AMERICAN ACADEMY *of* ACTUARIES

July 16, 2012

Julie Mix McPeak, Chair
Life Insurance and Annuities (A) Committee
National Association of Insurance Commissioners

Mike Boerner, Chair
Life Actuarial (A) Task Force
National Association of Insurance Commissioners

Dear Ms. McPeak and Mr. Boerner:

The following letters provide comments from the American Academy of Actuaries[1] regarding two different elements of the PBR implementation process.

The first is from the Academy's Life Financial Soundness/Risk Management Committee and outlines suggested changes to section VM-20 of the Valuation Manual. Some are recommendations for immediate consideration, some will need to be dealt with after adoption of the manual, and still others will require extensive long-term discussion and analysis.

The second letter is from the Academy Life Practice Council and outlines the necessity for a process that is capable of facilitating ongoing review, assessment, and improvement of the valuation manual. We include a proposal for completing this goal but absolutely acknowledge that there may be other ways to affectively implement such a review process.

Please feel free to contact John Meetz, the Academy's life policy analyst (meetz@actuary.org; 202/223-8196) if you have any questions.

Sincerely,

Cande Olsen
Vice President
Life Practice Council

Dave Neve
Chairperson
Life Financial Soundness/Risk Management Committee

cc: Commissioner Kevin McCarty, Commissioner Susan Voss

[1] The American Academy of Actuaries is a 17,000-member professional association whose mission is to serve the public and the U.S. actuarial profession. The Academy assists public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

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July 16, 2012

Mike Boerner, Chair
Life Actuarial (A) Task Force
National Association of Insurance Commissioners

Dear Mr. Boerner:

The American Academy of Actuaries'[1] Life Financial Soundness / Risk Management Committee (LFS/RMC) appreciates the opportunity to comment on the draft NAIC Valuation Manual (VM). We acknowledge the immense effort by the National Association of Insurance Commissioners (NAIC) to get to this significant milestone in the development and implementation of principle-based methods for statutory life reserves.

This comment letter provides comments on Section VM-20. Below are the changes we recommend be incorporated in VM-20, in priority order, broken down into three categories:

1. Changes to be in the draft prior to LATF adoption.

2. Changes to be addressed in the months immediately following NAIC adoption that we don't believe will involve a lot of additional discussion and/or analysis.

3. Changes that are more fundamental in nature that may involve additional extensive discussion and analysis.

<u>Changes to be in the draft prior to LATF adoption</u>

1. Prescribed pattern and slope to grade company experience mortality rates to an industry table.

One of the major observations of the NAIC on its PBR Impact Study was the need to modify the approach to determine the mortality assumption. The approach was viewed as being overly complex, difficult to understand, and one that contributed to an excessive level of conservatism in the reserve. In particular, the process to blend current company mortality experience with an applicable industry table utilizing credibility theory generally was viewed as overly complex and very confusing. In light of these concerns, both the Academy LPC groups and the New York State Department of Financial Services (NYSDFS) submitted proposals to simplify the methodology.

LATF requested that the LPC and the NYSDFS work together to develop a proposal to simplify the mortality assumption methodology. Over the course of many phone

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meetings, the Academy Mortality Subgroup and NYSDFS developed an approach to grade company mortality experience to an applicable industry table over a prescribed period of time, based on the period of time that the company's experience was deemed to be sufficient, and the level of credibility of the experience data over the exposure period of the mortality study.

This approach limits the length of time that a company can reflect company experience, based on a defined "sufficient data period" that is determined based on a minimum number of claims within each duration of the study. The minimum number of claims to determine the sufficient data period was determined using an analysis of the number of claims by duration from the data that was submitted by companies to develop the new 2014 VBT table. The goal was to determine a minimum number of claims that produced a reasonable number of companies that would be able to utilize a reasonable length of the sufficient data period, while maintaining some level of conservatism.

The length of time a company can use its own experience was based on the premise that a company with 100% credibility to its data should be able to use its own experience without grading to an industry table. This premise is consistent with the initial principle-based approach presented by the Academy's subgroup to set the mortality assumption. While there are many companies in the industry that do not have fully credible data for an extended number of durations, there are also many that do have sufficiently credible data for both the select period as well as the ultimate period, especially when measured on a more aggregate level, such as non-smoker and smoker.

Thus, for a company with high credibility (80-100%), we believe 50 years is an appropriate and conservative limit on the maximum length of the sufficient data period. For companies with less than 80% credibility, grading the maximum limit down to only 10 years for a company with low credibility is an appropriate approach.

