by the difference between current scale and prudent estimate (i.e., PBR) mortality, with specified parameters

Survey usage

- We used the results of the survey to develop criteria to compare the APFs
- Refer to slide 41 for additional detail on comparison criteria

BACKGROUND AND PURPOSE

The interpretation survey asked participants to detail how they would implement each of the proposed solutions.

Responses

- Collected separate responses for different treatment by treaty type (i.e., PBR) mortality, with specified parameters
- Supplement and broaden range of practice outside of the participation of field test
- Poll companies on the modeling approach they would use to implement APFs

Interpretation survey results and additional analysis

- Respondents directed writers and reinsurers to legal entities spanning 36 separate direct writers and 51 responses from 36 separate direct writers and 51 reinsurers.
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assumption for projected YRT premium rate increases</strong></td>
<td></td>
</tr>
<tr>
<td>- Maintenance current scale throughout the projection</td>
<td>None</td>
</tr>
<tr>
<td>- Increase by percent of difference between PBR mortality and current scale</td>
<td>Reactive</td>
</tr>
<tr>
<td>- Increase by percent of prescribed mortality margin</td>
<td>Break-even</td>
</tr>
<tr>
<td>- Beyond (option 4)</td>
<td>Other</td>
</tr>
<tr>
<td>- Applying improvement for an initial period and then no improvement</td>
<td></td>
</tr>
<tr>
<td>- Including implicit FMI margin after a specified number of years by projecting (option 3)</td>
<td></td>
</tr>
<tr>
<td>- Excluding implicit FMI margin by applying improvement throughout</td>
<td></td>
</tr>
<tr>
<td>- Including implicit FMI margin by assuming no improvement (option 2)</td>
<td></td>
</tr>
<tr>
<td>- Future mortality improvement (&quot;FMI&quot;), incorporated as follows:</td>
<td></td>
</tr>
<tr>
<td>- Gradient from company to industry experience, and</td>
<td></td>
</tr>
<tr>
<td>- Prescribed margins on company and industry mortality</td>
<td></td>
</tr>
<tr>
<td>Mortality margin is defined as:</td>
<td></td>
</tr>
<tr>
<td>Increase by percent of prescribed mortality margin where the prescribed</td>
<td></td>
</tr>
<tr>
<td>Mortality margin is defined as:</td>
<td></td>
</tr>
<tr>
<td>Increase by percent of prescribed mortality margin where the prescribed</td>
<td></td>
</tr>
<tr>
<td>Mortality margin is defined as:</td>
<td></td>
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<tr>
<td>Increase by percent of prescribed mortality margin where the prescribed</td>
<td></td>
</tr>
<tr>
<td>Mortality margin is defined as:</td>
<td></td>
</tr>
<tr>
<td>Increase by percent of prescribed mortality margin where the prescribed</td>
<td></td>
</tr>
<tr>
<td>Mortality margin is defined as:</td>
<td></td>
</tr>
</tbody>
</table>

**Summary of Options**

For each group of reinsurance agreements, participants were asked to provide standardized responses on how YRT premium rates would be adjusted based on language presented in each proposal.
Reinsurer reaction

- None 19%
- Reactive 40%
- Break-even 25%
- Other 16%

- 100% of prescribed mortality margin after 1 year and every year thereafter
- Include implicit future mortality improvement margin immediately and every year thereafter
- 100% of prescribed mortality margin after 1 year and every year thereafter
- Increase YRT premiums by the difference between current YRT premium and prescribed mortality immediately and every year thereafter

SURVEY COMMENTARY

- APF with largest variance across survey options
- Largest percentage selecting "Other"
- APF 2019-40 | SURVEY RESULTS
- Responses ranged from straightforward (reactive or break-even) to complex
- Complex responses were often associated with None and "Other"
- Examples: recapture at certain periods, utilize a loss trigger
- Complex responses were often associated with None and "Other"
- Tended to reflect modeling solutions used for other applications or adjustments to cash flows other than YRT premiums

- Responses ranged from straightforward (reactive or break-even) to complex
- Examples: recapture at certain periods, utilize a loss trigger
- Complex responses were often associated with None and "Other"
- Tended to reflect modeling solutions used for other applications or adjustments to cash flows other than YRT premiums
4.1 Pre-reinsurance DR (projected reserve amount)

4.2 Post-reinsurance DR (projected reserve amount)

Baseline YRT scale and high credibility

4.3 Pre-reinsurance DR – Post-reinsurance DR (projected reserve amount)

Baseline YRT scale and high credibility

4.4 Pre-reinsurance DR and high credibility

Baseline YRT scale and high credibility

1/2 CX

Break even after 1 year (option 5)

Fully reactive after 1 year (option 2)

No change in rates (option 1)

NPR (gross and net)

Pre-reinsurance DR
No change in rates scenario produces the highest modeled "reserve credit" for Term but is smaller than ½ cx for most valuation dates due to a higher baseline YRT scale than ULSG.
### Reinsurer reaction

<table>
<thead>
<tr>
<th>Reaction</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>55%</td>
</tr>
<tr>
<td>Reactive</td>
<td>17%</td>
</tr>
<tr>
<td>Break-even</td>
<td>18%</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
</tr>
</tbody>
</table>

#### Modeling approaches illustrated
- Reinsurance cash flows (premiums and claims) projected separately using best estimate mortality including future mortality improvement
- Increase YRT premiums by
  - 100% of the difference between current YRT premium and prescribed mortality immediately and each year thereafter

### SURVEY COMMENTARY

#### Range of responses
- Most responses were either None or Break-even
- These responses generally included a comment regarding intent to adjust claims in lieu of premiums

#### Complexity
- Many responses indicated the need for multiple models or model runs to apply this APF to reflect best estimate mortality for reinsurance cash flows and VM-20 mortality for all other cash flows
- Some respondents expressed concern with consistency between using one projection using prudent estimate assumptions and a separate one using best estimate assumptions
4.7 Pre-reinsurance DR (projected reserve amount)
High credibility

4.8 Post-reinsurance DR (projected reserve amount)
"Baseline YRT scale" and high credibility

4.9 Pre-reinsurance DR – Post-reinsurance DR (projected reserve amount)
"Baseline YRT scale" and high credibility

The relationship between YRT rates and anticipated mortality minimizes the impact of interpretation differences. This is because Option 1 uses anticipated experience assumptions, and reinsurance premiums are closely aligned with benefits (nearly break-even) and reinsurance is break-even under Option 5.

Interpretation survey results and additional analysis
Similar to ULSG, the no change in rate scenario produces the largest "reserve credit", but it is considerably smaller than for ULSG and ½ Cx.
None 1%
Reactive 64%
Break-even 29%
Other 6%
None 1%
Reinsurer reaction
Modeling approaches illustrated

Reinsurer reaction

SURVEY COMMENTARY

• Most responses were reactive and incorporate 100% of the prescribed margin
• Variation in reactive responses was the number of years of mortality improvement included in the margin
• Prescribed margin assumptions to determine the prescribed margin require a company to develop multiple sets of mortality assumptions, to determine the prescribed solution will get over 35% of responses were something other than a reactive margin, the prescribed margin formula may be difficult to interpret and understand

YRT premiums by

% of the difference between current YRT premium and prescribed mortality immediately and each year thereafter
100% of prescribed mortality margin after 1 year and every year thereafter
100% of prescribed mortality margin after 1 year and every year
Increase YRT premiums by

Range of responses

Increase YRT premiums by

Modeling approaches illustrated

APF 2019-42 | SURVEY RESULTS

Interpretation survey results and additional analysis
4.13 Pre-reinsurance DR – Post-reinsurance DR (projected reserve amount)

Reducing the amount of implicit margin decreases the net DR and increases the "reserve credit" mortality margin decreases the net DR and increases the "reserve credit".
Reducing the amount of implicit margin due to future mortality improvement in the development of the prescribed reserve credit.

