



SOCIETY OF
ACTUARIES®

2019 **ANNUAL
MEETING**
& EXHIBIT

October 27-30
Toronto, Canada

Session 094: PBR Implementation: Lessons Learned

[SOA Antitrust Compliance Guidelines](#)

[SOA Presentation Disclaimer](#)

2019 Annual Meeting

Session 94 | PBR Implementation: Lessons Learned

October 29, 2019

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SOCIETY OF ACTUARIES

Antitrust Compliance Guidelines

Active participation in the Society of Actuaries is an important aspect of membership. While the positive contributions of professional societies and associations are well-recognized and encouraged, association activities are vulnerable to close antitrust scrutiny. By their very nature, associations bring together industry competitors and other market participants.

The United States antitrust laws aim to protect consumers by preserving the free economy and prohibiting anti-competitive business practices; they promote competition. There are both state and federal antitrust laws, although state antitrust laws closely follow federal law. The Sherman Act, is the primary U.S. antitrust law pertaining to association activities. The Sherman Act prohibits every contract, combination or conspiracy that places an unreasonable restraint on trade. There are, however, some activities that are illegal under all circumstances, such as price fixing, market allocation and collusive bidding.

There is no safe harbor under the antitrust law for professional association activities. Therefore, association meeting participants should refrain from discussing any activity that could potentially be construed as having an anti-competitive effect. Discussions relating to product or service pricing, market allocations, membership restrictions, product standardization or other conditions on trade could arguably be perceived as a restraint on trade and may expose the SOA and its members to antitrust enforcement procedures.

While participating in all SOA in person meetings, webinars, teleconferences or side discussions, you should avoid discussing competitively sensitive information with competitors and follow these guidelines:

- **Do not** discuss prices for services or products or anything else that might affect prices
- **Do not** discuss what you or other entities plan to do in a particular geographic or product markets or with particular customers.
- **Do not** speak on behalf of the SOA or any of its committees unless specifically authorized to do so.
- **Do** leave a meeting where any anticompetitive pricing or market allocation discussion occurs.
- **Do** alert SOA staff and/or legal counsel to any concerning discussions
- **Do** consult with legal counsel before raising any matter or making a statement that may involve competitively sensitive information.

Adherence to these guidelines involves not only avoidance of antitrust violations, but avoidance of behavior which might be so construed. These guidelines only provide an overview of prohibited activities. SOA legal counsel reviews meeting agenda and materials as deemed appropriate and any discussion that departs from the formal agenda should be scrutinized carefully. Antitrust compliance is everyone's responsibility; however, please seek legal counsel if you have any questions or concerns.

Presentation Disclaimer

Presentations are intended for educational purposes only and do not replace independent professional judgment. Statements of fact and opinions expressed are those of the participants individually and, unless expressly stated to the contrary, are not the opinion or position of the Society of Actuaries, its cosponsors or its committees. The Society of Actuaries does not endorse or approve, and assumes no responsibility for, the content, accuracy or completeness of the information presented. Attendees should note that the sessions are audio-recorded and may be published in various media, including print, audio and video formats without further notice.

Agenda

This is an interactive panel discussion, facilitated by results from Oliver Wyman's 2019 PBR survey



Introductions



Analysis and implementation



Assumptions and margins



Reporting and disclosures



Emerging topics



Serena Chao

FSA, MAAA

Serena.Chao@Oliverwyman.com

- Serena is a Consultant in the US Life Insurance Practice of Oliver Wyman and is based in the New York office.
- Serena has nearly ten years of insurance experience, including Corporate Owned Life Insurance and Fixed Deferred Annuity pricing, risk management of life products, Prophet model builds, and life principles-based reserving.
- Prior to joining Oliver Wyman, Serena worked in the Prophet Center of Excellence and other rotations at New York Life. She is an active volunteer for both the Society of Actuaries and the American Academy of Actuaries.



Justin Lengemann

FSA, MAAA

JLengemann@Scor.com

- Justin is VP – US Reporting and Analysis and serves as the Appointed Actuary for SCORs US companies and is based in Charlotte, NC. He leads all financial valuation for US Stat, US GAAP, and IFRS 4 valuation as well as capital and collateral related matters.
- Justin’s background includes model development and production, economic reporting, and financial valuation.
- He volunteers for the Society of Actuaries as an exam question writer.



