

Statutory Life and Annuity Issues:

An Update from the American Academy of Actuaries

Thomas A. Campbell, MAAA, FSA, CERA

Donna R. Claire, MAAA, FSA, CERA

David E. Neve, MAAA, FSA, CERA



AMERICAN ACADEMY *of* ACTUARIES

Objective. Independent. Effective.™

August 31, 2020

Life and Annuity Valuation Issues

- Statutory Reserve Issues
- Risk-Based Capital (RBC) and Related Issues
- Actuarial Practice Issues
- Appointed Actuary and Opinion Topics



Statutory Reserve Issues



AMERICAN ACADEMY *of* ACTUARIES

Objective. Independent. Effective.™

© 2020 American Academy of Actuaries. All rights reserved.
May not be reproduced without express permission.

Update on Life Principle-Based Reserving (PBR) Adoption

- Valuation Manual (VM) became operative on 1/1/2017
 - All 50 states have adopted the Valuation Manual
 - All companies must implement Life PBR (VM-20) by 1/1/2020.
 - Pre-need, Industrial, Guaranteed Issue, and Credit Life excluded
 - Company-wide exemption is optional if company meets criteria
- New York legislature adopted PBR in July of 2018
 - Optional for 2019 and 2020, must be implemented in 2021
 - NY has added a second formulaic floor (in addition to the Net Premium Reserve) that is a factor times the current CRVM



Summary of Recent VM-20 Changes

- National Association of Insurance Commissioners (NAIC) must adopt by Summer National Meeting (early August) to be effective 1/1 of next year.
 - Substantive changes for 2020 include:
 - Interim approach on Yearly Renewable Term (YRT) reinsurance cash flows for 2020 and 2021.
 - Aggregation of mortality segments to determine level of credibility
 - Prescribed Deterministic Reserve (DR) option payoff assumption for indexed benefits (based on option budget)
 - Seriatim basis to test post-level term profits (not aggregate basis)
 - Revisions to the valuation of term riders
 - Adjustments when company experience is worse than applicable industry table
 - Increase Commissioners Standard Ordinary (CSO) mortality rates for NPR if lower than anticipated mortality
 - No significant changes adopted for 2021



Modeling YRT Reinsurance Premiums

- Regulators are concerned with the wide variation in margins used to model YRT reinsurance premiums
- 5 Amendment Proposal Forms (APFs) have been submitted to address this concern
- Life Actuarial Task Force (LATF) adopted an interim approach in June of 2019 (APF 2019-39)
 - Ceded YRT reserve is set equal to $\frac{1}{2}$ CX used in Net Premium Reserve (NPR); only pre-reinsurance reserve is modeled (modeling of reinsurance cash flows is eliminated)
 - Is effective for 2020 and 2021 with optional 3-year carve out for 2017–19 issues
- A field test was completed early in 2020 to test the impact of three alternative permanent solutions
 - Participating companies submitted actual data under each of the alternatives
 - Oliver Wyman was hired to review and analyze data
- LATF is discussing results, with the goal of adopting a permanent solution for 2022



AMERICAN ACADEMY of ACTUARIES

Objective. Independent. Effective.™

© 2020 American Academy of Actuaries. All rights reserved.
May not be reproduced without express permission.

VM-20 Revisions Under Discussion

- Permanent approach to model YRT reinsurance cash flows
- Individually underwritten certifications under group contract
- Treatment of term and group conversions
- Non-U.S. business ceded into U.S.
- Reflecting impact of accelerated underwriting programs



Possible Future VM-20 Revisions

- Allowing full aggregation benefit in Stochastic Reserve
- Replacing individual margins with aggregate margin
- Eliminating the Net Premium Reserve
- Changes to mortality assumption calculation, including permitting mortality improvement



Regulator Summary of PBR

- California and the NAIC reviewed all 2017 and submissions; Texas, California and the NAIC viewed the 2018 submissions (2019 currently being reviewed)
- Conclusion: 2018 was an improvement over 2017
- Still room for improvement
- Emerging best practices including reserve analysis, effective use of graphs, tables and spreadsheets

https://content.naic.org/sites/default/files/inline-files/VAWG%202018%20PBR%20Review%20Report_12-6-19.pdf



AMERICAN ACADEMY of ACTUARIES

Objective. Independent. Effective.™

© 2020 American Academy of Actuaries. All rights reserved.
May not be reproduced without express permission.