In addition, the length of time between when a company must begin grading from its own experience to the time it must be fully graded into the applicable industry table was chosen to ensure a smooth transition from one table to the next and to result in a reasonable slope in mortality.

This approach was initially submitted to LATF in February of 2012, and went through several revisions, based on LATF input and further analysis of the data submitted for the 2014 VBT table. The end result was a final proposal submitted to LATF on June 19, which is shown below:

(1)	(2)	(3)	(4)
Credibility of company data over sufficient data period	**Maximum # of years for data to be considered sufficient**	**Maximum # of years in which to begin grading after sufficient data no longer exists**	**Maximum # of years in which the assumption must grade to 100% of an applicable industry table (from the duration where sufficient data no longer exists)**
0-19%	**10**	**2**	**10**
20-39%	**20**	**4**	**15**

40-59%	**30**	**6**	**18**
60-79%	**40**	**8**	**20**
80-100%	**50**	**10**	**25**

However, on the 6/19 LATF conference meeting, a significant change was made by LATF to reduce the limit on the maximum permitted length of the sufficient data period, and to reduce the length of time to grade to the industry table, largely based on the premise that the approach was not based on sound credibility theory. We believe these changes go too far to dampen the impact of company experience, which is one of the primary objectives of a principle-based system. In addition, the shortened time period that was adopted to grade to the industry table can result in an extremely steep and unreasonable slope, especially for companies with near or full credibility to their experience data.

We acknowledge that the process used to define a "sufficient data period" by defining a minimum number of claims within each duration is more based on a practical solution to simplify the process, rather than being rooted in credibility theory. But that was the charge given to us by LATF. The original process of following a more precise actuarial credibility approach was deemed to be too complicated (as a result of the NAIC impact study), so LATF asked the Academy and the NYSDFS to hammer out a practical compromise. That was done, and we believe the current approach in the exposure draft is too conservative and has drifted too far from a "pure" principle-based approach. We believe it will not resolve one of the initial objectives of "right-sizing" the implicit margin due to grading into the applicable industry table, especially for companies with credible experience.

So we respectfully recommend that VM-20 be modified to reinstate the above table that was submitted to LATF for the 6/19 call.

2. Prescribed margins applied to the company experience rates.

The mortality proposal submitted to LATF for their 6/19 call included an approach to determine mortality margins by prescribing two sets of margin percentages, one that is applied to company experience rates that vary by credibility, and the other is applied to the applicable industry table. Developing margins that vary by credibility was a specific request of LATF.

The recommended margin percentages for the company experience rates that vary by credibility were developed referencing the 1998 paper "A Credibility Approach to Mortality Risk" by Hardy and Panjer that was based on Canadian data. This same approach could be followed using the same U.S. industry data used to create the 2014 VBT tables to make it more relevant to PBR in the US. The basic approach uses the notion that the standard error is related to 1/Z where Z is the credibility level. The factors to determine the percentages by credibility came from relating the standard error estimates in table 1 on page 277 of the paper to 1 divided by the credibility level. As stated in the paper the results are consistent with the Canadian margins of 3.75-15 divided by life expectancy but the incidence by duration is different. (Note that the range in the paper for margins was from 4% to 12% and the credibility ranged from .94 to .29)

Our recommendation is definitely consistent with this range. This is a rough, preliminary estimate, and we recommend that a more thorough analysis be done to update these factors as part of the development of the 2014 VBT tables before VM-20 becomes effective.

The recommended table of margin percentages is as follows:

	Credibility Level				
att age	0-19%	20-39%	40-59%	60-79%	80-100%
<45	21%	13.7%	8.4%	6.3%	5.3%
46-47	20%	13.0%	8.0%	6.0%	5.0%
48-49	19%	12.4%	7.6%	5.7%	4.8%
50-51	18%	11.7%	7.2%	5.4%	4.5%
52-53	17%	11.1%	6.8%	5.1%	4.3%
54-55	16%	10.4%	6.4%	4.8%	4.0%
56-57	15%	9.8%	6.0%	4.5%	3.8%
58-59	14%	9.1%	5.6%	4.2%	3.5%
60-61	13%	8.5%	5.2%	3.9%	3.3%
62-63	12%	7.8%	4.8%	3.6%	3.0%
64-68	11%	7.2%	4.4%	3.3%	2.8%
69-76	10%	6.5%	4.0%	3.0%	2.5%
77+	9%	5.9%	3.6%	2.7%	2.3%

However, during the 6/19 LATF teleconference meeting, a change was made to put in place a floor at 5%. The reason articulated for the change is that a 5% margin is the lowest margin that is typically submitted by companies for cash flow testing assumptions in the state of New York. However, cash flow testing is a “pass/fail” type of analysis where the additional work of determining specific margins by level of credibility and/or age isn’t warranted. The above table has margins well in excess of 5% for some cells, and below 5% for others, reflecting the need for different margin levels depending on the credibility level and age (the higher the credibility level and the higher the age, there are more claims upon which to base the mortality assumption leading to a lower need for margins). As explained above, the percentages above are consistent with the results of the Hardy/Panjer paper.

