Governance Checklist

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Introduction

The Life Underwriting and Risk Classification Subcommittee of the American Academy of Actuaries has developed a Governance Checklist related to testing for unfairly discriminatory practices for life insurance underwriting.

While the checklist is not exhaustive, it is offered as a resource for practicing life actuaries involved in underwriting (risk selection and classification), pricing, risk management, or model governance. Its development was prompted in response to recent trends of focus on potential unfairly discriminatory practices in the underwriting process and the increased use of third-party[1] data, especially nonmedical data, in the underwriting process. There is also increased focus on reviewing underwriting plans for adverse impacts on classes of policyholders for which it is illegal to differentiate, such as race. This is a new and rapidly evolving area for the industry.

It should also be made clear that although this checklist represents governance practices that many life actuaries and their companies have or would aspire to, they will not apply in every situation as governance is a complex and evolving process specific to a company's environment. The checklist is intended to be a starting point that the actuary can customize to be appropriate for their situation.

Please note this document is not a promulgation of the Actuarial Standards Board, is not an actuarial standard of practice (ASOP), is not binding upon any actuary and is not a definitive statement as to what constitutes generally accepted practice in the area under discussion. This document should not be treated as guidance but rather it should be read and utilized as a list of considerations and resources on a particular topic. Events occurring subsequent to this publication of the topic may make the practices described or referred to in this document irrelevant or obsolete.

In addition to this checklist, an actuary may want to review applicable ASOPs, including but not limited to ASOP No. 12 (*Risk Selection*), ASOP No. 23 (*Data Quality*), ASOP No. 41 (*Actuarial Communication*), and ASOP No. 56 (*Modeling*), along with the more detailed Model Governance Checklist.

1 For the purpose of this paper, any entity beside the carrier and the insured will be considered to be a third party.

Checklist items are only intended to foster awareness of the respective governance concerns. These items/questions are offered solely as considerations for practicing life actuaries. Furthermore, the checklist is not intended as an instrument for evaluating an organization's level of governance, nor is it prescriptive in any way and does not constitute a list of governance requirements. Including or omitting an item or items in no way reflects a judgment or conclusion regarding the actuary's or company's performance related to its underwriting practices. There is no expectation that all the items will be addressed. This will depend on many things, including the nature of the company, the model's purpose, and the materiality of the model's inputs and outputs. All items or questions are provided for consideration by practitioners.

The checklist focuses on governance considerations specifically related to testing for unfairly discriminatory practices for life insurance underwriting. But testing should be considered in a larger sense (for example, including the documentation of the testing) and the checklist can help with a variety of desirable outcomes for models, including meeting business needs, accountability, transparency, documentation, etc. Except as noted, "governance" in this document refers to this specific view of the checklist. Details related to the broader model governance topic are found in links at the bottom of this document. This is a rapidly evolving area, and this checklist is not meant to be exhaustive. This paper focuses on the governance of models and leaves the discussion of data governance to another set of papers. We acknowledge that model and data are interlinked, and the governance of the data is a critical component for the success of the modeling exercise.

Governance Principle 1:
Establish a Multi-Disciplinary, Cross-Functional Governance Team

- [ ] **Codify the purpose of the governance team:**
    - Has the purpose of the governance team been articulated?
- [ ] **Determine the individual(s) in the organization with ultimate responsibility for governance and testing:**
    - Who within the organization has the ultimate responsibility for the governance program?
    - Who within the organization has the ultimate responsibility for the testing to be done in a satisfactory manner?
- [ ] **Identify team members:**
    - Does the governance team include members from all key functional areas (e.g., actuarial, underwriting, claims, risk management, audit, modeling team, governance)?
- [ ] **Establish a meeting cadence.**
- [ ] **Define and document the roles and responsibilities of team members, including potential third parties. Responsibilities could include model owner, model validation, model user, audit, etc.**
- [ ] **Establish operating norms (e.g., decision-making process, conflict resolution, participation expectations, approval process).**
- [ ] **Get agreement on expectations for and of the governing body (e.g., Board of Directors), including reporting and approval.**
- [ ] **Develop a process for seeking input from outside of the team (e.g., internal and third parties).**
- [ ] **Review and sign off on governance documentation.**
- [ ] **Create a communications plan:**
    - The plan should include defining triggering events that merit communication and the substance of the communication, in the event it is warranted.
- [ ] **Identify resources and training needs (e.g., model management framework).**

Governance Principle 2:
Maintain Written Policies and Procedures Relating to the Governance of Testing Procedures