Ross Zilber

FSA, MAAA

RZilber@Jhancock.com

- Ross is VP & Deputy Appointed Actuary at John Hancock with experience in Product Development, ALM/Investment, and Valuation. Ross leads the US Statutory Valuation Team with responsibility for all aspects of financial reporting for Life, LTC and Annuities, including Quarterly Valuation, Annual Reporting, Asset Adequacy Testing, Regulator and Rating agency surveys, and internal and regulatory audits.
- Ross is also responsible for the implementation of Principle Based Reserves (PBR) for Life and Annuity products, and process improvement projects for valuation systems and reporting. He also serves as the Appointed Actuary for some of John Hancock's companies.



Chris Whitney

FSA, MAAA

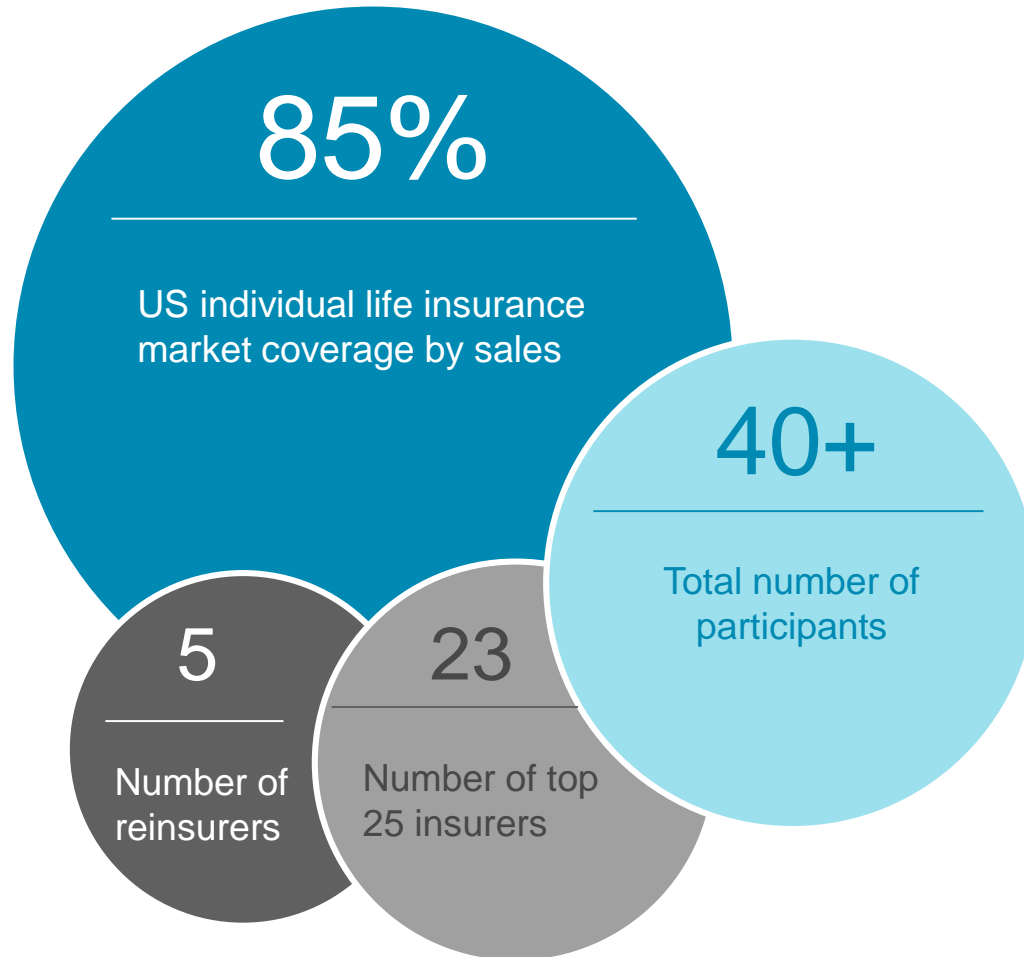
Christopher.Whitney@Oliverwyman.com

- Chris Whitney is a Principal at Oliver Wyman and is located in the Hartford office.
- His primary areas of practice include life principle-based reserving, life pricing and product development, GGY AXIS financial modeling and mergers and acquisitions (M&A).
- Prior to joining Oliver Wyman, Chris led the Assumption and Model Management and Product Operations teams within the Product Management Group at Liberty Mutual.
- Chris is a Member of the Academy's Life Reserves Work Group and is a frequent speaker at industry conferences on PBR topics.
- He's a Fellow of the Society of Actuaries (FSA), and a Member of the American Academy of Actuaries (MAAA).



