81 - PBR Workshop - Life Insurance

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2019 Valuation Actuary Symposium

SESSION 81: PBR WORKSHOP – LIFE INSURANCE
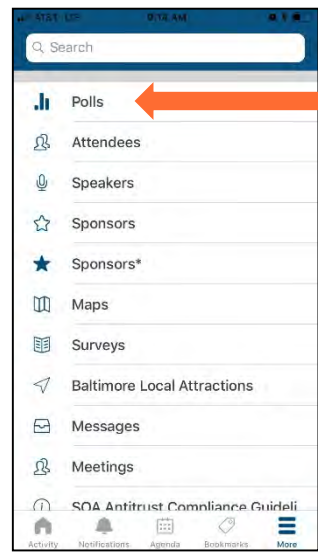
August 27, 2019

Paul Fedchak, FSA, MAAA
Carrie Lee Kelley, FSA, MAAA
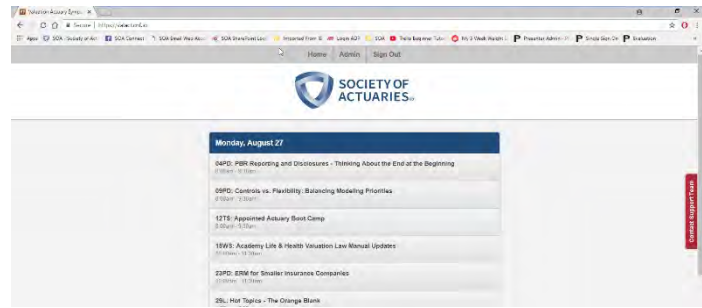**Yibo Yan, FSA, MAAA**

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Monday, August 27

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This is a workshop with audience polling and break-out discussions
Audience participation is encouraged

For each of the following topics we will provide a brief overview followed by polling questions and break-out discussion

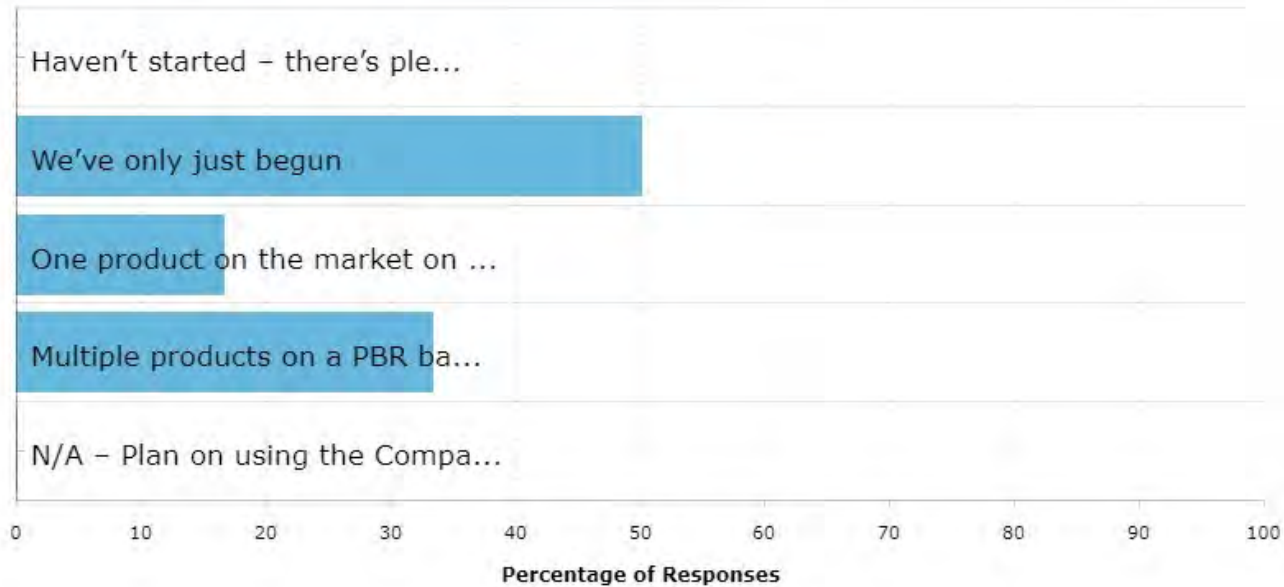| 1	Implementation
2	Assumptions
3	Modeling
4	Reinsurance

1 | Implementation

Polling question

What stage is your company at in their PBR implementation?

