Session 03PD: PBR Reporting and Disclosures –Thinking About the End at the Beginning

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Jo Beth Stephenson FSA,MAAA
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PBR Reporting and Disclosures - Introduction
Key considerations for PBR reporting

- Start preparations for PBR early, even if not planning to implement PBR until later in the 3-year transition period;
- Review disclosure requirements at the beginning of the PBR implementation planning process;
- Draw from experience in creating existing principles-based disclosures (e.g., AG43, Asset Adequacy Testing, etc.);
- Focus on clarity of communication and transparency of disclosures;
- Strike a balance between the level of detail and readability in the reporting and disclosures; and
- Consider the different perspectives and needs of key stakeholders (e.g., senior management, board, regulators, etc.).
VM-31 requirements summary

• The PBR Actuarial Report and associated Executive Summary are an annual reporting requirement

• They are prepared by one or more qualified actuaries and consist of one or more sub-reports, each sub-report covering a group of individual life policies comprised of one or more model segments

• The PBR Actuarial Report must include documentation and disclosure sufficient for another actuary qualified in the same practice area to evaluate the work

• PBR Actuarial Report submission requirements
  - Executive Summary required to be submitted to company’s domiciliary commissioner by April 1
  - PBR Actuarial Report submitted upon request to company’s domiciliary commissioner by April 1
  - PBR Actuarial Report and/or Executive Summary submitted upon request to commissioner of any other state in which the company is licensed
## VM-31 Executive Summary overview

<table>
<thead>
<tr>
<th>Sections</th>
<th>Content overview</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Qualified Actuary</td>
<td>• Identification and qualifications of qualified actuaries</td>
</tr>
<tr>
<td>2. Policies</td>
<td>• Description of policies covered</td>
</tr>
<tr>
<td>3. Life PBR Summary</td>
<td>• Summary of critical contents including: materiality, material risks, changes in reserve amounts, changes in methods and assets and risk management</td>
</tr>
<tr>
<td>4. Closing Section</td>
<td>• Signature, credentials and contact information for qualified actuaries</td>
</tr>
<tr>
<td>5. Supplement – Part 1</td>
<td>• Part 1 of the VM-20 Reserve Supplement from the annual statement blanks</td>
</tr>
<tr>
<td>6. Supplement – Part 2</td>
<td>• Part 2 of the VM-20 Reserve Supplement from the annual statement blanks</td>
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</tbody>
</table>
## VM-31 PBR Actuarial Report overview

<table>
<thead>
<tr>
<th>Sections</th>
<th>Content overview</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Assumptions and Margins</td>
<td>• Summary of valuation assumptions and margins</td>
</tr>
<tr>
<td>2. Cash-Flow Models</td>
<td>• Description of:</td>
</tr>
<tr>
<td></td>
<td>• Modeling system</td>
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<tr>
<td></td>
<td>• Segmentation</td>
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<td></td>
<td>• Validation</td>
</tr>
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<td></td>
<td>• Modeled v. historical experience</td>
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<tr>
<td>3. Mortality</td>
<td>• Detailed explanation of the mortality assumption, including:</td>
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<tr>
<td></td>
<td>• Development</td>
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<tr>
<td></td>
<td>• Segments for company experience</td>
</tr>
<tr>
<td></td>
<td>• Grading process</td>
</tr>
<tr>
<td></td>
<td>• Industry basic table used for each segment</td>
</tr>
</tbody>
</table>
VM-31 PBR Actuarial Report overview

<table>
<thead>
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<th>Sections</th>
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<tbody>
<tr>
<td>4. Policyholder behavior</td>
<td>• Description of data sources for policyholder behavior assumptions</td>
</tr>
<tr>
<td></td>
<td>• Interaction of policyholder behavior assumptions with Non-Guaranteed Elements (NGEs)</td>
</tr>
<tr>
<td>5. Expenses</td>
<td>• Description of the expense allocation methodology</td>
</tr>
<tr>
<td></td>
<td>• Development of margins</td>
</tr>
<tr>
<td>6. Assets</td>
<td>• Asset modeling assumptions and margins</td>
</tr>
<tr>
<td></td>
<td>• Additional explanation if starting assets do not fall within 2% of the final aggregate minimum reserve</td>
</tr>
<tr>
<td>7. Revenue Sharing Assumptions</td>
<td>• Description of the revenue sharing agreements and income used in projections</td>
</tr>
</tbody>
</table>
## VM-31 PBR Actuarial Report overview

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<tr>
<th>Sections</th>
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</tr>
</thead>
</table>
| 8. Reinsurance                  | • Description of reinsurance agreements  
• Assumptions used to determine the cash flows included in the model                                                                              |
| 9. Non-Guaranteed Elements      | • Description of modeling approach  
• Documentation of margins  
• Comparison of projected NGEs to experience assumptions                                                                                     |
| 10. Exclusion Tests             | • Rationale explaining product groupings used  
• Summary of results of exclusion tests  
• Support for exclusion test methodology used                                                                                                    |
| 11. Additional Information     | • Impact of individual margins for each risk factor  
• Aggregate impact of all margins on deterministic reserves for each segment  
• Documentation of approximations/simplifications                                                                                               |
## VM-31 PBR Actuarial Report overview