Interpretation survey results and additional analysis.
4.19 Pre-reinsurance DR – Post-reinsurance DR (projected reserve amount)

2019-40 "Baseline YRT scale" and high credibility

-0.4
-0.2
0.0
0.2
0.4
0.6
0.8
1.0

0 10 20 30 40 50 60

No change in rates (option 1)

Fully reactive after 1 year (option 2)

Fully reactive after 1 year, including 10 yr MI (option 4)

Break even after 1 year (option 5)

4.20 Pre-reinsurance DR – Post-reinsurance DR (projected reserve amount)

2019-41 "Baseline YRT scale" and high credibility

-0.4
-0.2
0.0
0.2
0.4
0.6
0.8
1.0

0 10 20 30 40 50 60

Fully reactive after 1 year, including 10 yr MI (option 4)

Break even after 1 year (option 5)

1/2 Cx

Interpretation survey results and additional analysis
4.22 Pre-reinsurance DR – Post-reinsurance DR 2019-40 "Baseline YRT scale" and high credibility

4.23 Pre-reinsurance DR – Post-reinsurance DR 2019-42 "Baseline YRT scale" and high credibility

4.24 Pre-reinsurance DR – Post-reinsurance DR 2019-41 "Baseline YRT scale" and high credibility

Impact on DR Relative to Interim Solution (Term)

Interpretation survey results and additional analysis.
**KEY TAKEAWAYS**

Additional key takeaways from analysis of range of interpretation survey results are highlighted below in addition to those previously established.

<table>
<thead>
<tr>
<th>Takeaway Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.</strong> Reinsurer reaction scenarios can produce reserve credits in excess of $\frac{1}{2} Cx$</td>
</tr>
<tr>
<td>- $\frac{1}{2} Cx$ represents the cost of reinsurance that corresponds to the period for which the reinsurance premium has been paid, but not yet earned by the reinsurer, with no provision for reinsurance beyond the paid to date.</td>
</tr>
</tbody>
</table>
| - Full reinsurer reaction scenarios allow for:
  | - Differences between evolution of mortality and reinsurance premium payment dates,
  | - Contractual provisions around return of unearned reinsurance premium and other mechanical differences due to VM-20 requirements (e.g., differences in starting assets and resulting earned rate). |
| **2.** It is important to look at long-term projections of reserves when evaluating the impact of reinsurance modeling approaches. |
| - The level of margin in mortality as compared to best estimate changes at future valuation dates, due to unlocking of mortality improvement and extending the sufficient data period. |
| - As the business ages, higher mortality and shorter projection horizons will change the impact of reinsurance on reserves between direct writers and reinsurers. |
| **3.** Differences in reserve credits and assumed reserves under PBR are likely to occur for multiple reasons. |
| - Reserves between direct writers and reinsurers will not be mirrored, primarily due to differences in model implementation. |
| - Reinsurance reaction scenarios can produce reserve credits in excess of $\frac{1}{2} Cx$, which can be used to determine the level of risk shared between parties in the model reserve. |
| **4.** Differences in modeled reserves are primarily driven by the relationship between the current scale of YRT premiums and PBR mortality (anticipated experience and the level of margin). |
| - Observed differences in the relationship between the current scale of reinsurance premiums and mortality can be thought of as mechanisms which can be used to define the level of risk shared between parties in the modeled reserve. |
| **5.** Variation in surveyed approaches points to several considerations including level of prescription, modeling complexity, variation in results, and others in a long-term solution. |
| - APF 2019-42 has the highest level of prescription. APF 2019-40 allows for more flexibility; however, measures to reduce the variation in results (e.g., "loss ratio" trigger) add additional prescription. |
| - APF 2019-40 has the most complex model (and therefore is more difficult to implement), which can be thought of as mechanisms which can be used to define the level of risk shared between parties in the modeled reserve. |

Interpretation survey results and additional analysis provide a long-term solution.
Observation from prior analysis:

- Differences in assumed reserve compared to reserve credit can be driven by
  - Asymmetries caused by the NPR floor (i.e., NPR)
  - Asymmetries caused by the PBR methodology
  
Analytical adjustment: Analyses focused on the impact of

Drivers of differences in reserve credits and assumed reserves:

by assumptions for modeled reserves and PBR methodology

Most common responses and responses resulting in the largest reduction in aggregate DR from reinsurers and direct

EVALUATION OF TOTAL IMPACT ON DR (CEDED AND ASSUMED)

Interpretation survey results and additional analysis

Assumed reserves in the following slides are developed using the ceded pre and post reinsurance DR, an approach which captures reinsurance cash flows in determining the assumed reserve with some simplification, i.e., excludes reinsurers expenses and uses ceding company asset assumptions.
Largest reduction to DR (assumed – credit)

Most common responses (ceded credit, assumed reserve)

Impact of reinsurance on DR combined (assumed – credit)

Largest reduction to DR (assumed reserve)

Most common responses (ceded credit, assumed reserve)

combined impact to DR from both ceding and assuming companies for the most common surveyed responses is positive; combinations of other surveyed responses could lead to a reduction in total DR.

Interpretation: survey results and additional analysis
Differences in modeling approach result in differences between responses. Did not reflect “no adjustment” largest reduction to DR is smaller than APF 2019-40 since properly reflect the guidance in the APF.

Reinsurers had similar comments as direct companies regarding the need to model reinsurance cash flows separately to underwrite claims are adjusted to reflect anticipated experience. “None” reaction refers to no adjustments to premiums.

**Commentary**

- **Other** 40%
- **Break-even** 40%
- **Reactive** 20%
- **None** 0%

**Reinsurer Reaction – Assuming Reinsurer**

- **Other** 7%
- **Break-even** 15%
- **Reactive** 19%
- **None** 59%

**Reinsurer Reaction – Ceding Insurer**

- **Other** 59%
- **Break-even** 19%
- **Reactive** 15%
- **None** 7%

Impact of reinsurance on DR combined (assumed credit, ceded credit, assumed reserve) is smaller than APF 2019-40 since differences in modeling approach result in differences between responses. Did not reflect “no adjustment” largest reduction to DR is smaller than APF 2019-40 since properly reflect the guidance in the APF. Reinsurers had similar comments as direct companies regarding the need to model reinsurance cash flows separately to underwrite claims are adjusted to reflect anticipated experience. “None” reaction refers to no adjustments to premiums. Differences in modeling approach result in differences between responses. Did not reflect “no adjustment” largest reduction to DR is smaller than APF 2019-40 since properly reflect the guidance in the APF. Reinsurers had similar comments as direct companies regarding the need to model reinsurance cash flows separately to underwrite claims are adjusted to reflect anticipated experience. “None” reaction refers to no adjustments to premiums.
Reinsurer reaction – Ceding insurer

None 1%
Reactive 64%
Break-even 28%
Other 7%

Reinsurer reaction – Assuming reinsurer

None 20%
Reactive 60%
Break-even 40%
Other 0%

4.29 – Impact to total projected deterministic reserves (ULSG)

Most common responses

A reactive approach was the most common for both ceding and assuming companies

Largest reduction to DR

• A reactive approach was the most common for both ceding
  and assuming companies
  
  • "Reserve credits" are exactly opposite assumed reserves in
    this scenario, resulting in offsetting impacts
  
  • Largest reduction to DR is shown as fully reactive with 10 years
    of mortality improvement included in the margin, versus fully
    reactive excluding future mortality improvement for the
    assuming company

Interpretation survey results and additional analysis

APF 2019-42 | Ceded AND ASSUMED

Interpretation survey results and additional analysis
Additional key takeaways from evaluation of total impact on DR (ceded and assumed) are highlighted below in addition to those previously established.