- ☐ **Document the underwriting process (models, human interaction, etc.), including how algorithms and predictive models fit into the process and the materiality of model use.**
- ☐ **Maintain an inventory of underwriting algorithms and predictive models, including their respective purpose, and the governance standards applicable.**
- ☐ **Ensure the governance team is knowledgeable about the broader company governance standards.**
- ☐ **Establish written governance policies and procedures, including procedures for model development and deployment, with appropriate control in the model development and deployment, as well as authority for deployment.**
- ☐ **Document appropriate model risk management processes, including the process for assessing which models and processes are within the scope of the testing requirements, but also model training and supervision, risk mitigation measures, and ongoing monitoring and corrective actions.**
- ☐ **The characteristics of the model risk management process should be informed by the state and/or federal requirement review.**
- ☐ **Include appropriate assessment (e.g. monitoring metrics) for each model life cycle as well as triggers for model retirement and replacement in the model risk management processes.**
- ☐ **Ensure an audit process and accountability scope are established in the written policies and procedures.**
- ☐ **Set a cadence for the review of governance policies and procedures.**

Governance Principle 3:
Testing Within the Governance Framework

☐ **Define the scope of testing:**

- Inventory of testing, including inputs, algorithm/modeling approach, outputs.
- Testing approach, including testing of internal and external models along with a comprehensive assessment.
- Define inputs. For example, is there documentation of how applicants were assigned to testing groups? Examples might include information provided on the application (e.g., gender) or from a methodology used to infer the result (e.g., Bayesian Improved First Name Surname and Geocoding—BIFSG).
- Include internal data (experience data), data from applicants, and external data. Data may include results from other models.
- Identify and document in-scope models and out-of-scope models.

☐ **Maintain an inventory detailing testing (e.g., model version, tests performed, results).**

☐ **Establish guidelines for selection, use, and oversight of third-party vendors.**

☐ **Set a testing cadence.**

☐ **Incorporate state and/or federal requirements for testing.**

☐ **Perform an independent validation and review of results, including control effectiveness.**

☐ **Determine the processes to follow under various testing results:**

- Document remediation process for any unfairly discriminatory practices that are uncovered, as defined by the company taking into account state and federal requirements.
- Consider isolating the source of the problem (e.g., inputs, model training).
- Develop remediation plans for reducing the potential for unfairly discriminatory practices uncovered through testing.

☐ **Define the scope of governance.**

☐ **Implement the communications plan.**

Governance Principle 4:
Governance Reporting

☐ **Create a governance report:**

- Document the established governance framework.
- Document algorithms and models used, how they are used, and the risks associated with their use.
- Document the problems identified through the testing.
- Document mitigation efforts and/or corrective actions.
- Document a periodic assessment of the governance framework.
- Document testing outcomes.
- Include the identification, understanding and compliance with legislation, regulations, guidelines, and standards (e.g., ASOPs, the MIB) that could have an impact.

☐ **Include appropriate limitations related to reliance/due diligence:**

- Experience study reliance.
- Validation process.

☐ **Ensure the appropriate parties sign off on the governance report:**

- Perform a peer review process appropriate.

Appendix I: Definitions

For the benefit of readers, we are providing the follow list of definitions of relevant terms:

Bayesian Improved Surname Geocoding (BISG)—A publicly available algorithm developed by the Rand Corporation for the Consumer Financial Protection Bureau where it is used to investigate discrimination in lending practices. BISG relies on self-reported race/ethnicity and other data from the U.S. Census. The inputs required are a person's last name and their home address. The methodology produces a vector of probabilities of a person being a given race/ethnicity. BISG offers a way to impute race/ethnicity. RAND Bayesian Improved Surname Geocoding, RAND, undated.

BIFSG—an extension of BISG which has first name as an additional input.

Unfair discrimination—Generally, under insurance law, unfair discrimination occurs when similar risks are treated differently. The NAIC Unfair Trade Practices Act defines it for life insurance as:

- Making or permitting any unfair discrimination between individuals of the same class and equal expectation of life in the rates charged for any life insurance policy or annuity or in the dividends or other benefits payable thereon, or in any other of the terms and conditions of such policy.
- Unfair Trade Practices Act (MO-880-1), NAIC's Model Laws, Regulations, Guidelines and Other Resources, Spring 2024.

"Algorithm" means a clearly specified mathematical process for computation; a set of rules that, if followed, will give a prescribed result.

"Predictive Model" refers to the mining of historic data using algorithms and/or machine learning to identify patterns and predict outcomes that can be used to make or support the making of decisions.

NAIC Model Bulletin: Use of Artificial Intelligence Systems by Insurers, adopted December 4, 2023.

Appendix II: References

Relevant Standards of Practice:

Actuarial Standards Board, ASOP No. 12, *Risk Classification (for all Practice Areas)*, adopted December 2005.

Actuarial Standards Board, ASOP No. 23, *Data Quality*, adopted December 2016.

Actuarial Standards Board, ASOP No. 41, *Actuarial Communications*, adopted December 2010.

Actuarial Standards Board, ASOP No. 56, *Modeling*, adopted December 2019.

Other Useful Resources:

American Academy of Actuaries, *Model Governance—Some Considerations for Practicing Life Actuaries*, Practice Note, April 2017.

American Academy of Actuaries, Model Governance Checklist—Some Considerations for Practicing Life Actuaries, August 2016.

NAIC AI Model Bulletin, Use of Artificial Intelligence Systems by Insurers, December 2023.

SOA Research Paper, Statistical Methods for Imputing Race and Ethnicity, April 2024.