A. Haven't started – there's plenty of time
B. We've only just begun
C. One product on the market on a PBR basis
D. Multiple products on a PBR basis
E. N/A – Plan on using the Company Wide Exemption

# Poll: What stage is your company at in their PBR implementation?

Polling question

What is the biggest challenge facing your company when moving to PBR?

A. Implementation (Modeling or additional assumption governance)
B. Product Handoff (Consistency in pricing and valuation)
C. Resourcing / Capacity
D. Product design changes
E. No challenges!

# Poll: What is the biggest challenge facing your company when moving to PBR?
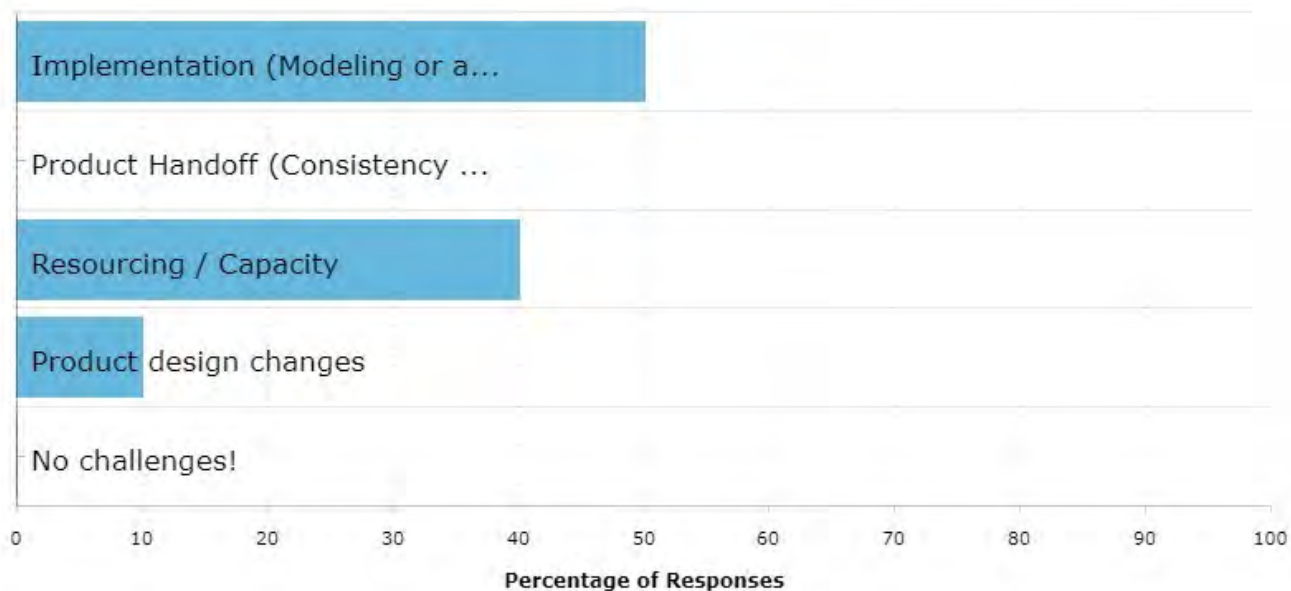
Polling question

How do you train your key personal on PBR?

A. Send them to PBR Boot Camp
B. Hold in-house training sessions/information sessions
C. Organize broadcast of PBR related Webcasts
D. Documentation/word of mouth

Poll: How do you train your key personal on PBR?