Regulator Summary of PBR: Areas Needing Improvement

- Organization and readability of reports
- Governance and controls
- Explanations on simplifications made and whether it impacted results
- Explanations as to what is considered material
- Explanations, justifications of assumption changes



Regulator Summary of PBR: Areas Needing Improvement

Questions on Assumptions Used

- Mortality Assumptions
- Nonguaranteed YRT Reinsurance
- Assumption changes
- Exclusion tests
- Dates used deterministic/stochastic calculations
- Assets



PBR Implementation Work Group

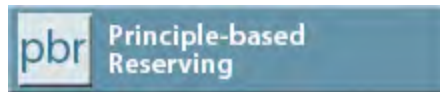
- Academy work group looking at governance under PBR and other related issues
- 2019 Projects included:
 - Updated website
 - Practice Note on PBR projections
 - PBR Checklist
 - PBR Boot Camp



PBR Page on Academy Website

- Go to actuary.org and click on Principle-based Reserving (navigation bar on right)

OR



- www.actuary.org/content/pbr-practice

- Page includes a PBR Toolkit



Academy PBR Toolkit

PBR Overview: Resources that provide the mechanics of PBR, as well as industry practices and guidance in performing a principle-based valuation.

- [PBR Checklist](#)
- [The Details Behind PBR Implementation](#)
- [Model Governance Checklist](#)
- [Model Governance Practice Note](#)

Implementation Tools: Resources that provide tools and frameworks to assist actuaries in implementing principle-based valuations.

- [Principle-Based Approach Projections Practice Note](#)
- [VM-20 Practice Note](#)
- [ASOP 52: Principle-Based Reserves for Life Products](#)
- [Economic Scenario Generators](#)
- [Life PBR Assumptions Resource Manual](#)



NAIC Resources on PBR

- [Valuation Manual 2019-2020 Comparison](#)
- [Valuation Manual](#), published January 2020
- [Valuation Manual Versions and Amendments](#)
- [SVL Model Law](#)
- [VM-20 / VM-22 Tables](#)
- [NAIC Impact Study of VM-20 on PBR for Life Insurance](#)
- [Life Actuarial \(A\) Task Force of the NAIC](#)
- [2018 PBR Review Report](#)
- [2017 PBR Review Report](#)



Also on Academy's PBR Website

- Academy comments on PBR
- PBR Practice Notes
- PBR relevant ASoPs
- PBR Qualification Standards



PBR Boot Camp Seminar

- Academy is having a 4 day (5¼ hours a day) seminar virtually September 14-17
 - ▣ Life Topics September 14 & 15
 - ▣ Variable Annuity (VA) Topics September 16
 - ▣ Preparing Reports and for Audits, Regulatory Updates September 17, 2020

<https://www.actuary.org/pbr2020>



AMERICAN ACADEMY of ACTUARIES

Objective. Independent. Effective.™

© 2020 American Academy of Actuaries. All rights reserved.
May not be reproduced without express permission.