Overview of PBR survey

This presentation contains select results from a survey that Oliver Wyman conducted in 2019 related to PBR implementation plans and emerging topics

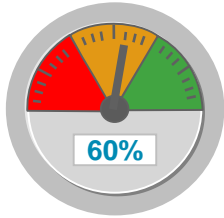


Respondents were asked to describe their practices as of December 31, 2018



Implementation planning

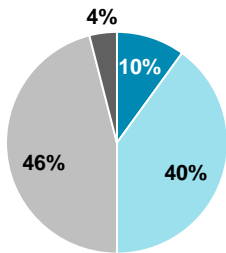
PBR has been analyzed on more than half of survey participants' products and implementations are heavily back-loaded¹



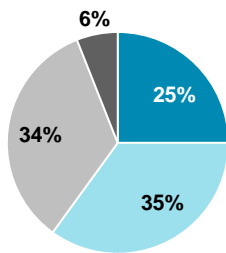
60%

Life writers have analyzed the impact of PBR on more than half their products

Impact on profitability % of Life products



Impact on reserves % of Life products



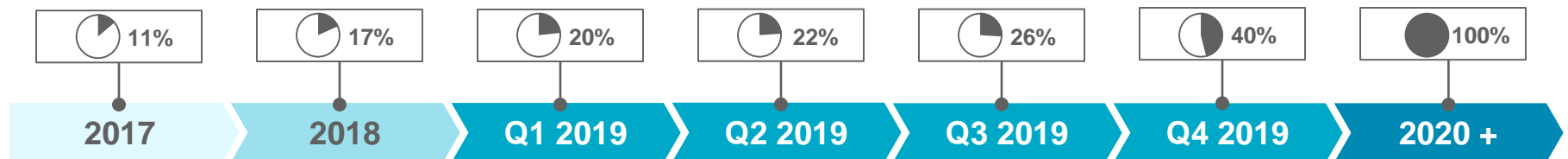
- Large Decrease (-)
- Small Decrease (-)
- Small Increase (+)
- Large Increase (+)

Exclusion testing % of Life products

50% of products for which writers anticipate passing stochastic exclusion tests

23% of products for which writers anticipate passing deterministic exclusion tests

Number of Life products on PBR
Across all participants



¹Data from Oliver Wyman's 2019 PBR Emerging Practices survey, which covers the responses of nearly 45 writers and reinsurers as of 12/31/2018



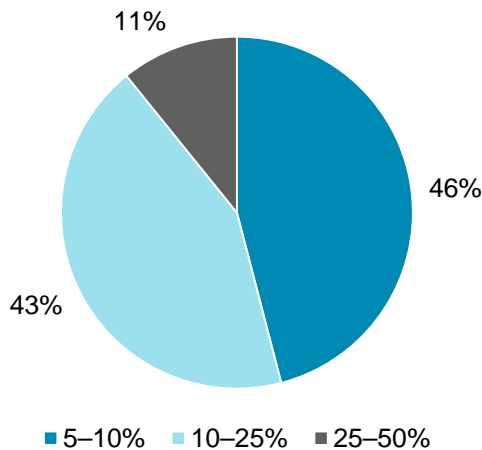
Aggregate margin levels

Reserve margins are more than double what participants feel is an appropriate level for Term, ULSG, IUL, and VUL