**Takeaway Details**

1. Reinsurer reaction scenarios can produce reserve credits in excess of ½ Cx.
   - ½ Cx represents the cost of reinsurance that corresponds to the period for which the reinsurance premium has been paid, but not yet earned by the reinsurer, with no provision for reinsurance beyond the paid to date.
   - Full reinsurer reaction scenarios tested allow for differences between evolution of mortality and reinsurance premium payment dates, contractual provisions around return of unearned reinsurance premium and other mechanical differences due to VM-20 requirements (e.g., differences in starting assets and resulting earned rate).

2. It is important to look at long-term projections of reserves when evaluating the impact of reinsurance modeling approaches.
   - The level of margin in mortality as compared to best estimate changes at future valuation dates, due to unlocking of mortality improvement and extending the sufficient data period.
   - As the business ages, higher mortality and shorter projection horizons will change the impact of reinsurance on reserves at future valuation dates.

3. Differences in reserve credits and assumed reserves under PBR are likely to occur for multiple reasons.
   - Reserves between direct writers and reinsurers will not be mirrored, primarily due to differences in valuation assumptions (including changes to non-guaranteed YRT premiums).
   - Other drivers include the mechanics of computing final PBR reserves, and reinsurers aggregating results across multiple treaties and multiple cedants.
   - Differences between ceded and assumed reserves are reduced when adjustments to YRT premiums are based on the level of mortality margin specific to each party.

4. Differences in modeled reserves are primarily driven by the relationship between the current scale of YRT premiums and PBR mortality (anticipated experience and the level of margin).
   - Observed differences in the relationship between the current scale of reinsurance premiums and anticipated mortality will change the impact of reinsurance on reserves at future valuation dates.
   - The prescription of triggers (APF 2019-40) and levels of mortality improvement (APF 2019-41 and 2019-42) reduce differences between the scale of reinsurance premiums and mortality and can be thought of as mechanisms which can be used to define the level of risk shared between parties in the modeled reserve.

5. Variation in surveyed approaches points to several considerations including level of prescription, modeling complexity, variation in results and others in a long-term solution.
   - APF 2019-42 has the highest level of prescription. APF 2019-40 allows for more flexibility; however, measures to reduce the variation in results (e.g., “loss ratio” trigger) add additional prescription.
   - APF 2019-41 has the most complexity (modeling and theoretical) as it requires projecting YRT premium and claim set periods using a separate mortality assumption.

6. Differences in ceded “reserve credits” and assumed reserves are minimized when a mechanical approach to reinsurance is used by both parties.
   - When both ceding companies and assuming companies have the same assumptions and methodologies, a reactive approach under APF 2019-42 can result in mirrored deterministic “reserve credits”.
   - Other solutions allow for more differences between ceded and assumed reserves through reinsurance premium modeling, outside of variance driven by assumption differences and PBR methodology.
### Field Tested „APFs”

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<tr>
<th>Dimension</th>
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<th>Supporting Analysis</th>
</tr>
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<tbody>
<tr>
<td><strong>Level of prescription</strong></td>
<td>• Judgement allowed by the potential solution</td>
<td>• Prescribed solutions provide more uniformity but may not fully account for the</td>
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<td>• Prescribed solutions provide more uniformity but may not fully account for the underlying risks associated with the underlying risks.</td>
<td>• Assumptions and relationships identified in risk sharing agreements.</td>
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<td>• Prescribed solutions provide more uniformity but may not fully account for the underlying risks associated with the underlying risks.</td>
<td>• Assumptions and relationships identified in risk sharing agreements.</td>
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### Some dimensions have clear ideal outcomes (e.g., modeling complexity) while other dimensions will need to be weighed

<table>
<thead>
<tr>
<th>Dimension</th>
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<th>Supporting Analysis</th>
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<tr>
<td><strong>Modeling complexity</strong></td>
<td>• Complexity of implementing solution in valuation system and process</td>
<td>• Complexities could result in increases to total reserves and assumptions of variability among other drivers.</td>
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### Comparison of potential long-term solutions based on results of the field test and interpretation survey

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- **Potential APF Revisions**
- **Level of prescription**
- **Modeling complexity**
- **Variation in results**
- **Potential for asymmetry in ceded interpretation between assumed and ceded interpretation**
- **Baseline level of risk sharing**
- **Potential APF revisions**
Supporting reports and presentations

APPENDIX A
FIELD TEST RESULTS

Compiled and documented by the American Academy of Actuaries

Academy Reports

Detailed reports published by the Academy are posted to the NAIC website with this report.
Detailed reports published by the Academy are posted to the NAIC website with this report.
Initial presentations focused on education of modeling reinsurance under PBR, initial representative PBR model design and analysis of the APFs.
Prior presentations are posted to the NAIC website along with Academy Reports and this report.

Supplement was focused on reviewing drivers of differences due to PBR which cause asymmetries between a direct company’s reserve credit and an reinsurer’s assumed reserve.

Supplement was focused on reviewing drivers of differences due to PBR which cause asymmetries between a direct company’s reserve credit and an reinsurer’s assumed reserve.
Model design and assumptions
<table>
<thead>
<tr>
<th>Liability Assumptions (ULSG)</th>
<th>Model design and assumptions</th>
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<tr>
<td><strong>Future mortality improvement of 50%</strong></td>
<td><strong>Assumption</strong></td>
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<tr>
<td>A/E factors vary by high/low band</td>
<td><strong>Anticipated experience assumption</strong></td>
</tr>
<tr>
<td>Relative risk varies by risk class</td>
<td><strong>Prudent estimate assumption (e.g. margin)</strong></td>
</tr>
<tr>
<td>Prescribed margins applied to company mortality</td>
<td><strong>Mortality</strong></td>
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<tr>
<td>Industry table: 2015 VBT with prescribed margins and 100% limited mortality improvement scale</td>
<td><strong>Lapse</strong></td>
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<tr>
<td>Fluctuation method credibility</td>
<td><strong>Expenses</strong></td>
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<tr>
<td>3% annual lapse rate</td>
<td>2% premium tax</td>
</tr>
<tr>
<td>2% annual lapse rate</td>
<td>2.5% inflation</td>
</tr>
<tr>
<td>0% annual lapse rate when the secondary guarantee is in-the-money (i.e. CSV &gt; 0)</td>
<td>105% margin on expenses</td>
</tr>
<tr>
<td>2.5% inflation</td>
<td>$100 per policy (annual)</td>
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<tr>
<td></td>
<td>2% marginal on expenses</td>
</tr>
<tr>
<td></td>
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<tr>
<td>Model design and assumptions</td>
<td>Assumption</td>
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<tr>
<td>Mortality</td>
<td>Future mortality improvement of 50%</td>
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<td>Relative risk varies by risk class</td>
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<td>2015 VBT gender distinct, smoker distinct ANB</td>
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<td>Prescribed margins applied to company mortality</td>
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<td>Industry table: 2015 VBT with prescribed margins and mortality improvement scale</td>
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<td>Lapse</td>
<td>100% shock lapse after level term period</td>
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<td>95% margin on lapsed</td>
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<td>Expenses</td>
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<td>$100 face</td>
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<td>2% premium tax</td>
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<td>105% margin on expenses</td>
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The assumptions used in the analysis are below, including assumed PBR margins.
APPENDIX C

Supplemental Results
Similar to UL56, the representative PBR model explains the variance in impacts of reinsurance on modeled reserves observed in field test submissions.