2019 Projects

- PBR Checklist
 - Four pages to cover what needs to be done for PBR
- PBA Projections Approach Practice Note (released December 2019)
 - Answers related to common practice for projecting out future principle-based reserve and capital calculations



PBR Review Procedures Work Group

- PBR Review Procedures Work Group, chaired by Randall Stevenson
- Objective is to develop the “Common Practices of Examining Actuaries” note for Risk Focused Examinations
- Covers the general approach of an actuary participating in a risk-focused examination as well as examples
- Includes examination considerations for PBR
- Released April 2020



VM-20 Practice Note Updates

- Has been updated for 2020 Valuation Manual changes
- Includes new questions from PBR Boot Camps and other actuarial meetings
- Released in April 2020

www.actuary.org/sites/default/files/2020-04/VM-20_PN_2020_Version_0.pdf

- Work has begun on the 2021 Practice Note



PBR Analysis Template

- Academy group under Pat Allison is developing ways to display PBR (and other) data:
 - Examples: waterfalls, trend analysis graphs
 - Advantages: one picture is worth a 1,000 words
- Goal is to have this done in 2020



PBA for Variable Annuities

- Revisions effective 1/1/2020
 - Early adoption allowed for year-end 2019, using Actuarial Guideline (AG) 52
 - AG 43, VM-21, VM-31, VM-01, and C-3 Phase II
 - Applies to all inforce business
- 3-Year Phase-in option – up to 7 years with approval
 - Must phase-in both VM-21 and C-3 Phase II
 - Adjustment for material decreases in business
 - Can't phase-in if you early adopted
- 2020 C-3 Phase II modification
 - Phase-in and smoothing where voluntary reserves were used



VA Framework – Notable Elements

- VM-20 economic scenario generator (ESG)
 - For interest rate and equity returns
 - May use proprietary ESGs, but only if it increases results
- Working Reserve removed
- More guidance on discount rates and asset projection
- Treatment of hedging and revenue sharing updated
- 2012 IAM Basic Table replaces 1994 VA MGDB
- Alternative Methodology includes aggregate floors
 - Cash surrender value and AG 33
- Reporting requirements moved to VM-31
- Definitions moved to VM-01



VA Framework – Standard Scenario (SS)

- Rebrand reserve SS as Standard Projection (SP)
- Align SP with the Stochastic Reserve
- Prescribed policy behavior assumptions based on industry experience
- Prescribed mortality uses 2012 IAM Basic Table
 - Adjustments were added late in the process
 - Studies are being performed by SOA and a consulting firm
- Aggregate calculation, with disclosure



VA Framework – C-3 Phase II

- Standard Scenario completely removed from the C-3 Phase II calculation
- RBC and reserve calculation are better aligned
 - C-3 based on $25\% \times [\text{CTE}(98) - \text{reserve}]$
- Tax adjustment options
 - Macro Tax Adjustment vs. Specific Tax Recognition
- Smoothing based on C-3 charge rather than total asset requirement



Academy VA Reserves and Capital WG

- VM-21 Checklist
 - Need for the revision, scope, reserve and RBC framework, assumptions, reporting, and governance
 - www.actuary.org/sites/default/files/2020-07/VM21_Checklist.pdf
- Practice Note Supplement
 - Transition
 - Standard Projection, including potential conflicts
 - Asset Modeling and discount rates
 - Scenarios
 - Hedging
 - C-3 Phase II
 - Disclosures



VM-31 PBR Report Changes

- Major change is to bring in the AG-43/VM-21 requirements into VM-31
- Will be effective with changes to VM-21
- Will now require one executive summary, then separate Life and Variable Annuity reports



PBR for Non-Variable Annuities

Valuation Interest Rates

- Current version of VM-22
 - Valuation interest rates requirements for Income Annuities
 - Applies new business issued beginning 2018
 - Quarterly rates, but daily for jumbo contracts
 - Rates posted on www.naic.org/pbr_data.htm?tab_2
- Academy SVL Interest Rate Modernization WG
 - Coordination with Annuity Reserves Work Group (ARWG) on the development of a proposed PBR, including effective date

www.naic.org/cmte_a_latf_vm22sg.htm



AMERICAN ACADEMY of ACTUARIES

Objective. Independent. Effective.™

© 2020 American Academy of Actuaries. All rights reserved.
May not be reproduced without express permission.