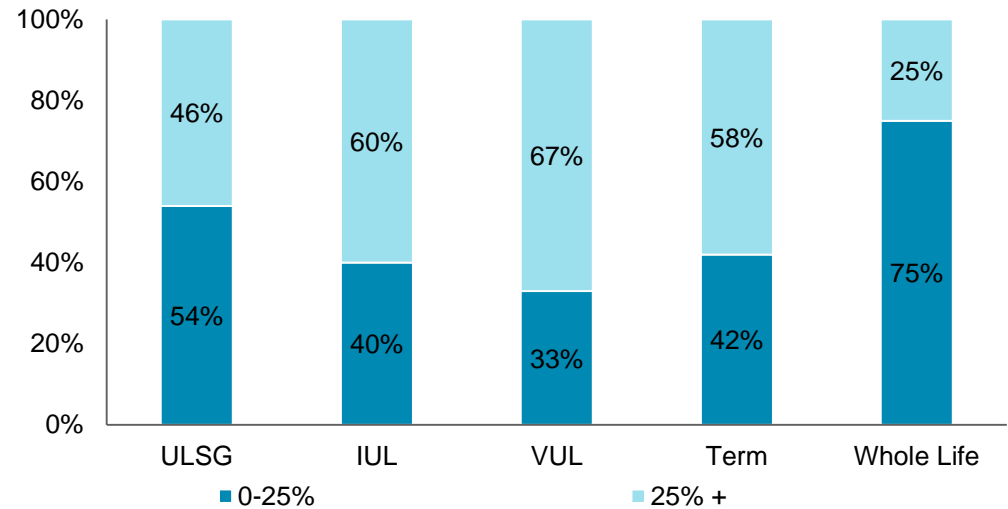
89%

of participants think an appropriate level of aggregate margin is less than 25%

Appropriate level of aggregate margin



Actual level of aggregate margin



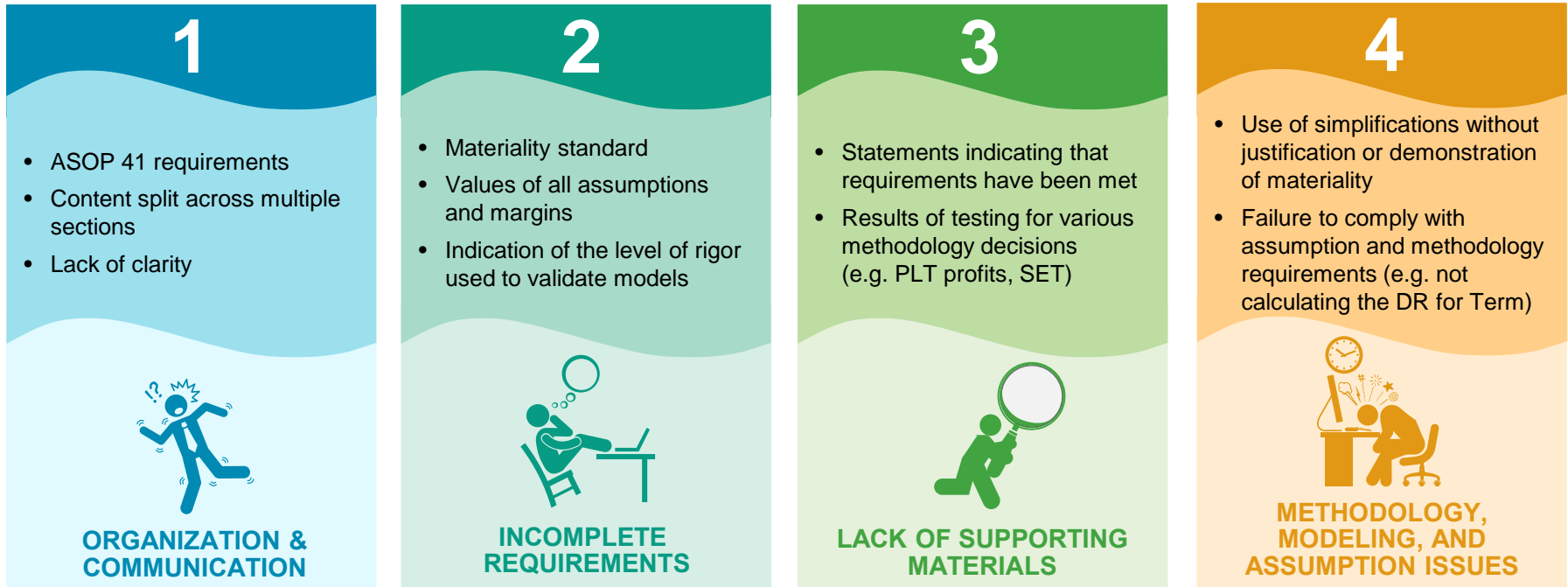
Note: ULSG includes IUL SG and VUL SG

Observed margins in excess of 25% are common across all product types



Lessons learned