Field test results legend

**Baseline YRT scale with high credibility**

Coverage range (Representative PBR model)

- 75th percentile (Field test)
- 25th percentile (Field test)

Field test results and analysis

**BASELINE | TERM RESULTS**

Similar to UL56, the representative PBR model explains the variance in impacts of reinsurance on modeled reserves observed in field test submissions.
Application of prudent estimate margins in Action B lowers the impact to DR and including additional parameters to determine the application of margins (Action C and Action D) reduces the variation in field test results.
Similar to ULSG, introducing future mortality improvement to the projected claims reduces reinsurance gains. Given the current scale of reinsurance premiums is held constant.

Field test results and analysis.
Similar to ULSG, increasing the level of future mortality improvement has a similar impact on both APF 2019-41 and APF 2019-42.
C.13 – No change to YRT rates

Development of unitized impact to DR for baseline YRT rate scale and high credibility

Unitized Impact to DR is unitized as per 1000 of Ceded NAAR

\[
\text{Unitized Impact to DR} = \frac{(a) - (b)}{(c)} \times 1000
\]

Notes

- Impact to DR is unitized as per 1000 of Ceded NAAR
- Impact to DR is unitized as per 1000 of Ceded NAAR

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<thead>
<tr>
<th>Pre-Reinsurance DR (b)</th>
<th>0.978</th>
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<td>94.41</td>
<td>135.09</td>
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</table>

Development of unitized impact to DR for baseline YRT rate scale and high credibility
### Notes

- Impact to DR is unitized as per 1000 of Ceded NAAR
- Impact to DR is unitized as per 1000 of Ceded NAAR

#### Development of unitized impact to DR for baseline YRT Rate scale and high credibility

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<tr>
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<th>C.14 – Action A</th>
<th>C.16 – Action C</th>
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<td></td>
<td>Action B</td>
<td>Action D</td>
</tr>
<tr>
<td></td>
<td>Action C</td>
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</table>

#### Impact to DR

- Unitized impact to DR = \[\frac{(a) - (b)}{c}\] * 1000

#### Field Test Results

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<th>Pre-reinsurance DR (a)</th>
<th>Post-reinsurance DR (b)</th>
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<td>4,903</td>
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#### Additional Data

- C.15 – Action B
- C.17 – Action D
Development of unitized impact to DR for baseline YRT Rate scale and high credibility

Notes

- \( (a) \) is adjusted to be consistent with each post-reinsurance run
- \( (c) \) reflects the outer-loop ceded NAAR used in each scenario which is adjusted to as a modeling technique for reinsurance margins.
- \( (d) \) is unitized as per 1000 of ceded NAAR.
- Unitized impact to DR = \([(a) - (b)] / (c) \times 1000

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<tr>
<th>Pre-reinsurance DR (a)</th>
<th>Post-reinsurance DR (b)</th>
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- For C.18 - 0.0% FMI

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- For C.19 - 0.5% FMI

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- For C.20 - 1.0% FMI

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<tr>
<td>1,974</td>
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<td>2,314</td>
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Field test results and analysis
### Field Test Results and Analysis

**Development of Unitized Impact to DR for baseline YRT Rate scale and high credibility**

- **Unitized impact to DR = \[ \frac{(a) - (b)}{(c)} \times 1000 \]**
- Impact to DR is unitized as per 1000 of Ceded NAAR
- (a) is adjusted to be consistent with each post-reinsurance run
- (c) reflects the outer-loop ceded NAAR used in each scenario which is adjusted to a modeling technique for reinsurance margins

#### Notes

- (c) reflects the outer-loop ceded NAAR used in each scenario which is adjusted to a modeling technique for reinsurance margins
- (a) is adjusted to be consistent with each post-reinsurance run
- Impact to DR is unitized as per 1000 of Ceded NAAR

#### C.22 – 10-years FMI

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<td>1,817</td>
<td>18,530</td>
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<tr>
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<td>2,368</td>
<td>2,199</td>
<td>17,752</td>
<td>9.51</td>
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<td>4,031</td>
<td>3,832</td>
<td>14,914</td>
<td>13.36</td>
</tr>
<tr>
<td>20</td>
<td>5,650</td>
<td>5,404</td>
<td>11,956</td>
<td>20.58</td>
</tr>
<tr>
<td>30</td>
<td>6,268</td>
<td>5,955</td>
<td>7,833</td>
<td>39.95</td>
</tr>
<tr>
<td>50</td>
<td>6,293</td>
<td>6,313</td>
<td>7,865</td>
<td>39.23</td>
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</table>

#### C.24 – 20-years FMI

<table>
<thead>
<tr>
<th>Year</th>
<th>Pre-reinsurance DR (a)</th>
<th>Post-reinsurance DR (b)</th>
<th>Ceded NAAR (c)</th>
<th>Unitized impact to DR (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,978</td>
<td>1,817</td>
<td>18,530</td>
<td>8.73</td>
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<tr>
<td>5</td>
<td>2,368</td>
<td>2,199</td>
<td>17,752</td>
<td>9.51</td>
</tr>
<tr>
<td>10</td>
<td>4,031</td>
<td>3,832</td>
<td>14,914</td>
<td>13.36</td>
</tr>
<tr>
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<td>5,650</td>
<td>5,404</td>
<td>11,956</td>
<td>20.58</td>
</tr>
<tr>
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<td>6,268</td>
<td>5,955</td>
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<td>6,293</td>
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</table>

#### C.21 – 5-years FMI

<table>
<thead>
<tr>
<th>Year</th>
<th>Pre-reinsurance DR (a)</th>
<th>Post-reinsurance DR (b)</th>
<th>Ceded NAAR (c)</th>
<th>Unitized impact to DR (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,978</td>
<td>1,817</td>
<td>18,530</td>
<td>8.73</td>
</tr>
<tr>
<td>5</td>
<td>2,368</td>
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<td>3,832</td>
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<td>13.36</td>
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<td>7,833</td>
<td>39.95</td>
</tr>
<tr>
<td>50</td>
<td>6,293</td>
<td>6,313</td>
<td>7,865</td>
<td>39.23</td>
</tr>
</tbody>
</table>
No change in rates

BASELINE | TERM RESULTS
Development of unitized impact to DR for baseline YRT Rate scale and high credibility

Notes
• Impact to DR is unitized as per 1000 of ceded NAAR
• Unitized impact to DR = \([(a) - (b)] / (c) * 1000\)