PBR for Non-Variable Annuities

Valuation Interest Rates

- Valuation rates for products that pass exclusion test
 - Refresh approach, using methodology similar to that used to develop current rates
 - Consistent with VM-20 Deterministic
- Contemplated proposal for valuation rates to support PBR
 - Treasuries plus VM-20 spreads
 - New differentiators, such as surrender charge periods and multi-year guarantee vs. annual reset
- Lock-in at issue or unlock annually?

www.naic.org/cmte_a_latf_vm22sg.htm



AMERICAN ACADEMY of ACTUARIES

Objective. Independent. Effective.™

© 2020 American Academy of Actuaries. All rights reserved.
May not be reproduced without express permission.

PBR for Non-Variable Annuities

- Academy ARWG is developing a PBR framework for non-variable annuities
- Key objectives:
 - Propose a CTE70 stochastic reserve calculation. Proposal will not include any formulaic or prescription floors
 - Develop a set of slides laying out various elements of methodology
 - Recommend consistency in reserve methodologies for all annuities, and consistency with VM-20 where appropriate

https://content.naic.org/sites/default/files/national_meeting/LATF%20%20Meetings%20Packet.pdf – page 14



PBR for Non-Variable Annuities

Timeline

▣ Summer 2020

- ARWG present framework proposal to LATF

▣ Fall 2020

- Seek LATF endorsement for PBR framework
- Valuation Manual language drafting begins

▣ Spring 2021

- Begin industry field testing

▣ Spring 2022

- LATF adoption
- Target 1/1/2023 effective date



PBR for Non-Variable Annuities

Key Topics

1. Product Scope

- ARWG perspective: include both deferred and payout annuities

2. Exclusion Test Methodology

- ARWG perspective: incorporate exclusion test similar to VM-20

3. Investment Spreads, Defaults and Reinvestment Mix

- ARWG perspective: Consider company-specific prudent estimates for defaults and spreads, and not including 50% A / 50% AA reinvestment mix used for VM-20 VM-21

4. Aggregation

- ARWG perspective: aggregate across all fixed annuity products

5. Inforce Retrospective Application

- ARWG perspective: needs further investigation, but believe there may be merits for retrospective application



Experience Reporting Requirements

- It will be the basis for the NAIC Statistical Agent process for PBR; NAIC will administer
- Was supposed to start in 2020, was delayed until 2021
- Expected to be expanded in future



Long-term Care (LTC) Benefit Riders

- LTC Combination Product Valuation Practice Note
- Reserve requirements may fall under NAIC LTC Insurance Model Regulation, AG 51, or VM-25
 - VM-20 and Universal Life Model Regulation may apply
 - Application may depend upon rider features
- U.S. Qualification Standards
 - Committee on Qualifications FAQ #51 notes that LTC typically involves aspects of both life and health
 - Basic education in one area, knowledge of law
 - Continuing education should include LTC-related topics
 - Specific Qualification Standards may apply

https://www.actuary.org/sites/default/files/2019-12/LTC_Combo_PN_12022019.pdf



Update on Economic Scenario Generator

- The Academy/SOA/NAIC generator will be replaced by a generator under the NAIC's purview
- A request for proposals (RFP) went out March 4, 2020
- Will not be done for year-end 2020



Risk-Based Capital and Related Issues



AMERICAN ACADEMY of ACTUARIES

Objective. Independent. Effective.™

© 2020 American Academy of Actuaries. All rights reserved.
May not be reproduced without express permission.