We disagree with imposing a 5% floor, and respectfully recommend that LATF reinstate the above table in VM-20.

Changes to be addressed in the months immediately following LATF adoption (by the end of 2012).

1. Permit an aggregate margin approach rather than requiring a margin for each assumption.

2. Expand the 98% - 102% collar on starting assets.

3. Eliminate the prescribed use of the Canadian lapse table under certain conditions for ULSG products.

Changes that are more fundamental in nature that may involve extensive discussion and analysis (within 1-2 years).

1. Modify the prescribed default costs methodology.

2. Modify the prescribed methodology to determine spreads on reinvestment.

3. Permit the option in VM-20 to use a company's own stochastic generator.

4. Change the use of the Greatest Present Value of Accumulated Deficiencies (GPVAD) approach to a Gross Premium Reserve approach as the basis for the stochastic reserve calculation.

5. Eliminate the requirement that current risk transfer rules be followed.

6. Modify the "haircuts" on revenue sharing.

The LFS/RMC welcomes the opportunity to assist LATF and the NAIC in addressing these recommended changes.

Please feel free to contact John Meetz, the Academy's life policy analyst (meetz@actuary.org; 202/223-8196) if you have any questions.

Sincerely,

David E. Neve, Chairperson
Life Financial Soundness / Risk Management Committee
American Academy of Actuaries

LFS/RMC Members

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Nancy Bennett	Kerry Krantz
Peter Bondy	Patricia Matson
Larry Bruning	Arthur Panighetti
Thomas Campbell	Martin Snow
Gary Falde	William Wilton

CC: Commissioner Julie McPeak, Commissioner Kevin McCarty, Commissioner Susan Voss.

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Commissioner Julie Mix McPeak
Chair, Life Insurance and Annuities (A) Committee
National Association of Insurance Commissioners

Mike Boerner, Chair
Life Actuarial (A) Task Force
National Association of Insurance Commissioners

Dear Commissioner McPeak and Mr. Boerner:

The American Academy of Actuaries'[1] Life Practice Council (LPC) appreciates the opportunity to comment on the draft NAIC Valuation Manual (VM) and revisions to the Standard Valuation Law (SVL). We recognize the immense effort by the NAIC and all interested parties to get to this significant milestone in developing and implementing principle-based methods for statutory life reserves.

The LPC, along with many of its committees and work groups, has been at the forefront of this multi-year effort to develop a revolutionary new principle-based approach to the SVL and subsequently its companion VM, from its initiation through this latest draft of the VM. The revised SVL and the VM represent a major paradigm shift from the current formulaic statutory reserve requirements for life insurance toward a complete model-based and experience-based reserve framework. The work to develop the current framework has been a challenging and lengthy process, and, while the process to complete it appears near at hand, there is yet more to be done before the work is complete. It is critical to the success of these reforms that there be a process in place to continue to review and assess the reasonableness of the framework and the resulting reserves. It would not be prudent or responsible to adopt a principle-based reserve (PBR) methodology without also creating and maintaining a process to ensure its continued review, assessment, and improvement.

With the experience and expertise of our committee and work group members we have a unique perspective on many of the technical and non-technical aspects of principle-based reserves and proposed framework. As a result, in addition to working with the Life Actuarial Task Force (LATF) on the technical aspects of this framework, our involvement includes both education and active and visible efforts in support of the framework provided to the following audiences: the actuarial profession, regulators, NAIC staff, and state legislators, the last of these through the National Conference of Insurance Legislators (NCOIL).

In the development of the PBR framework, there has been some considerable discussion amongst and debate between the LPC and NAIC groups, LATF in particular, involving key issues. Certain prescriptive and limiting elements have been introduced into the VM that the LPC does not support; although, we acknowledge that the perspective of the regulators may be different from that of the LPC.

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At the end of this letter is a list of some of the provisions underlying these elements, provided as examples of our concerns.