Horizontal bar chart showing percentage of responses:
- Send them to PBR Boot Camp — ~33%
- Hold in-house training sessio... — ~33%
- Organize broadcast of PBR rel... — ~17%
- Documentation/word of mouth — ~17%
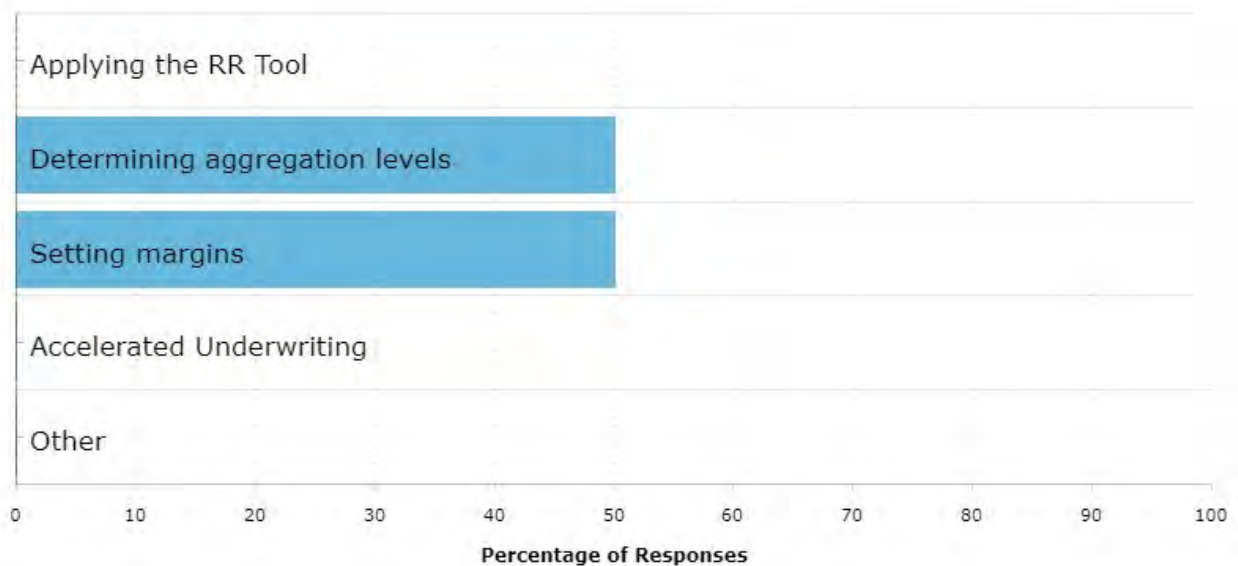
Percentage of Responses
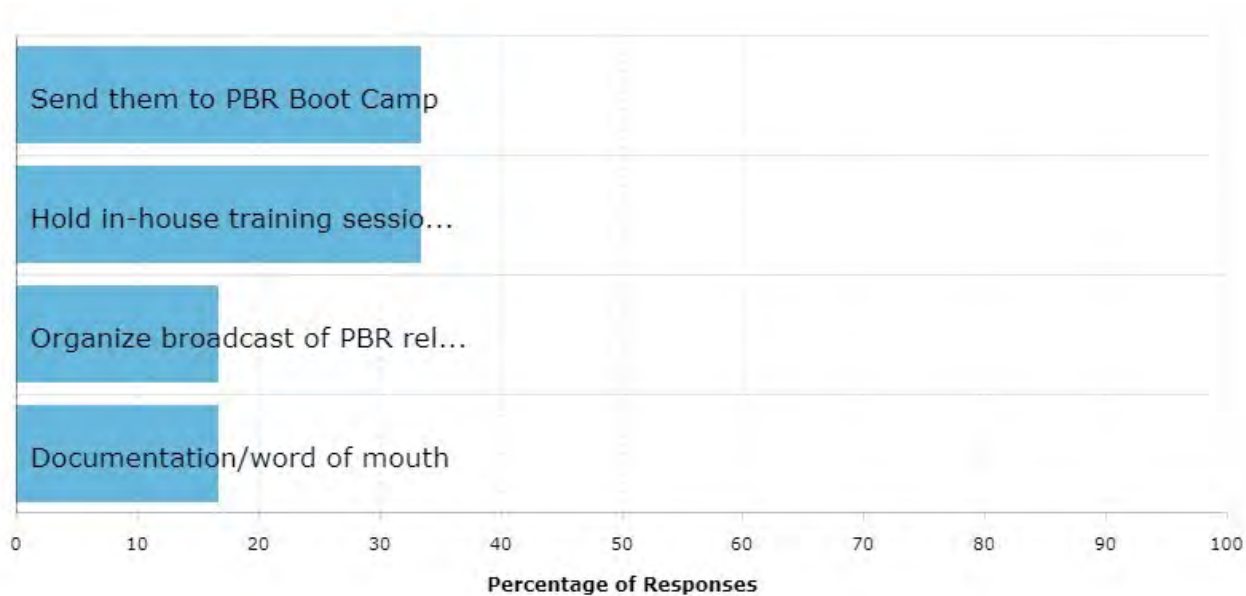
2 | Assumptions

