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July 22, 2020

Director Robert H. Muriel
Chair, Accelerated Underwriting (A) Working Group
National Association of Insurance Commissioners (NAIC)

Dear Director Muriel,

On behalf of the Life Underwriting and Risk Classification Work Group of the American Academy of Actuaries,[1] thank you for the opportunity to present at the Accelerated Underwriting (A) Working Group call on June 18. We hope the content of our presentation was useful as you consider the use of external data and data analytics in accelerated life underwriting.

As a follow-up to our presentation, we thought it would be helpful to expand on the actuarial standards of practice (ASOPs) that we referenced in our presentation.

As discussed on the call, ASOPs provide guidance to actuaries when performing actuarial services:

- Some ASOPs apply to actuaries in all practice areas, while other ASOPs apply to actuaries in a specific practice area (i.e., life insurance, health insurance, casualty insurance, enterprise risk management [ERM], or pensions).
- Some ASOPs apply to actuaries when they perform a variety of services, while other ASOPs apply to actuaries when they perform a specific service.

Actuaries use guidance from these ASOPs along with certain requirements as provided in laws and regulations that address appropriate actuarial practice.

We have provided excerpts from key ASOPs related to underwriting in the Appendix to this letter. Although we recommend ASOPs be read in their entirety, we would specifically like to highlight guidance from ASOP No. 12, *Risk Classification (for All Practice Areas)*, which states that the actuary should select risk characteristics that are related to expected outcomes. Risk characteristics are measurable or observable factors or characteristics that are used to assign each risk to one of the risk classes. Data elements used in life insurance underwriting would be considered risk characteristics. We have highlighted this guidance because a question was asked on the call as to whether actuaries have an affirmative standard that the data elements used in underwriting be related to mortality.

[1] The American Academy of Actuaries is a 19,500-member professional association whose mission is to serve the public and the U.S. actuarial profession. For more than 50 years, the Academy has assisted 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.

We hope this additional information is helpful and provides additional background as your group continues its work. If you have any questions or would like further dialogue on the above topics, please contact Ian Trepanier, life policy analyst, at trepanier@actuary.org.

Sincerely,

Sue Bartholf, MAAA, FSA
Chairperson, Life Underwriting and Risk Classification Work Group
American Academy of Actuaries

cc: Members, Accelerated Underwriting (A) Working Group

Appendix: Excerpts from key ASOPs related to underwriting

The following ASOPs are, in the opinion of this work group, directly or indirectly related to the life underwriting process. These ASOPs apply to actuaries in all practice areas unless otherwise noted. The excerpts are verbatim from the ASOPs, and complete text of these ASOPs can be found at www.actuarialstandardsboard.org/standards-of-practice.

ASOP No. 12, *Risk Classification*

3.2.1 Relationship of Risk Characteristics and Expected Outcomes
The actuary should select risk characteristics that are related to expected outcomes. A relationship between a risk characteristic and an expected outcome, such as cost, is demonstrated if it can be shown that the variation in actual or reasonably anticipated experience correlates to the risk characteristic.

ASOP No. 23, *Data Quality*

3.2 Selection of Data
In undertaking an analysis, the actuary should determine what data to use. The actuary should take into account the scope of the assignment and the intended use of the analysis being performed to determine the nature of the data needed and the number of alternative data sets or data sources, if any, to be considered.

ASOP No. 25, *Credibility Procedures*

3.2 Selection or Development of Credibility Procedure
The actuary should use an appropriate credibility procedure when determining if the subject experience has full credibility or when blending the subject experience with the relevant experience. The procedure selected or developed may be different for different practice areas and applications. Additional review may be necessary to satisfy applicable law.

ASOP No. 54, *Pricing of Life Insurance and Annuity Products* (applies to actuaries in life practice area only)

3.4 Pricing Assumptions
The actuary should use professional judgment to set assumptions that are reasonable for the intended purpose and reflect expected future experience based on the following considerations.

3.4.4. Assumption Setting
When setting assumptions, the actuary should consider the following:

c. mortality and morbidity assumptions that incorporate the effects of risk selection and classification of future applicants, the impact of expected trends on future assumptions, and product features such as conversion and level premium periods on term coverage.

3.1.4 Model Structure

The actuary should assess whether the structure of the model (including judgments reflected in the model) is appropriate for the intended purpose. The actuary should consider the following, as applicable, for a particular model:

a. which provisions and risks specific to a business segment, contract, or plan, if any, or interactions more broadly, are material and appropriate to reflect in the model;
b. whether the form of the model is appropriate, such as a projection model (deterministic or stochastic), statistical model, or predictive model;
c. whether the use of the model dictates a particular level of detail, for example, whether grouping inputs will produce reasonable output, or whether a certain level of detail in the output is needed to meet the intended purpose;
d. whether there is a material risk of the model overfitting the data; and
e. whether the model appropriately represents options, if any, that could be reasonably expected to have a material effect on the output of the model. Examples include call options on fixed income assets, policyholder surrender options, and early retirement options.

3.4 Reliance on Models Developed by Others

If the actuary relies on a model designed, developed, or modified by others, such as a vendor or colleague, and the actuary has a limited ability either to obtain information about the model or to understand the underlying workings of the model, the actuary should disclose the extent of such reliance. In addition, the actuary should make a reasonable attempt to have a basic understanding of the model, including the following, as appropriate:

a. the designer's or developer's original intended purpose for the model;
b. the general operation of the model;
c. major sensitivities and dependencies within the model; and
d. key strengths and limitations of the model.
e. When relying on models developed by others, the actuary should make practical efforts to comply with other applicable sections of this standard.