<table>
<thead>
<tr>
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</tr>
</thead>
</table>
| 12. Reliance Descriptions and Statements | • Description of where the qualified actuary relied on others for data, assumptions, projections, analysis, etc.  
• Reliance statements from each individual on whom the qualified actuary relied |
| 13. Certifications | • Certifications from contributors to the PBR Actuarial Report and senior management |
| 14. Closing Paragraph | • Signature, credentials and contact information for qualified actuaries |
2017 Valuation Actuary Symposium

John W. Robinson, FSA, FCA, MAAA

PBR Reporting – One Regulator’s Perspective

August 28, 2017
2017 Valuation Actuary Symposium

James Collingwood – EY
John Robinson – MN Department of Commerce
Jo Beth Stephenson – USAA

Session 3: PBR Reporting and Disclosures – Thinking About the End at the Beginning

August 28, 2017
PBR Reporting – A Company Perspective
Start planning and writing early!

- System preparation
- Timing
- Assumptions
- Coordination
- Writing the report
System preparation-
Runs you may need to do

• Exclusion tests, deterministic reserve, stochastic reserve
  • Reinsurance

• Margin impact – deterministic reserve
  • Anticipated Experience Assumption vs Prudent Estimate Assumption
  • Individual impacts
  • Aggregate impact

• Aggregation impact – stochastic reserve
System preparation –
How to set up data processes, models and reporting

Prepare inputs
- PBR Assumptions
- Asset Data
- Policy Data

Set up PBR model
- Multiple runs likely needed
- Different runs will require different assumptions
- Determine number of stochastic runs needed

Outputs
- Develop automated reports
- Review Annual Statement blanks as well as VM-31
- Determine what to save and where to save it
Timing

• Determine timing of calculations
  • VM-20 allows the deterministic and stochastic reserves to be calculated with as of date no earlier than three months before valuation date
  • VM-31 requires an explanation in the PBR report of why the use of such date will not produce a material change in results

• Use quarterly reporting to prepare for year-end
  • Improve readiness of modeling and reporting systems
  • Determine DR and SR adjustment method if necessary
Assumptions

• Much of VM-31 is dedicated to assumption-related disclosures
  • Leverage assumption development work
• Margin determination
• Sensitivity testing
Coordination

• VM-31 can require coordination with many areas within the Company
  • Asset information – what is needed and who will provide?
  • Assumption data
  • Liability data

• PBR Report Certifications require signatures of officers
  • Investment officer
  • Senior management
# Coordination

<table>
<thead>
<tr>
<th>Party</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appointed Actuary</td>
<td>Opine on overall adequacy of reserves</td>
</tr>
<tr>
<td>Qualified Actuary</td>
<td>VM-G responsibilities&lt;br&gt;Prepare PBR Report&lt;br&gt;Certify to modeling of clearly defined hedging strategies</td>
</tr>
<tr>
<td>Chief Investment Officer</td>
<td>Certify modeled investment strategy is consistent with actual investment strategy</td>
</tr>
<tr>
<td>Senior Management</td>
<td>VM-G responsibilities&lt;br&gt;Certify principle-based valuation is VM-G compliant</td>
</tr>
<tr>
<td>Board of Directors</td>
<td>VM-G responsibilities</td>
</tr>
<tr>
<td>Other Actuaries</td>
<td>Participate in assumption development, etc</td>
</tr>
<tr>
<td>Accountants</td>
<td>Should be aware of changes in reporting requirements, impact of PBR</td>
</tr>
</tbody>
</table>
Writing the report

• Start writing a draft early (before year-end)

• Leverage other reports when possible

• Organize what has to be done

• Determine level of detail needed
Conclusion

• Don’t wait until January to get started!
• Prepare systems to make sure you can get all the values you need to report.
• Determine as-of date for deterministic and stochastic valuations.
• Leverage assumption development in writing your report.
• Coordinate and inform.
Definition of PBR
Agenda

1. The PBR Pilot
2. Four Areas of Concern
3. Future developments in VM
4. Closing comments
Chapter 1. The PBR Pilot

The Project Plan:

Companies volunteer to calculate reserves per VM-20, construct report per VM-31. Regulators review reports in detail, critique both the content provided by the companies and VM-20 / VM-31 guidance.
Pilot...

The Response:
11 companies participated. 10 valued term, 7 valued ULSG.

Observations from the pilot:
1. All companies constructed VM-31 report in the order in which the guidance is provided.
2. Negative deterministic reserve (DR) is possible. Can be attributable to either (a) gross premium sufficiency; or (b) inappropriate assumptions.
3. Pre-reinsurance DR can be less than post-reinsurance DR.
4. Significant variation in approach used to set mortality assumption. More specific guidance may be needed.
5. VM-31 report: overlap between overview and main report.
Pilot...

Pilot was of great value to regulators.

All participating companies stated that the pilot was worthwhile.