We have noted publicly over the past few years that the desire to add many of these prescriptive and limiting elements apparently stems from potential regulatory discomfort with the model-based paradigm that is the basis of PBR and the degree to which the approaches and assumptions to be used differ from current requirements. We understand those concerns and agree that care must be taken in transitioning to a PBR framework. However, the LPC believes that many of these prescriptive and limiting elements add significant, unnecessary complexity to an already complex approach, and in some cases adds excessive conservatism to reserves. Hence these prescriptive elements move regulatory valuation even further away from being a “pure” PBR approach. It is critical to the success of PBR and the new VM that the enabling framework include a process by which the impact of these added elements can be evaluated and either adjusted or removed once actuarial practice is demonstrated to be firmly established and regulators become comfortable with company filings. The result will be a more purely model-based, experience-based PBR framework that appropriately reflects individual company risk and experience.

However, there likely will be challenges in obtaining the already strained regulatory resources, needed to develop and implement such a review process[2]. Two specific areas warrant consideration: state insurance departments and the NAIC. Within insurance departments generally, the complexity of the stochastic models will create a challenge to develop the expertise necessary to analyze insurance company models and their input and output in an effective manner. As a result, state resources likely will be stretched to be in a position to support efforts to make changes to the PBR framework once sufficient experience exists to support changes. At the NAIC, the many competing priorities (e.g., aspects of the Solvency Modernization Initiative, the development of principle-based approaches for other lines of business, and for risk-based capital), will create a demanding environment for finding and retaining dedicated working group and staff resources to support such a review process.

However, these challenges can be addressed by developing a centralized review facility, whether staffed by actuaries employed by the NAIC or supported through the use of consultants. A centralized review facility could provide knowledgeable and dedicated resources to support state insurance departments as the states review companies’ statutory reserves using principle-based approaches. Such a facility could also be used as a resource to the NAIC in its role in evaluating the overall effectiveness of principle-based valuation methodology for the industry at large. We recognize that other organizational structures may also be effective. However, the ultimate goal should be to have a sufficient number of appropriately trained individuals deployed:

- to assist insurance departments in their efforts in evaluating stochastic models, their input and output, and
- to be available to the NAIC to facilitate its efforts to evaluate the overall effectiveness of the VM.

The NAIC's strong commitment to leading the effort to create and fund such a centralized review facility is essential for the success of PBR and the VM.

As actuaries involved with the development of risk management tools, we recognize the complexity of stochastic models and the importance of ongoing modeling and model-assumption maintenance. In order for a stochastic model to be a credible analytical tool, the model’s calculation routines, such as its

[2] Regulators are not alone in dealing with this challenge - life insurance companies, actuarial consultants, and auditing firms are all going through the process of evaluating the availability and allocation of resources for PBR, in recognition of the fact that PBR is a significant change in the statutory valuation process.

interest rate generator, must be calibrated to be consistent with updated data and must be evaluated for reasonableness. Similarly, the assumptions used in the model must reflect recent experience. A process to review the assumption-setting and modeling process to ensure that it is up-to-date is thus a necessary complement to a valuation method that incorporates stochastic modeling. We do not think it would be prudent to adopt a stochastic valuation method and then ignore this component; the NAIC should act now to begin to put such a process in place. We believe a centralized review facility will help assure that such a process is in place.

After considerable deliberation of the issues discussed in this letter and the examples listed below, the LPC has made a determination to voice its active support for the adoption of the PBR methodology in the SVL and VM. However, for the VM ultimately to achieve the establishment of a truly principle-based approach, we believe it is vital also to establish a process to assist in the review and updating of the PBR methodology. In addition to providing our active support of the PBR methodology and of the review and updating process, we will continue both to educate and our efforts on behalf of the actuarial profession, to assist regulators, NAIC staff and state legislators. These efforts will include, to all audiences, a strong push for both the on-going review and updating process and the development of dedicated resources, ideally a centralized review facility discussed in this letter.

We stand ready to assist the NAIC and LATF in particular in addressing these issues or in any other manner that will ensure the success of principle-based methods for statutory life reserves.

Please feel free to contact John Meetz, the Academy's life policy analyst (meetz@actuary.org; 202/223-8196) if you have any questions.

Sincerely,

Cande Olsen, Vice-President
Life Practice Council
American Academy of Actuaries

LPC Members

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CC: Commissioner Kevin McCarty, Commissioner Susan Voss

Examples of Prescriptive and Limiting Elements in VM-20

1. Requiring margins for each assumption rather than an aggregate margin approach.
2. Prescribed economic scenario generators and the elimination of the option to use a company's own stochastic generator
3. Maintaining the current risk rules for reinsurance.
4. "Haircuts" on revenue sharing
5. Use of Greatest Present Value of Accumulated Deficiencies (GVPAD) rather than a Gross Premium Reserve approach as the basis for the stochastic reserve calculation