Polling question

What is the most difficult aspect of VM-20 Assumption Setting?

A. Using real assets

B. What to do with reinsurance

C. Setting margins

D. Mortality – Using the RR tool and setting an assumption for accelerated underwriting

E. Other

Poll: What is the most difficult aspect of VM-20 Mortality Assumption Setting?

Polling question

What is the most difficult aspect of VM-20 *Mortality* Assumption Setting?

A. Applying the RR Tool

B. Determining aggregation levels

C. Setting margins

D. Accelerated Underwriting

E. Other

Poll: What is the most difficult aspect of VM-20 Mortality Assumption Setting?

Polling question

How do you apply mortality margins on second-to-die survival products?

A. Apply margins to both company and industry mortality, do the grading, then frasierized.

B. Apply margins to both company and industry mortality, frasierized, then do the grading

C. Frasierized both company and industry mortality, apply the margins, then do the grading

D. We do not plan to sell survival products

Poll: How do you apply mortality margins on second-to-die survival products?
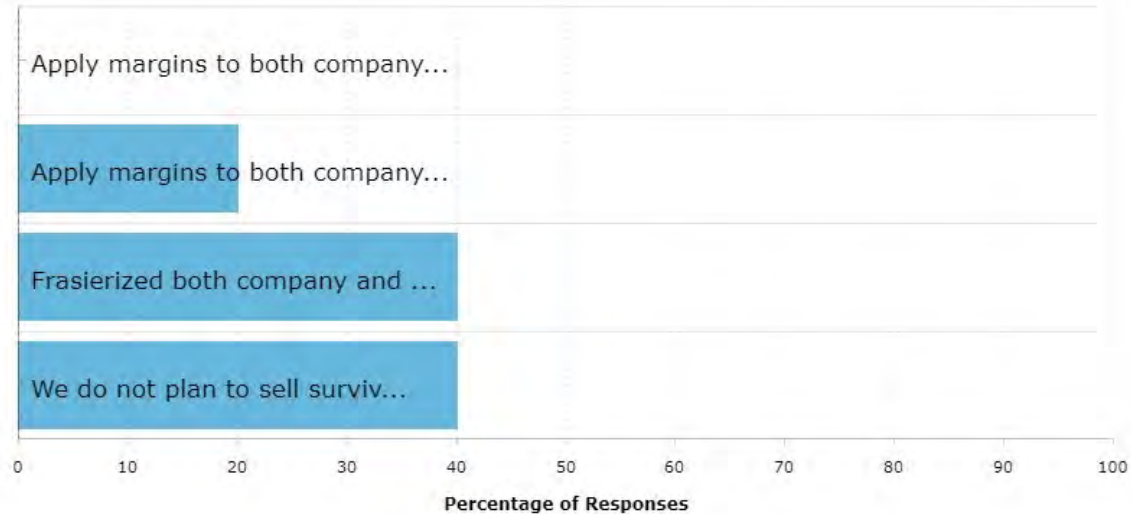
3 | Modeling & pricing

Polling question

What approach is your company using with respect to asset modeling in pricing for VM-20?