RBC C-1 Factors for Bonds

- Academy proposal was submitted to the Investment RBC WG (IRBCWG) in 2017. The IRBCWG has been disbanded, and the C-1 issue has been moved to the Life RBC WG
- The ACLI is working with the NAIC to develop an RFP to engage an independent 3rd party to review the Academy's proposed factors and methodology
- The NAIC has adopted the structural changes in the RBC template to accommodate the 20 factors for year-end 2020
 - Old factors will continue to be used
 - Companies will need to allocate bonds to the 20 categories
 - The existing NAIC 6 categories are being maintained, but there are now subcategories within the 6 categories

www.naic.org/documents/cmte_e_investment_rbc_wg_exposure_rp_assumptions.pdf



RBC for Longevity Risk (LR)

- C-2 Longevity Risk Work Group (C-2 LRWG) of the Academy developed a proposed LR charge (C-2b) based on the difference between reported reserves (assumed 85th percentile) and reserves under a longevity stressed scenario (95th percentile).
- LR factor(s) to be applied to formula statutory reserves for products in scope (payout annuities and pension risk transfers)
- Proposed factors vary with the total size of company reserves, ranging from .7% to 1.35%
- The C-2 LRWG has proposed a covariance factor with the mortality C-2 charge, but it has met with resistance from some regulators



RBC for Longevity Risk (cont.)

- In June, the Life RBC Working Group (LRBCWG) of the NAIC adopted changes to the RBC instructions effective year-end 2020 to accommodate the new factors
 - However, they decided to use factors equal to zero for year-end 2020 rather than the proposed factors
 - Will enable the LRBCWG to gather industry data to determine the overall impact of the new factors, and more importantly, to enable an analysis of a possible risk correlation factor between mortality and longevity
- Companies will be required to submit the reserve amounts that are subject to the new factors on the RBC template, tiered by size, even though the actual longevity risk charge will be zero

https://content.naic.org/cmte_e_lrbc.htm

Click on “Exposure Drafts” tab



AMERICAN ACADEMY of ACTUARIES

Objective. Independent. Effective.™

© 2020 American Academy of Actuaries. All rights reserved.
May not be reproduced without express permission.

C-2 RBC Requirements

- Academy C-2 Mortality Risk Work Group reviewing current C-2 RBC requirements
 - ▣ Scope is life insurance, including group life
 - ▣ Working with Academy LRWG on potential proposal for correlations with longevity risk on annuities
- C-2 requirements cover mortality risk in excess of that covered by stat reserves, related to:
 - ▣ Volatility Risk—natural statistical deviations in experience
 - ▣ Level Risk—error in base mortality assumption
 - ▣ Trend Risk—adverse mortality trend
 - ▣ Catastrophe Risk—large temporary mortality increase from a severe event



Group Capital Calculation (GCC)

- An RBC aggregation methodology to calculate a single capital ratio for all the companies in the group, including non-insurance entities
- Field test was completed in early 2020
- On May 15, revised instructions were made public and exposed for comment for 60 days. Key elements:
 - Adjustments for permitted /prescribed practices were removed, including adjustment for XXX/AXXX captives
 - Required capital calibration set at 300% ACL
 - Debt limits: 30% for senior debt, 15% for hybrid debt
 - Scalar method for offshore companies is Pure Relative ratio
 - Two required capital factors are under consideration for non-insurance entities without a required capital charge

https://content.naic.org/cmte_e_grp_capital_wg.htm

Click on “Meeting Materials” tab



AMERICAN ACADEMY of ACTUARIES

Objective. Independent. Effective.™

© 2020 American Academy of Actuaries. All rights reserved.
May not be reproduced without express permission.

Liquidity Stress Testing

- Purpose: determine the degree of systemic risk of widespread large asset sales within the insurance industry under adverse scenarios that could lead to widespread negative economic impacts
 - Focus is on aggregate industry results, not individual companies
 - 23 companies are within scope of the test
- The Financial Stability Task Force of the NAIC exposed for comment the 2019 Liquidity Stress Test Framework at their 12/9/2019 meeting for 60 days
 - Includes a baseline scenario and two liquidity stress scenarios
 - Also includes insurer-specific information request
 - Several comment letters were submitted
 - No further developments due to COVID-19

https://content.naic.org/cmte_ex_financial_stability_tf.htm

Click on “Exposure Draft” tab



AMERICAN ACADEMY of ACTUARIES

Objective. Independent. Effective.™

© 2020 American Academy of Actuaries. All rights reserved.
May not be reproduced without express permission.