The Valuation Analysis (E) Working Group released a report on observations and findings from 2017 PBR reporting split in four main categories



Link to full report:

www.naic.org/documents/cmte_e_valuation_analysis_wg_2017_pbr_review_report.pdf

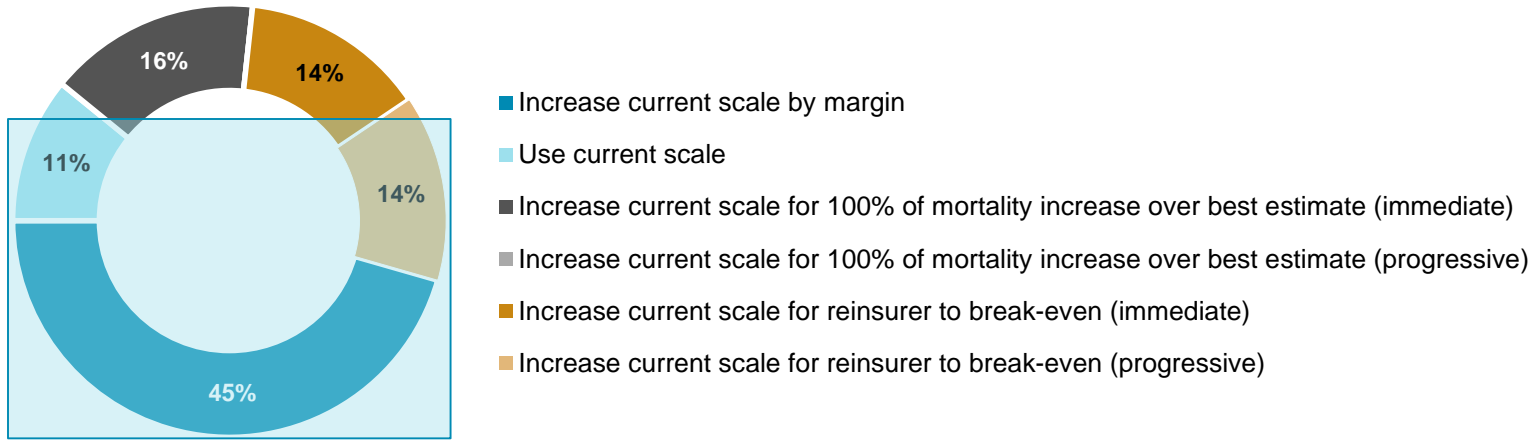


Reinsurance

PBR has necessitated robust modeling of reinsurance and may have an impact on reinsurance treaties