<table>
<thead>
<tr>
<th></th>
<th>Pre-reinsurance DR (a)</th>
<th>Post-reinsurance DR (b)</th>
<th>Ceded NAAR (c)</th>
<th>Unitized impact to DR (d)</th>
</tr>
</thead>
<tbody>
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<td>0.83</td>
<td>37,500</td>
<td>0.36</td>
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<td>1.11</td>
<td>35,042</td>
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<tr>
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<td>1.11</td>
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<td>1.22</td>
<td>26,641</td>
<td>1.02</td>
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<td>0.36</td>
<td>0.39</td>
<td>9,401</td>
<td>0.36</td>
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C.25 – No change in rates

Field test results and analysis
### Field Test Results and Analysis

**C.26 – Action A**

<table>
<thead>
<tr>
<th>Pre-reinsurance DR (a)</th>
<th>Post-reinsurance DR (b)</th>
<th>Ceded NAAR (c)</th>
<th>Unitized impact to DR (d)</th>
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<tbody>
<tr>
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<td>39.75</td>
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<td>1.17</td>
<td>3.48</td>
<td>96</td>
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<td>9</td>
<td>1.02</td>
<td>2.54</td>
<td>83</td>
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<tr>
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**C.27 – Action B**

<table>
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<th>Pre-reinsurance DR (a)</th>
<th>Post-reinsurance DR (b)</th>
<th>Ceded NAAR (c)</th>
<th>Unitized impact to DR (d)</th>
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<tr>
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<td>0.43</td>
<td>0.39</td>
<td>8.96</td>
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<tr>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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<tr>
<td>0</td>
<td>1.02</td>
<td>3.48</td>
<td>83</td>
</tr>
<tr>
<td>0</td>
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<td>5</td>
<td>10</td>
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</table>

**C.28 – Action C**

<table>
<thead>
<tr>
<th>Pre-reinsurance DR (a)</th>
<th>Post-reinsurance DR (b)</th>
<th>Ceded NAAR (c)</th>
<th>Unitized impact to DR (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.36</td>
<td>0.37</td>
<td>0.36</td>
</tr>
<tr>
<td>0</td>
<td>0.36</td>
<td>0.37</td>
<td>0.36</td>
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<tr>
<td>0</td>
<td>1.02</td>
<td>3.48</td>
<td>83</td>
</tr>
<tr>
<td>0</td>
<td>3</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

**Development of unitized impact to DR for baseline YRT Rate scale and high credibility**

- Unitized impact to DR = \( \frac{(a) - (b)}{(c) \times 1000} \)
- Impact to DR is unitized as per 1000 of Ceded NAAR

**Notes**

- Impact to DR is unitized as per 1000 of Ceded NAAR
- Unitized impact to DR = \( \frac{(a) - (b)}{(c)} \times 1000 \)
Development of unitized impact to DR for baseline YRT Rate scale and high credibility

<table>
<thead>
<tr>
<th>Pre-reinsurance DR (a)</th>
<th>Post-reinsurance DR (b)</th>
<th>Ceded NAAR (c)</th>
<th>Unitized impact to DR (d)</th>
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</thead>
<tbody>
<tr>
<td>0.5% FMI</td>
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<td>1% FMI</td>
<td>1% FMI</td>
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<tr>
<td>-10 127 247 344 354</td>
<td>30.573 36.9 26.64</td>
<td>30.573 36.9 26.64</td>
<td>30.573 36.9 26.64</td>
</tr>
</tbody>
</table>

Notes:
- (a) is adjusted to be consistent with each post-reinsurance run
- (b) is adjusted to be consistent with each post-reinsurance run
- (c) reflects the outer-loop ceded NAAR used in each scenario which is adjusted to at model the technique for reinsurance margins
- (d) is adjusted as per 1000 of ceded NAAR

Impact to DR is unitized as per 1000 of ceded NAAR

Unitized impact to DR = [(a) - (b)] / (c) * 1000
### Development of unitized impact to DR for baseline YRT Rate scale and high credibility

#### Notes

- Impact to DR is unitized as per 1000 of Ceded NAAR
- Unitized impact to DR = \( \frac{(a) - (b)}{(c)} \times 1000 \)

#### Field test results and analysis

<table>
<thead>
<tr>
<th>Year</th>
<th>Pre-reinsurance DR (a)</th>
<th>Post-reinsurance DR (b)</th>
<th>Ceded NAAR (c)</th>
<th>Unitized impact to DR (d)</th>
</tr>
</thead>
<tbody>
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<td>140</td>
<td>35,042</td>
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</tr>
<tr>
<td>1995</td>
<td>254</td>
<td>344</td>
<td>30,572</td>
<td>0.23</td>
</tr>
<tr>
<td>2000</td>
<td>330</td>
<td>427</td>
<td>26,644</td>
<td>-0.31</td>
</tr>
<tr>
<td>2005</td>
<td>349</td>
<td>424</td>
<td>9,406</td>
<td>-2.89</td>
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</table>

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<table>
<thead>
<tr>
<th>Year</th>
<th>Pre-reinsurance DR (a)</th>
<th>Post-reinsurance DR (b)</th>
<th>Ceded NAAR (c)</th>
<th>Unitized impact to DR (d)</th>
</tr>
</thead>
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<tr>
<td>1990</td>
<td>102</td>
<td>136</td>
<td>35,042</td>
<td>-0.47</td>
</tr>
<tr>
<td>1995</td>
<td>244</td>
<td>342</td>
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<td>0.33</td>
</tr>
<tr>
<td>2000</td>
<td>340</td>
<td>414</td>
<td>26,644</td>
<td>-0.54</td>
</tr>
<tr>
<td>2005</td>
<td>354</td>
<td>441</td>
<td>9,406</td>
<td>-3.02</td>
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INTERPRETATION SURVEY RESULTS AND ADDITIONAL ANALYSIS

APPENDIX C.2
**Impact to DR is (a) – (b)**

<table>
<thead>
<tr>
<th>Impact to DR (c)</th>
<th>0</th>
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<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
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<tbody>
<tr>
<td>Pre-reinsurance DR (a)</td>
<td>1,978</td>
<td>5,652</td>
<td>6,322</td>
<td>4,903</td>
<td>3,183</td>
<td>1,627</td>
<td>640</td>
</tr>
<tr>
<td>Post-reinsurance DR (b)</td>
<td>1,425</td>
<td>5,001</td>
<td>5,576</td>
<td>4,206</td>
<td>2,685</td>
<td>1,411</td>
<td>541</td>
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<tr>
<td>Impact to DR (c)</td>
<td>554</td>
<td>651</td>
<td>746</td>
<td>696</td>
<td>498</td>
<td>216</td>
<td>99</td>
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</table>

**Notes**

- C.37 – No change in rates
- C.38 – Fully reactive after 1 year
- C.39 – Break even after 1 year

---

**Development of Net DR for illustrated interpretation scenarios**

Interpretation survey results and additional analysis
### Notes

- **Impact to DR is (a) – (b)**

<table>
<thead>
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<th>Impact to DR (c)</th>
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<th>13</th>
<th>11</th>
<th>9</th>
<th>7</th>
<th>5</th>
<th>3</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-reinsurance DR (a)</td>
<td>190</td>
<td>303</td>
<td>357</td>
<td>363</td>
<td>327</td>
<td>225</td>
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<tr>
<td>Post-reinsurance DR (b)</td>
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<td>343</td>
<td>324</td>
<td>222</td>
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<td>0</td>
<td>2</td>
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<tr>
<td>Impact to DR (c)</td>
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<td>19</td>
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<td>20</td>
<td>3</td>
<td>3</td>
<td>17</td>
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</table>