Other RBC Issues

- Academy C-3 Life and Annuities WG
 - Looking at differences between the C-3 “Phases”
 - Treatment of Fixed Indexed Annuities still an open issue
- Elimination of Fraternal Blank
 - Life RBC updated to reflect Fraternal business
- Update to Preamble in RBC Instructions
- Life and Fraternal RBC forecasting spreadsheet



Actuarial Practice Issues



AMERICAN ACADEMY *of* ACTUARIES

Objective. Independent. Effective.™

© 2020 American Academy of Actuaries. All rights reserved.
May not be reproduced without express permission.

Actuarial Standards Board (ASB) Activities

- New/Revised Standards
 - ASOP No. 55, *Capital Adequacy Assessment* – effective November 1, 2019
 - ASOP No. 56, *Modeling* – October 1, 2020
- Review of new or revised ASOPs
 - ASOP No. 2, *Nonguaranteed Charges or Benefits for Life Insurance Policies and Annuity Contracts* – 2nd exposure; comments due 11/13/20



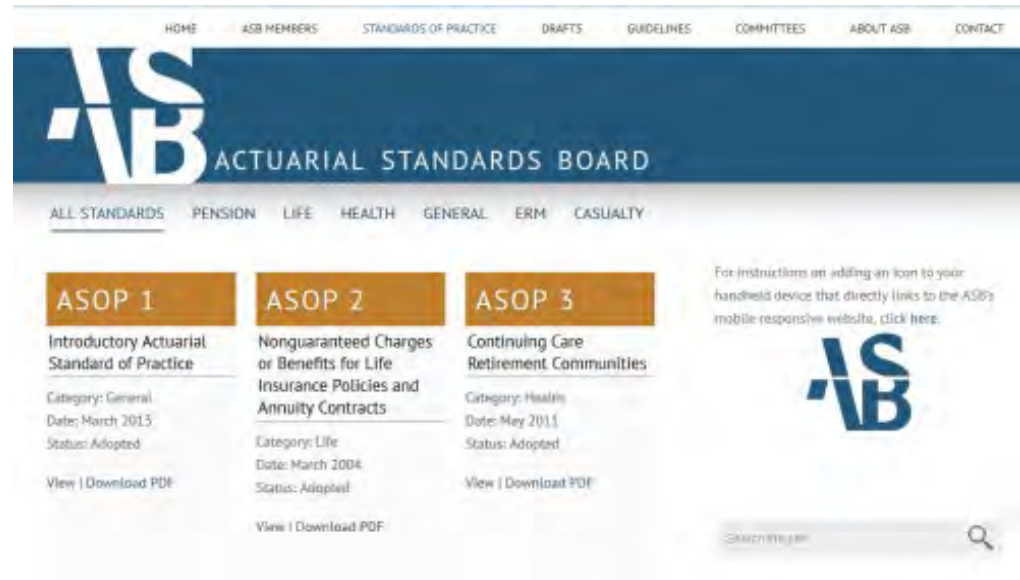
Actuarial Standards Board Activities

- Review of new or revised ASOPs (continued)
 - ASOP No. 11, *Reinsurance Financial Reporting* – exposed; comments being reviewed
 - ASOP No. 22, *Statements of Opinion Based on Asset Adequacy Analysis by Actuaries for Life or Health Insurers* – 2nd exposure; comments due 11/13/20
 - Setting Assumptions – 3rd exposure expected
 - ASOP No. 38, *Catastrophe Modeling*



ASB Resources

- Read current standards of practice
- Comment on exposure drafts
- Sign up for *Boxscore*
- Contact the ASB



U.S. Qualification Standards (USQS)