A. Modeling actual reinvestment strategy

B. Use an NIER vector generated by external model

C. Use simple asset return assumption vector

D. Haven't decided yet

E. Other

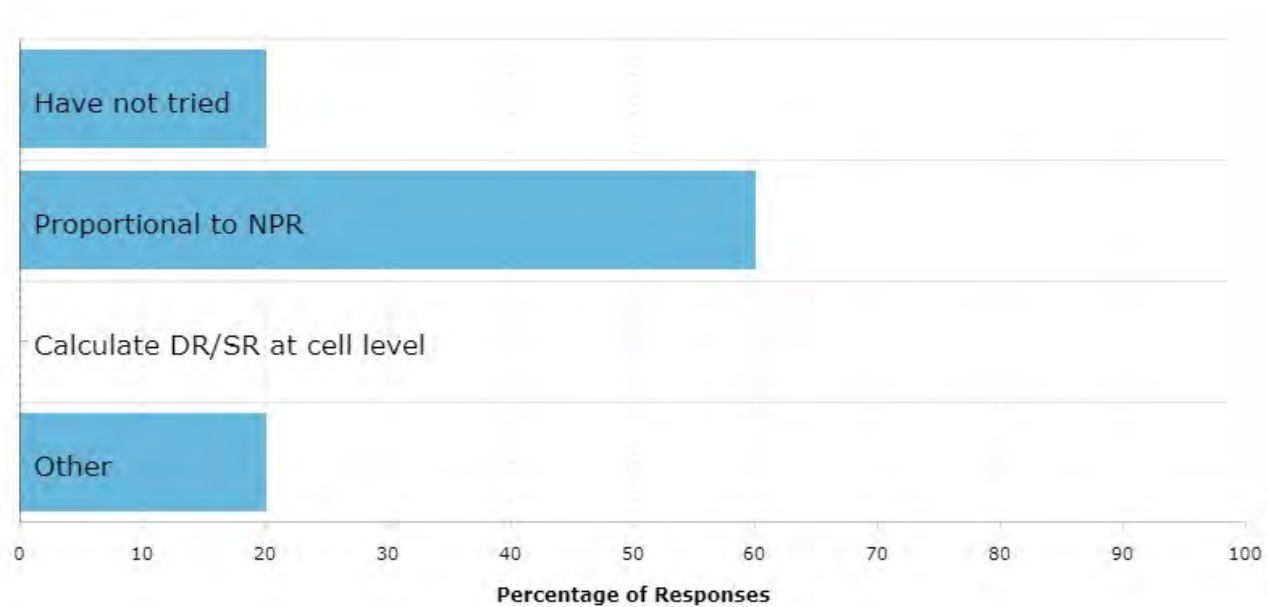# Poll: What approach is your company using with respect to asset modeling in pricing for VM-20?
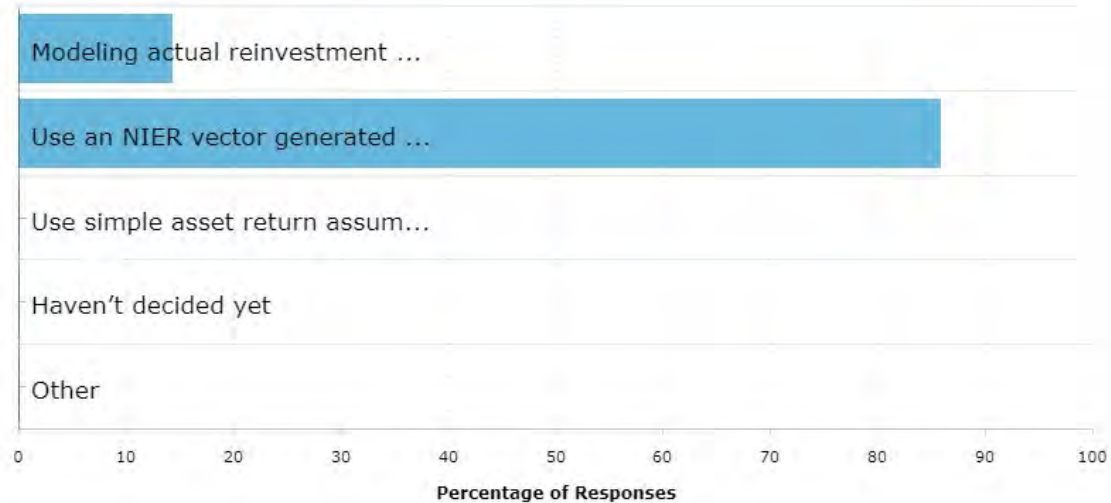
Polling question

