American Academy of Actuaries

July 12, 2024

Commissioner Michael Conway
Colorado Division of Insurance
1560 Broadway, Suite 850
Denver, CO 80202

Dear Commissioner Conway,

On behalf of the American Academy of Actuaries[1] Life Underwriting and Risk Classification Subcommittee (the "Subcommittee"), thank you for the opportunity to comment on the ACLI draft proposed quantitative testing regulation, *Concerning Quantitative Testing of External Consumer Data and Information Sources, Algorithms, and Predictive Models Used for Life Insurance Underwriting for Unfairly Discriminatory Outcomes.* Overall, we support Colorado's initiative to prevent unfairly discriminatory practices in insurance. In terms of the design of the data testing requirement, we are sharing actuarial perspectives for further consideration.

As the Draft Testing Regulation is updated and additional testing is completed by the Academy and other groups, we look forward to continued conversations with the Department.

The Subcommittee has the following suggestions to modify the proposed quantitative testing regulation:

1. **Definitions**

    Considering the definitions that are described within the proposed regulation, we would highlight the following:

    I.   Policy type is defined but the term is never used in the regulation. Therefore, the definition of policy type (4.K.) may be unnecessary.

    II. We encourage inclusion of a definition of Machine Learning, as well as an explanation as to how Machine Learning compares to, and differs, from Predictive Models.

2. **Section 5**

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[1] The American Academy of Actuaries is a 20,000-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.

Section 5.B.4. instructs Insurers to "refer to the Colorado Division of Insurance Bulletin: 'FAQs on the Use of Race/Ethnicity Inference Models and Data Sources." We request clarification as to the process for the development and publication of this document, when it will be released, and where it can be found. We support the flexibility in choosing racial inference method(s) including using multiple methods to perform analyses that consider a reasonable range of inference results to increase the number of inference results to use in analysis.

3. **Section 6**

   I.   With respect to the "Initial Screening Testing Requirements", we request consideration as to where data pretraining metrics could be included. If initial data diagnostics are examined before building the models, such screening may not be necessary.

   II.   In 6.A.5, we recommend changing "Determine the" to "identify."

   III.   When considering the formula in 6.A.6 and 6.A.7, the "model outcome" could already include the control variables. This could mean you are adding control variables that are already included. We request clarification on what is meant by "model outcome." Is it the result of the algorithm?

4. **Section 7**

   We suggest adding "materially" in front of "contributing" to allow for judgment on material contributions to the unfair discrimination result.

5. **Section 8**

   In Section 8.B.2.E., we request clarification as to what is meant by remediation beyond just removing variables. This may be useful to include in the FAQ.

Overall, we appreciate the flexibility in the approach presented. We do question whether building a regression model (or regression-like analysis) is necessary as a starting point. It is necessary to see if the number of life insurance applications from Colorado could provide a statistically significant result for analysis, taking into account each underwriting paradigm and product. Unlike property and casualty insurance, the voluntary aspect of life insurance could result in significantly fewer policies as inputs to the model, which may lead to results that are not statistically significant. The makeup of Colorado's applying, or insured population, may differ from the general United States' population and therefore pose additional challenges. The Academy's issue brief, "Approaches to Identify and/or Mitigate Bias in Property and Casualty Insurance" provides alternative methods to identifying and mitigating bias that may be useful when facing these and other challenges.

Per the public call on June 17, and our email request on July 2, we request and would like to participate in an additional call to explore this topic further. We also recommend an additional public call to help address technical questions so that all parties have the same understanding on this complicated subject.

We appreciate the opportunity to offer our perspectives and recommendations. The Academy looks forward to our continued conversations and collaboration on this complex issue. If you have any questions or would like additional information about our comments, please contact Amanda Barry-Moilanen, life policy analyst (barrymoilanen@actuary.org).

Sincerely,

Kirsten Pedersen, MAAA, FSA
Chairperson, Life Underwriting and Risk Classification Subcommittee