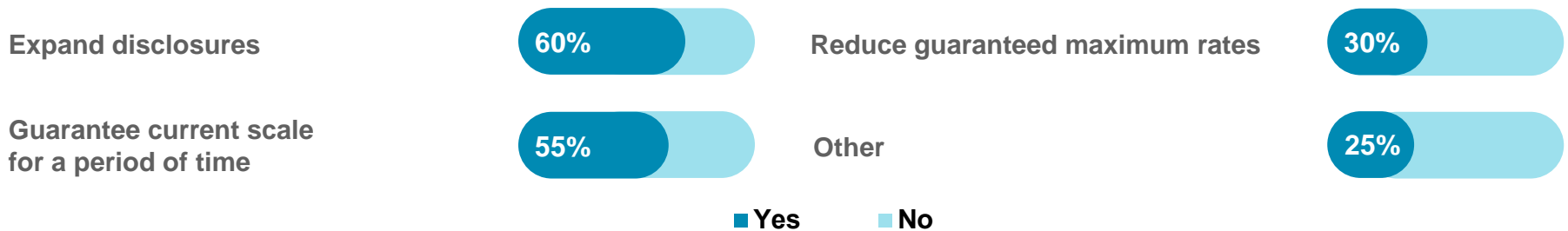
YRT modeling approach

Nearly three-quarters of companies are assuming less than 100% reaction to adverse mortality under PBR (shown in shaded range)



Potential changes to reinsurance arrangements

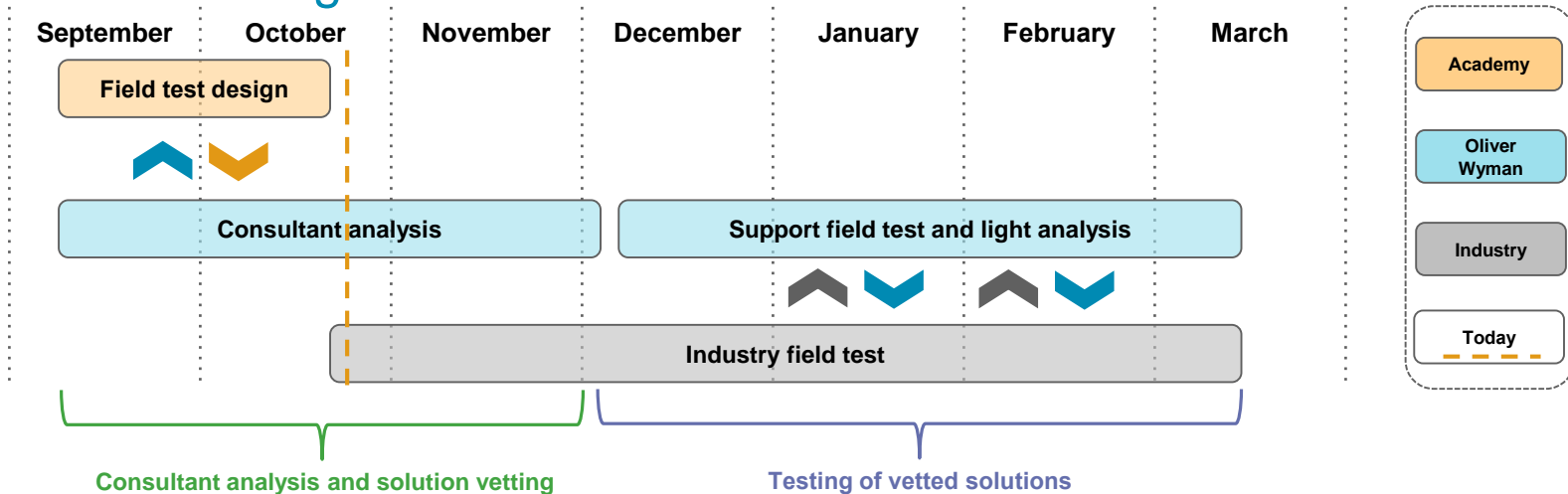
Close to a third of companies anticipate making changes to their reinsurance agreements because of PBR, with the prevalence of various changes summarized below (as a percent of those that anticipate making changes)





Reinsurance

Oliver Wyman is supporting a field test to inform a long-term solution on the treatment of non-guarantee reinsurance under PBR



Consultant analysis and solution vetting

- Field test participants will prepare their models for the field test while Oliver Wyman performs deep analysis across a range of products and reinsurer-action scenarios to provide regulators with representative results which inform the impacts from potential solutions on an apples-to-apples basis
- The industry field test will commence; initially the focus will be on model preparation and testing of simple solutions with a goal of identifying model challenges and testing the integrity and range variability in the results of Oliver Wyman’s analysis



Testing of vetted solutions

- Field test participants will produce results for the various solutions, while Oliver Wyman assists with the interpretation and collection of results. The results of this test will give regulators additional comfort with the Consultant analysis by extending the range of results for optionality and variation not previously captured.