The screenshot shows the website for the Actuarial Board for Counseling and Discipline. The main navigation bar includes 'PUBLIC POLICY' and 'PROFESSIONALISM'. Below this, there are tabs for 'ABOUT US', 'MEMBERSHIP', 'NEWSROOM', 'INTERNATIONAL', and 'PUBLIC DISCIPLINE'. The main content area is titled 'U.S. Qualification Standards' and includes a paragraph about the 2008 revision. There are three red arrows pointing to specific links: 'U.S. Qualification Standards (in effect as of Jan. 1, 2008)', 'FAQs on the U.S. Qualification Standards', and 'Submitting Additional Questions'. A sidebar on the right contains logos for the Actuarial Board for Counseling and Discipline and the Actuarial Standards Board, along with 'QUICK LINKS' and 'CALENDAR OF EVENTS' sections.

- U.S. Qualification Standards
- CE infographic
- FAQs
- Submit Questions

www.actuary.org/content/us-qualification-standards



U.S. Qualification Standards

- Academy has an optional attestation form for compliance with the USQS – attest.actuary.org
 - Specific and General Qualifications tracks
 - Can complete multiple attestations for multiple SAOs
 - Follows USQS language exactly
- Other resources
 - Quarterly Professionalism webinars
 - Library of Professionalism webinars
 - <https://www.actuary.org/user/logins>
 - E-learning courses “Understand the Code of Professional Conduct” and “Addressing Ethical Concerns”
 - www.actuary.org/content/actuarial-elearning-center



Appointed Actuary and Opinion Topics



AMERICAN ACADEMY *of* ACTUARIES

Objective. Independent. Effective.™

© 2020 American Academy of Actuaries. All rights reserved.
May not be reproduced without express permission.

2020 Year-end Testing Issues

- Academy's Asset Adequacy Testing Task Force under Karen Rudolph sent out a survey of appointed actuaries on 2020 year-end
 - Impact of COVID-19 on 2020 asset adequacy testing, e.g., mortality, lapse, LTC, interest rates
 - Goal is to have a white paper out in September



2020 Year-end Testing Issues (cont.)

- Consider impact of COVID-19 on:
 - ▣ Mortality
 - ▣ Mortality improvement for life insurance
 - ▣ Morbidity
 - ▣ Lapse assumptions
- Comparison of assumptions to PBR assumptions



Life & Health Valuation Law Manual

- Gives summary of each state's valuation requirements
- Provides one-source reference for applicable actuarial guidelines and NAIC model regulations

Later this year, look for
<https://www.actuary.org/node/13284>



State Requirements/Differences

- Need to follow state requirements; some states will accept state of domicile
- Can file separate opinions/memoranda in different states (state of domicile filed with NAIC)
- California and New York expected to have holiday letters



NY Special Considerations Letter

- Possible issues for 2020:
 - PBR NY minimum reserve requirements may be the greater of PBR and NY-determined minimum requirements
 - Asset spread updates
 - Number of scenarios to “pass”

Later this year, look for

www.dfs.ny.gov/system/files/documents/2020/11/special_consider_2020.pdf



American Academy of Actuaries

Life & Health Qualifications Seminar

- A succinct and effective way to fulfill some of the important requirements to sign statutory opinions for Life and Health Annual Statements
 - ▣ Topics include reserve valuation, nonforfeiture, RBC, and professionalism
 - ▣ Applicable economic, regulatory, and legal environments
 - ▣ The identification, evaluation, and management of risk
- May help fulfill Basic Education requirements that may not have been met through SOA examinations
- Can serve as a source of continuing education (CE) for more experienced actuaries
- A good overview of appointed actuary work

www.actuary.org/content/lhq-2020



AMERICAN ACADEMY of ACTUARIES

Objective. Independent. Effective.™

© 2020 American Academy of Actuaries. All rights reserved.
May not be reproduced without express permission.

Questions



AMERICAN ACADEMY *of* ACTUARIES

Objective. Independent. Effective.™

© 2020 American Academy of Actuaries. All rights reserved.
May not be reproduced without express permission.