### C.40
- No change in rates

### C.41
- Fully reactive after 1 year

### C.42
- Break even after 1 year

---

**Development of Net DR for Illustrated Interpretation Scenarios**

**APF 2019-40 | TERM RESULTS**

Interpretation survey results and additional analysis
<table>
<thead>
<tr>
<th>Impact to DR (c)</th>
<th>7</th>
<th>2</th>
<th>63</th>
<th>139</th>
<th>216</th>
<th>497</th>
<th>60</th>
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<tbody>
<tr>
<td>Post-reinsurance DR (b)</td>
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<td>5.601</td>
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<td>4.581</td>
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<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
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</table>

Notes

- Impact to DR is (a) – (b)
- C.44 – Break even after 1 year

Development of Net DR for Illustrated Interpretation Scenarios

APF 2019-41 | ULSG RESULTS

Interpretation survey results and additional analysis
<table>
<thead>
<tr>
<th>Year</th>
<th>Pre-reinsurance DR (a)</th>
<th>Post-reinsurance DR (b)</th>
<th>Impact to DR (c)</th>
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<tbody>
<tr>
<td>2017</td>
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<tr>
<td>2018</td>
<td>10 206 298 353 355 325 222 18</td>
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<td></td>
</tr>
<tr>
<td>2019</td>
<td>-19 -16 5 4 7 2 3 17</td>
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</table>

Notes:
- C.45 – No change in rates
- C.46 – Break even in 1 year

Development of Net DR for Illustrated Interpretation Scenarios

APF 2019-41 | TERM RESULTS

Interpretation survey results and additional analysis
<table>
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<tr>
<th>Impact to DR (c)</th>
<th>0 10 20 30 40 50 60</th>
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<tbody>
<tr>
<td>Pre-reinsurance DR (a)</td>
<td>1,978 5,652 6,322 4,903 3,183 1,627 640</td>
</tr>
<tr>
<td>Post-reinsurance DR (b)</td>
<td>2,102 5,814 6,462 5,031 3,283 1,694 650</td>
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</table>

<table>
<thead>
<tr>
<th>Impact to DR (c)</th>
<th>0 10 20 30 40 50 60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-reinsurance DR (a)</td>
<td>1,918 5,506 6,107 4,723 3,063 1,564 594</td>
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<td>1,896 5,501 6,068 4,609 2,912 1,413 473</td>
</tr>
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<td>Impact to DR (c)</td>
<td>82 151 225 151 50 -6 4</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Impact to DR (c)</th>
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</thead>
<tbody>
<tr>
<td>Pre-reinsurance DR (a)</td>
<td>1,978 5,652 6,322 4,903 3,183 1,627 640</td>
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<tr>
<td>Post-reinsurance DR (b)</td>
<td>1,896 5,501 6,068 4,609 2,912 1,413 473</td>
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<tr>
<td>Impact to DR (c)</td>
<td>60 147 214 180 120 63 46</td>
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</table>

C.47 – Fully reactive after 1 year

C.48 – Fully reactive after 1 year, including 10 Year MI

C.49 – Break even after 1 year
<table>
<thead>
<tr>
<th>Year</th>
<th>Pre-reinsurance DR (a)</th>
<th>Post-reinsurance DR (b)</th>
<th>Impact to DR (c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
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<td>11</td>
<td>-20</td>
</tr>
<tr>
<td>2</td>
<td>190</td>
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<td>303</td>
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<td>6</td>
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<td>381</td>
<td>-18</td>
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<tr>
<td>10</td>
<td>327</td>
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<tr>
<td>14</td>
<td>35</td>
<td>20</td>
<td>15</td>
</tr>
</tbody>
</table>

Notes:

- C.50 – Fully reactive after 1 year
- C.52 – Break even after 1 year

Impact to DR is (a) – (b)

Development of Net DR for illustrated interpretation scenarios
Appendix D

Project team
The consultant analysis will be overseen by NAIC Staff, the Academy, and the ACL, as depicted in the following chart.

**Project Team and Governance**

The consultant analysis will be overseen by NAIC Staff, the Academy, and the ACL, as depicted in the following chart.

**Technical Project Team**

Field test participants: Pat Allison, Oliver Wyman, Dylan Strother, Jennifer Frasier, Katie van Ryn, Scott O’Neal, Chris Whitney, Brian Bayette, Steve Jackson, American Academy of Actuaries, NAIC.

Support: Sara Pinoso.

Technical lead: Dylan Strother.

Technical project team: Pat Allison, Oliver Wyman, Katie van Ryn, Scott O’Neal, Chris Whitney, Brian Bayette, Steve Jackson, American Academy of Actuaries, NAIC.

Project oversight: Jennifer Frasier, Sara Pinoso.
The report and the findings herein are subject to the reliances and limitations outlined at the beginning of this report.

The Academy of Actuaries of Oliver Wyman developed this report and meet the qualification requirements of the American Academy of Actuaries. Chris Whitney, Dylan Strother, and Katie van Ryn of Oliver Wyman developed this report and meet the qualification requirements of the American Academy of Actuaries.

<table>
<thead>
<tr>
<th>Role</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement manager</td>
<td>Chris Whitney, FSA, MAAA, Principal, Hartford</td>
</tr>
<tr>
<td>Technical lead</td>
<td>Dylan Strother, FSA, MAAA, Senior Consultant, New York</td>
</tr>
<tr>
<td>AXIS model development</td>
<td>Katie van Ryn, FSA, MAAA, Consultant, Toronto</td>
</tr>
<tr>
<td>Support</td>
<td>Sara Pineros, Consulting Intern, Toronto</td>
</tr>
</tbody>
</table>

The report and the findings herein are subject to the reliances and limitations outlined at the beginning of this report. This report is considered a statement of actuarial opinion under the guidelines promulgated by the American Academy of Actuaries. Chris Whitney, Dylan Strother, and Katie van Ryn of Oliver Wyman developed this report and meet the qualification requirements of the American Academy of Actuaries to render the opinion contained herein.
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This report does not represent investment advice or provide an opinion regarding the fairness of any transaction to any and all parties. This report does not represent legal advice, which can only be provided by legal counsel and for which you should seek advice of counsel. The opinions expressed herein are valid only for the purpose stated herein and as of the date hereof. Information furnished by others, upon which all or portions of this report are based, is believed to be reliable but has not been verified. No warranty is given as to the accuracy of such information. Public information and industry and statistical data are from sources Oliver Wyman deems to be reliable; however, Oliver Wyman makes no representation as to the accuracy or completeness of such information and has accepted the information without further verification. No responsibility is taken for changes in market conditions or laws or regulations and no obligation is assumed to revise this report to reflect changes.

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LATF Adopted Edits to Model 805
STANDARD NONFORFEITURE LAW FOR INDIVIDUAL DEFERRED ANNUITIES
ACLI DRAFT EDIT APRIL 30, 2020

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Section 1. Title

This Act shall be known as the Standard Nonforfeiture Law for Individual Deferred Annuities.