The goal is to allow regulators to make a decision in time for inclusion in the 2021 Valuation Manual

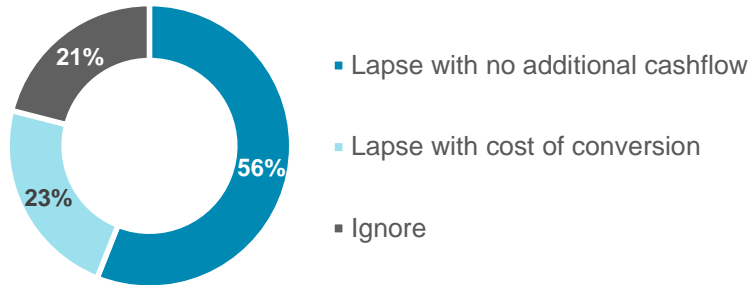


Conversions

A wide range of practice exists for the incorporation of conversion options into PBR

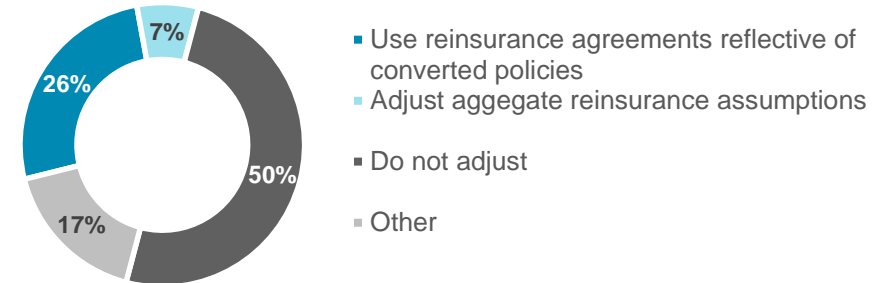
Methodology: Term reserves

Which of the following best describes your approach to recognizing Term conversions in your Term reserves (DR and if applicable, SR)?



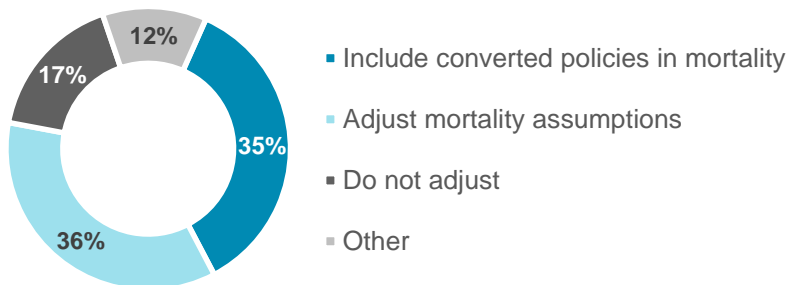
Methodology: Permanent reserves

Which of the following are you doing to reflect conversions in your permanent product reserves (DR and if applicable, SR)?



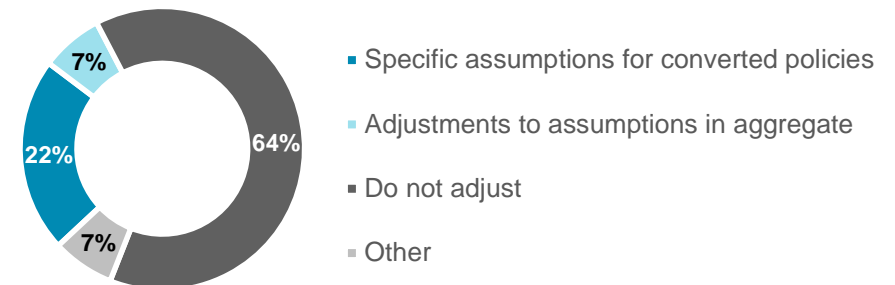
Assumptions: Mortality

How are conversions treated with respect to mortality?



Assumptions: Other updates for conversions

Are other adjustments made to assumptions to account for conversions?



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Social Q&A



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