How does your company allocate DR/SR to individual cells?

A. Have not tried
B. Proportional to NPR
C. Calculate DR/SR at cell level
D. Other

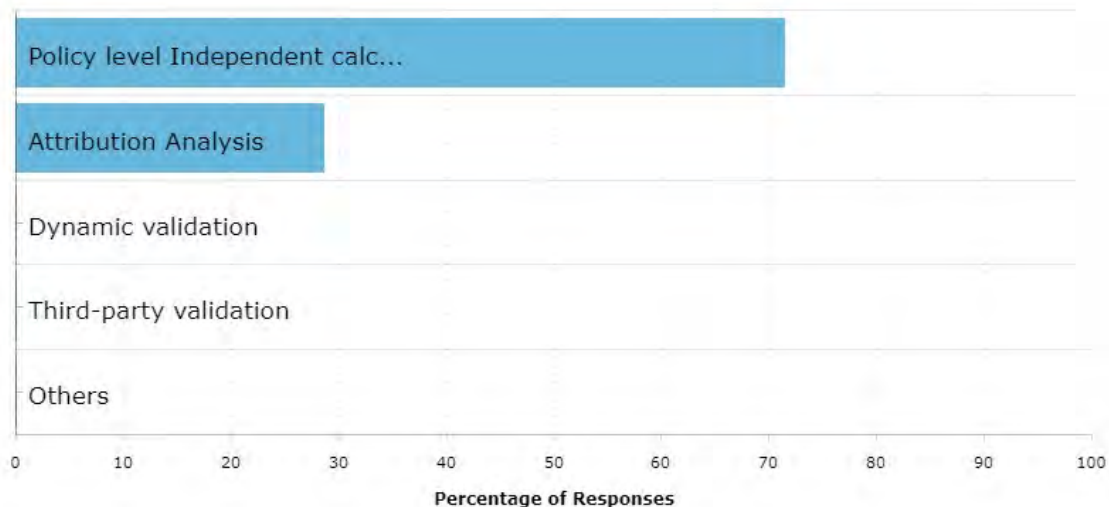# Poll: How does your company allocate DR/SR to individual cells?

Polling question

What types of model validation do you do or plan to do in the near future?

A. Policy level Independent calculation

B. Attribution Analysis

C. Dynamic validation

D. Third-party validation

E. Others

# Poll: What types of model validation do you do or plan to do in the near future?

Polling question

Are you planning to implement any simplifications, approximations and modeling efficiency techniques?