Section 2. Applicability

A. This Act shall not apply to any reinsurance, group annuity purchased under a retirement plan or plan of deferred compensation established or maintained by an employer (including a partnership or sole proprietorship) or by an employee organization, or by both, other than a plan providing individual retirement accounts or individual retirement annuities under Section 408 of the Internal Revenue Code, as now or hereafter amended, premium deposit fund, variable annuity, investment annuity, immediate annuity, any deferred annuity contract after annuity payments have commenced, or reversionary annuity, nor to any contract which shall be delivered outside this state through an agent or other representative of the company issuing the contract.

B. Sections 3 through 8 shall not apply to contingent deferred annuities.

C. Notwithstanding Subsection B, the commissioner shall have the authority to prescribe, by regulation, nonforfeiture benefits for contingent deferred annuities that are, in the opinion of the commissioner, equitable to the policyholder, appropriate given the risks insured, and to the extent possible, consistent with general intent of this law.

Drafting Note: It is expected that any regulation prescribing specific nonforfeiture requirements for the CDAs and promulgated by the commissioner under Subsection C above would apply only to the CDA contracts issued subsequent to the effective date of such regulation.

Section 3. Nonforfeiture Requirements

A. In the case of contracts issued on or after the operative date of this Act as defined in Section 13, no contract of annuity, except as stated in Section 2, shall be delivered or issued for delivery in this state unless it contains in substance the following provisions, or corresponding provisions which in the opinion of the commissioner are at least as favorable to the contractholder, upon cessation of payment of considerations under the contract:

(1) That upon cessation of payment of considerations under a contract, or upon the written request of the contract owner, the company shall grant a paid-up annuity benefit on a plan stipulated in the contract of such value as is specified in Sections 5, 6, 7, 8 and 10;

(2) If a contract provides for a lump sum settlement at maturity, or at any other time, that upon surrender of the contract at or prior to the commencement of any annuity payments, the company shall pay in lieu of a paid-up annuity benefit a cash surrender benefit of such amount as is
specified in Sections 5, 6, 8 and 10. The company may reserve the right to defer the payment of the cash surrender benefit for a period not to exceed six (6) months after demand therefor with surrender of the contract after making written request and receiving written approval of the commissioner. The request shall address the necessity and equitability to all policyholders of the deferral;

(3) A statement of the mortality table, if any, and interest rates used in calculating any minimum paid-up annuity, cash surrender or death benefits that are guaranteed under the contract, together with sufficient information to determine the amounts of the benefits; and

(4) A statement that any paid-up annuity, cash surrender or death benefits that may be available under the contract are not less than the minimum benefits required by any statute of the state in which the contract is delivered and an explanation of the manner in which the benefits are altered by the existence of any additional amounts credited by the company to the contract, any indebtedness to the company on the contract or any prior withdrawals from or partial surrenders of the contract.

B. Notwithstanding the requirements of this section, a deferred annuity contract may provide that if no considerations have been received under a contract for a period of two (2) full years and the portion of the paid-up annuity benefit at maturity on the plan stipulated in the contract arising from prior considerations paid would be less than $20 monthly, the company may at its option terminate the contract by payment in cash of the then present value of the portion of the paid-up annuity benefit, calculated on the basis on the mortality table, if any, and interest rate specified in the contract for determining the paid-up annuity benefit, and by this payment shall be relieved of any further obligation under the contract.

Section 4. Minimum Values

The minimum values as specified in Sections 5, 6, 7, 8 and 10 of any paid-up annuity, cash surrender or death benefits available under an annuity contract shall be based upon minimum nonforfeiture amounts as defined in this section.

A. (1) The minimum nonforfeiture amount at any time at or prior to the commencement of any annuity payments shall be equal to an accumulation up to such time at rates of interest as indicated in Subsection B of the net considerations (as hereinafter defined) paid prior to such time, decreased by the sum of Paragraphs (a) through (d) below:

(a) Any prior withdrawals from or partial surrenders of the contract accumulated at rates of interest as indicated in Subsection B;

(b) An annual contract charge of $50, accumulated at rates of interest as indicated in Subsection B;

(c) Any premium tax paid by the company for the contract, accumulated at rates of interest as indicated in Subsection B; and

(d) The amount of any indebtedness to the company on the contract, including interest due and accrued.

Drafting Note: The premium tax credit is only permitted if the tax is actually paid by the company. If the tax is paid and subsequently credited back to the company, such as upon early termination of the contract, the tax credit may not be taken.

(2) The net considerations for a given contract year used to define the minimum nonforfeiture amount shall be an amount equal to eighty-seven and one-half percent (87.5%) of the gross considerations credited to the contract during that contract year.

B. The interest rate used in determining minimum nonforfeiture amounts shall be an annual rate of interest determined as the lesser of three percent (3%) per annum and the following, which shall be specified in the contract if the interest rate will be reset:
The five-year Constant Maturity Treasury Rate reported by the Federal Reserve as of a date, or average over a period, rounded to the nearest 1/20th of one percent, specified in the contract no longer than fifteen (15) months prior to the contract issue date or redetermination date under Section 4B(4);

Reduced by 125 basis points;

Where the resulting interest rate is not less than one zero percent (10%); and

The interest rate shall apply for an initial period and may be redetermined for additional periods. The redetermination date, basis and period, if any, shall be stated in the contract. The basis is the date or average over a specified period that produces the value of the five-year Constant Maturity Treasury Rate to be used at each redetermination date.

During the period or term that a contract provides substantive participation in an equity indexed benefit, it may increase the reduction described in Subsection B(2) above by up to an additional 100 basis points to reflect the value of the equity index benefit. The present value at the contract issue date, and at each redetermination date thereafter, of the additional reduction shall not exceed the market value of the benefit. The commissioner may require a demonstration that the present value of the additional reduction does not exceed the market value of the benefit. Lacking such a demonstration that is acceptable to the commissioner, the commissioner may disallow or limit the additional reduction.

The commissioner may adopt rules to implement the provisions of Section 4C and to provide for further adjustments to the calculation of minimum nonforfeiture amounts for contracts that provide substantive participation in an equity index benefit and for other contracts that the commissioner determines adjustments are justified.

Section 5. Computation of Present Value

Any paid-up annuity benefit available under a contract shall be such that its present value on the date annuity payments are to commence is at least equal to the minimum nonforfeiture amount on that date. Present value shall be computed using the mortality table, if any, and the interest rates specified in the contract for determining the minimum paid-up annuity benefits guaranteed in the contract.

Section 6. Calculation of Cash Surrender Value

For contracts that provide cash surrender benefits, the cash surrender benefits available prior to maturity shall not be less than the present value as of the date of surrender of that portion of the maturity value of the paid-up annuity benefit that would be provided under the contract at maturity arising from considerations paid prior to the time of cash surrender reduced by the amount appropriate to reflect any prior withdrawals from or partial surrenders of the contract, such present value being calculated on the basis of an interest rate not more than one percent (1%) higher than the interest rate specified in the contract for accumulating the net considerations to determine maturity value, decreased by the amount of any indebtedness to the company on the contract, including interest due and accrued, and increased by any existing additional amounts credited by the company to the contract. In no event shall any cash surrender benefit be less than the minimum nonforfeiture amount at that time. The death benefit under such contracts shall be at least equal to the cash surrender benefit.