Company-regulator communication during pilot:
1. After initial review, regulators asked further clarifying questions.  
   For me, eight actuaries on the line.
2. Most companies did a thorough job; a few companies admitted they did not “put their best foot forward”.

Regulators have formed the “VM Review Drafting Group” consisting of NAIC Staff, regulators, industry representatives and Academy volunteers.
Chapter 2. Four Areas of Concern

Introduction

Says it applies to VM-20. (Then why references to VM-21??)

The VM is a marvelous piece of work, combining the extraordinary talents of several groups of actuaries over several years.
Do you find the VM-20 guidance on constructing the mortality assumption clear as a bell?

1. Yes
2. No
Have you participated in the construction of your company’s experience mortality table?

1. Yes
2. No
Area 1. Construction of the mortality assumption for DR and SR. HUGE!

Three steps: determine anticipated experience, apply margins, blend to industry table.

Section 3.D.3.a: “Description of each mortality segment...”

3 different approaches from pilot:
(i) Company 1 defined Segment: “band, u/w class, level term period, gender, issue age, select and ultimate period”.

(ii) Company 2 defined Segment: “preferred, preferred plus, preferred ultra, standard, standard plus”.

(iii) Company 3 defined Segment: “UL, Prime Term...”
...and Subsegment: “sex, age, risk class, u/w basis, distribution channel”.
Area 1....

My concern: There are two levels of decision-making (eg. credibility): aggregate, mortality segment. What they are needs to be made clearer.

My view:
Aggregate = underwriting regime (examples: full, accelerated, simplified)
and
Mortality segment = underwriting class (example: super preferred, preferred, standard, residual)
Area 2. Amount of Starting Assets

VM-20, Section 7, “Cash-Flow Models”, covers both DR and SR.

Section 7.D.1:
“…select starting assets such that the aggregate annual statement value of the assets at the projection start date equals the estimated value of the modeled reserve plus the PIMR balance at the projection start date…”

Section 7.D.2:
“If for all model segments combined, the aggregate annual statement value of starting assets is less than 98% or greater than the larger of NPR or 102% of the final modeled reserve, the company shall provide documentation... that the modeled reserve is not materially understated as a result of the amount of starting assets.”

“modeled reserve” = max(DR, SR)
VM-31, Section 3.D.6.i:
If for all model segments combined, the annual aggregate statement value of starting assets is less than 98% or greater than 102% of the final aggregate minimum reserve, *documentation that supports the conclusion that the minimum reserve is not materially understated...*
Area 2...

1. Question: What documentation can prove that?
   
   My answer: May need to re-run.

2. Demonstrate that you have met the requirement (as you interpret it) even if not requested.

<table>
<thead>
<tr>
<th>Starting Assets</th>
<th>Modeled Reserve</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
Area 3: Investment strategy used

Section 3.D.6: “The following information regarding the asset assumptions used ... in determining principle-based reserves...:”

“Principle-based reserves” = DR or SR.

Section 3.D.6.p:

“*Documentation that the model investment strategy does not produce a modeled reserve less than* [what] *would result by assuming... 50% PBR credit rating of 6 ("A2/A") and 50% PBR credit rating of 9 ("Aa2/AA").”
Area 3....

Question: What documentation can prove that?

My answer: Use the specified mix, or a mix that is qualitatively more conservative.
Area 4: ULSG Sensitivities

Section 3.D.4: “…information regarding each policyholder behavior assumption used... in determining principle-based reserves:”


My concern: Unless this helps determine reserve, not clear how helpful this exercise is.
Chapter 3: Future Developments in VM

For YE 2017, applicable edition is:
Valuation Manual Adopted 8/29/16 with Non-substantive changes through 12/31/16
http://www.naic.org/documents/cmte_a_latf_related_val_adopted_160829_with_changes.pdf

For YE 2018, expect significant changes to the VM as a whole.
   Revised VM-31. Executive Summary and main report. Expect to provide both.
   Corrections, clarifications and revisions.
   Remove VM-05.
   Glossary covering the entire manual.
   Standardize format throughout, such as Chapter, Part, Section, Subsection. (JWL)
   Rationalize reporting guidance (VM20, VM-21).

Longer term: guidance for mortality unlocking in VM-20, AG43/VM-21 revisions and VM-22.
Chapter 4: Closing Comments

Remember the following sections from ASOP 41:

(a) Section 3.2 (partial):

“...the actuarial report, the actuary should state the actuarial findings, and identify the methods, procedures, assumptions, and data used by the actuary with sufficient clarity that another actuary qualified in the same practice area could make an objective appraisal of the reasonableness of the actuary’s work as presented in the actuarial report.”

(b) Section 3.1.1:

“Form and Content—The actuary should take appropriate steps to ensure that the form and content of each actuarial communication are appropriate to the particular circumstances, taking into account the intended users.”

(c) Section 3.1.2

“Clarity—The actuary should take appropriate steps to ensure that each actuarial communication is clear and uses language appropriate to the particular circumstances, taking into account the intended users.”

The regulator is that other qualified actuary and an intended user.
THE END