A.   Yes, cell crunching

B.   Yes, reduced scenario sets

C.   Yes, using inforce with a month/quarter lag

D.   No, I don't see run time being an issue

E.   No, but we will gain efficiency through other means

Poll: Are you planning to implement any simplifications, approximations and modeling efficiency techniques?
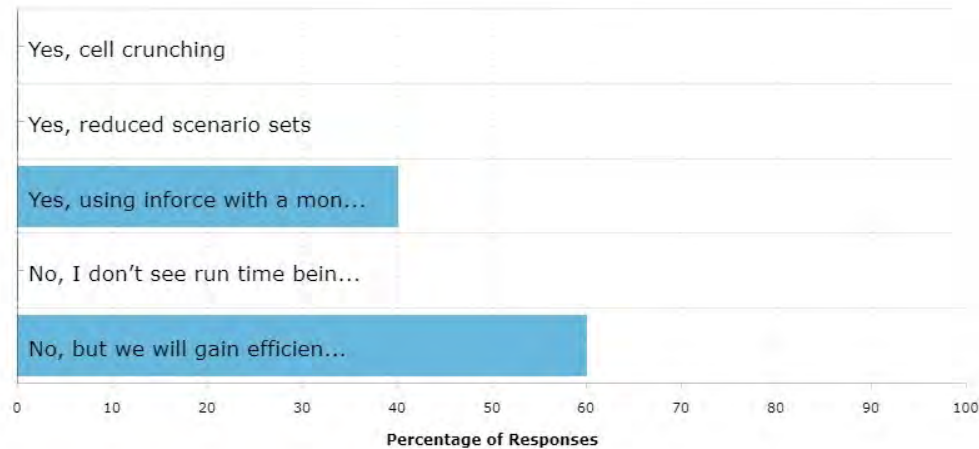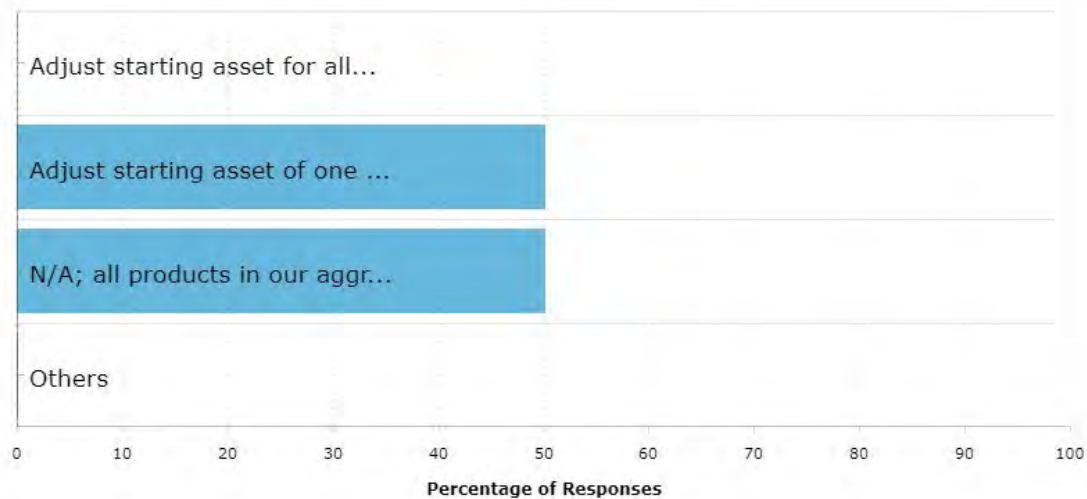
Polling question

When iterating to satisfy the 2% asset collar requirement, how do you set starting asset for multiple model segments in the same aggregation subgroup?