Section 7. Calculation of Paid-up Annuity Benefits

For contracts that do not provide cash surrender benefits, the present value of any paid-up annuity benefit available as a nonforfeiture option at any time prior to maturity shall not be less than the present value of that portion of the maturity value of the paid-up annuity benefit provided under the contract arising from considerations paid prior to the time the contract is surrendered in exchange for, or changed to, a deferred paid-up annuity, such present value being calculated for the period prior to the maturity date on the basis of the interest rate specified in the contract for determining the maturity value of the paid-up annuity benefit, and increased by any additional amounts credited by the company to the contract. For contracts that do not provide any death benefits prior to the commencement of any annuity payments, present values shall be calculated on the basis of such interest rate and the mortality table specified in the contract for determining the maturity value of the paid-up annuity benefit. However, in no event shall the present value of a paid-up annuity benefit be less than the minimum nonforfeiture amount at that time.
Section 8. Maturity Date

For the purpose of determining the benefits calculated under Sections 6 and 7, in the case of annuity contracts under which an election may be made to have annuity payments commence at optional maturity dates, the maturity date shall be deemed to be the latest date for which election shall be permitted by the contract, but shall not be deemed to be later than the anniversary of the contract next following the annuitant's seventieth birthday or the tenth anniversary of the contract, whichever is later.

Section 9. Disclosure of Limited Death Benefits

A contract that does not provide cash surrender benefits or does not provide death benefits at least equal to the minimum nonforfeiture amount prior to the commencement of any annuity payments shall include a statement in a prominent place in the contract that such benefits are not provided.

Section 10. Inclusion of Lapse of Time Considerations

Any paid-up annuity, cash surrender or death benefits available at any time, other than on the contract anniversary under any contract with fixed scheduled considerations, shall be calculated with allowance for the lapse of time and the payment of any scheduled considerations beyond the beginning of the contract year in which cessation of payment of considerations under the contract occurs.

Section 11. Proration of Values; Additional Benefits

For a contract which provides, within the same contract by rider or supplemental contract provision, both annuity benefits and life insurance benefits that are in excess of the greater of cash surrender benefits or a return of the gross considerations with interest, the minimum nonforfeiture benefits shall be equal to the sum of the minimum nonforfeiture benefits for the annuity portion and the minimum nonforfeiture benefits, if any, for the life insurance portion computed as if each portion were a separate contract. Notwithstanding the provisions of Sections 5, 6, 7, 8 and 10, additional benefits payable in the event of total and permanent disability, as reversionary annuity or deferred reversionary annuity benefits, or as other policy benefits additional to life insurance, endowment and annuity benefits, and considerations for all such additional benefits, shall be disregarded in ascertaining the minimum nonforfeiture amounts, paid-up annuity, cash surrender and death benefits that may be required by this Act. The inclusion of such benefits shall not be required in any paid-up benefits, unless the additional benefits separately would require minimum nonforfeiture amounts, paid-up annuity, cash surrender and death benefits.

Section 12. Rules

The commissioner may adopt rules to implement the provisions of this Act.

Section 13. Effective Date

After the effective date of this Act, a company may elect to apply its provisions to annuity contracts on a contract form-by-contract form basis before the second anniversary of the effective date of this Act. In all other instances, this Act shall become operative with respect to annuity contracts issued by the company after the second anniversary of this Act.
May 29, 2020

Mr. Mike Boerner
Chair, NAIC Life Actuarial Task Force (LATF)

Mr. Reggie Mazyck
Life Actuary, NAIC

Re: Model 805 Exposure, Standard Nonforfeiture Law for Individual Deferred Annuities

Dear Mr. Boerner and Mr. Mazyck:

On behalf of our members, the Insured Retirement Institute (“IRI”)\(^1\) appreciates the opportunity to comment on the proposed change to Model 805 Exposure. For the reasons set forth below, we support the proposal and respectfully urge the NAIC to move expeditiously to adopt the proposal.

The current financial environment is challenging institutional and individual investors and product offerings. The proposed change from 1% to 0% will give companies more flexibility to provide the value and benefits wanted and needed by consumers. If companies are required to offer 1% crediting rates, and interest rates remain low or decrease further, certain products will no longer be feasible to offer. The products most at risk are often those in greatest demand by consumers. For example, products with short surrender charge periods may not be able to find investments that have a high enough yield to support a 1% rate. At the same time, many consumers will be understandably hesitant to purchase long term products in a low yield environment. Additional guarantees in contracts such as a return of premium benefit may become unaffordable if the asset yield available is exhausted by the 1% guarantee.

IRI is committed to responding to the country’s economic condition with policy recommendations that support individual investment. Companies must have a diverse product portfolio to respond to the

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\(^1\) IRI is the leading association for the entire supply chain of insured retirement strategies, including life insurers, asset managers, and distributors such as broker-dealers, banks and marketing organizations. IRI members account for more than 95 percent of annuity assets in the U.S., include the top 10 distributors of annuities ranked by assets under management, and are represented by financial professionals serving millions of Americans. IRI champions retirement security for all through leadership in advocacy, awareness, research, and the advancement of digital solutions within a collaborative industry community.
changing economic and individual situation. IRI supports the responsive approach of Model 805 and encourages the Life Actuarial Task Force to adopt as proposed.

Thank you again for the opportunity to share our views on this important subject. Please contact the undersigned if you have questions about anything in this letter, or if we can be of any further assistance in connection with this important regulatory effort.

Sincerely,

Jason Berkowitz
Chief Legal & Regulatory Affairs Officer
Insured Retirement Institute

Liz Pujolas
Director, State Affairs
Insured Retirement Institute
ACLI Comments on the Opening of Model 805
Brian Bayerle  
Senior Actuary  

July 20, 2020  

Mr. Mike Boerner  
Chair, NAIC Life Actuarial Task Force (LATF)  

Re: ACLI Comments on Opening of NAIC Model #805  

Dear Mr. Boerner:  

The American Council of Life Insurers (ACLI) appreciates the opportunity to provide comments on the opening of NAIC Model #805 on Standard Nonforfeiture Law for Individual Deferred Annuities. We appreciate the leadership of LATF and the Life Insurance and Annuities (A) Committee to address this critical issue for consumers.  

ACLI believes regulators should make quick, tactical revisions to Model #805 in light of the current economic environment. Specifically, we believe the appropriate course of action is to reduce the minimum nonforfeiture interest rate in Section 4 (B) (3) from 1% to 0%.  

The current interest rate environment creates unique challenges on crediting rates. As of June 30th, the yields for the US 5-year and 10-year Treasuries were 0.29% and 0.66%, respectively. It is difficult to support the current 1.00% minimum guaranteed rate given these historically low interest rates. An annuity contract is a long-term commitment and requires that insurers maintain a long time horizon with respect to managing contract liabilities. Many companies are contemplating or have begun to limit their product offerings in response to the current situation and would appreciate greater flexibility to address the current environment. Greater flexibility will help promote expanded product availability to consumers.  

We note that the 0% is a floor only; and the current formula will continue to be used to determine the minimum rates companies are permitted to guarantee on newly-issued contracts. The 0% floor will only be triggered in low interest rate environments, such as the one we are currently experiencing. Companies will continue to use non-guaranteed crediting rates, bonuses, and other features in order to maintain market competitiveness and product differentiation. If, and when, market conditions improve, competitive pressures will necessitate that insurers increase both their current and guaranteed crediting rates regardless of the regulatory floor.  

We look forward to a discussion on this important issue.
Sincerely,

cc: Reggie Mazyck, NAIC