A.   Adjust starting asset for all model segments proportionally for each iteration

B.   Adjust starting asset of one model segment for each iteration

C.   N/A; all products in our aggregation subgroups are in the same model segments

D.   Others

Poll: When iterating to satisfy the 2% asset collar requirement, how do you set starting asset for multiple model segments in the same aggregation subgroup?
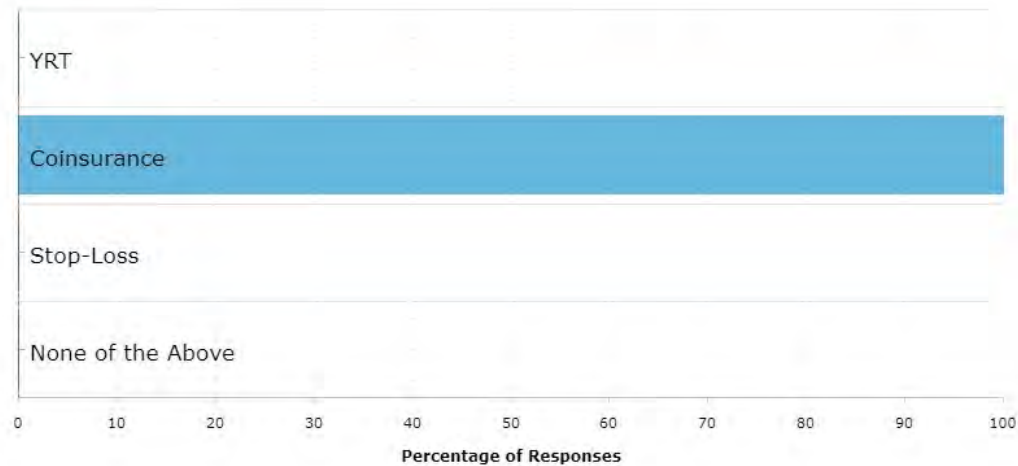
4 | Reinsurance

Polling question

What types of reinsurance has caused issues (implementation, modeling or assumptions) in your PBR analysis to date? Mark all that apply.

A.   YRT
B.   Coinsurance
C.   Stop-Loss
D.   None of the Above

Poll: What types of reinsurance has caused issues (implementation, modeling or assumptions) in your PBR analysis to date? Mark all that apply.

Workshop speakers

Paul Fedchak
FSA, MAAA

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(317) 524-3537

- Paul consults on life insurance and annuity products. He has been involved with universal life, with a focus on secondary guarantees, indexed universal life, and whole life. He has worked with these products in the contexts of product development and implementation, VM-20 modeling and implementation, AG 48 and assumption development. Paul also has robust experience with MG-ALFA modeling software.

- Paul is co-author of the SOA research report 'Impact of VM-20 on Life Insurance Product Development' and two of the SOA E-courses in the 'PBR Professional Development Series'.

- Paul is a former L&A Symposium Committee Chairperson, former Product Development Section Council member and an active SOA researcher, speaker, and article writer.

Carrie Kelley
FSA, MAAA

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(678) 684-0613

- Carrie joined Willis Towers Watson in 2012. Her primary areas of practice are individual life insurance, COLI/BOLI products and principles-based reserving. She has assisted clients across a range of M&A, embedded value, and financial modeling issues.

- Carrie has assisted her clients in implementing VM-20 for term, universal life with secondary guarantees, and whole life products. Her experience includes developing assumptions, models, and simplifications from both a valuation and pricing perspective.

- Carrie leads the firms VM-20 initiatives. She is a member of the Academy of Actuaries' Life Reserve Working Group and the Life PBA Practice Note Work Group. She is also a frequent speaker at SOA events on PBR related topics.

Yibo Yan
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- Yibo started at Nationwide Financial in 2010. His main area of practice is the Statutory, Tax and GAAP valuation of life insurance products, and is currently leading the valuation of Universal Life products including secondary guarantee, Indexed life as well as LTC combo products. Yibo also has experience in using PolySystems and MG-ALFA.

- Yibo was a core contributor to the initial design and implementation of VM20 framework at Nationwide Financial, and is currently leading the maintenance, enhancement as well as new product implementation on PBR.