



March 14, 2024

New York State Department of Financial Services

Via email: [innovation@dfs.ny.gov](mailto:innovation@dfs.ny.gov)

Re: Proposed Circular on the use of AIS and ECDIS in Insurance Underwriting and Pricing

To Whom it May Concern,

On behalf of the Health, Life and Casualty practice councils (“the councils”) of the American Academy of Actuaries,<sup>1</sup> we appreciate the opportunity to comment on New York State Department of Financial Services (“Department”) [proposed insurance circular letter](#) (“Circular”) on the use of Artificial Intelligence Systems (AIS) and External Consumer Data and Information Sources (ECDIS) in Insurance Underwriting and Pricing. The councils support efforts to curb underwriting and pricing methods that “reflect systemic biases and can reinforce and exacerbate inequality.” Below we provide broad comments that apply to all practice areas, followed by specific comments related to property and casualty, life, and health insurance.

### **Broad Comments**

The councils provide the following broad comments that apply to property and casualty, life, and health insurance:

1. In the definition of AIS in section 4, it would be helpful to clarify whether predictive models are specifically included or excluded from the definition. Some predictive models have elements of “self-improvement” not often considered types of machine learning; however, they do not fully replace human decision-making in building the predictive model. One approach may be for the Circular to identify common predictive modeling techniques used by insurers and specify whether those techniques would be considered an AIS. While we support the principle-based approaches to permit insurer innovation in underwriting and rating, providing examples of current techniques would not only improve clarity but also ensure consistent insurer compliance. Furthermore, we ask for clarification as to whether a “machine-based system” refers to machine learning techniques as a subset of artificial intelligence.

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<sup>1</sup> 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.

2. We encourage the Department to consider specifying the protected classes subject to the Circular. We note that there are differences between the protected classes in the Insurance Law Article 26 references in section 9 and the state and federal laws references in section 12. If the intent is to include all protected classes, there are challenges with sourcing protected class information for certain categories, such as creed, national origin, religion, gender expression, gender identity, and gender preference. Insurers do not collect or are prohibited from collecting protected class information. To ensure compliance, we request the Department clarify in explicit terms whether protected class information should be collected or whether it should be otherwise determined. For instance, if the Department determines that race should be imputed instead of collected, further guidance on considerations that insurers should use when selecting an inference algorithm would be beneficial. These considerations could include how well algorithms infer race, how any inaccuracies could potentially change conclusions, and the trade-offs between different methods. The Department may want to explore how insurers evaluate proxy effects for protected classes for which there are no reliable statistical imputation methods. Furthermore, as new third-party vendors for this imputed data continue to enter the market, it is unclear what standards are in place to ensure sourcing transparency, both now and in the future.
3. The councils are supportive of section 10 and appreciate the Department's acknowledgment and reliance on actuarial standards of practice (ASOPs) throughout this effort. ASOPs are essential, as they set appropriate standards for actuarial practice by describing procedures for actuarial practice and identifying what should be disclosed when reporting the results of those procedures.
4. When performing proxy assessments in section 11, we recommend the Department either define the term "proxy" or, alternatively, use the term "statistical proxy." While the councils agree it is unacceptable to use rating variables that serve as proxies for protected classes, the word "proxy" can be used in different ways and is sometimes incorrectly assumed to mean "correlated." Statistical proxy discrimination occurs if a rating plan variable draws all or some of its power as an insurance loss predictor from its correlation to a protected class, rather than from its own power to predict insurance loss. Statistical proxy discrimination, if it exists, is not acceptable and would need to be remediated.
5. With respect to section 14, we would recommend the following modifications to the subsections. As currently drafted, we found the if/then constructs slightly confusing. By modifying the section as recommended below, we believe it clarifies the process that the Department is recommending that insurers follow:
  14. An insurer should not use ECDIS or AIS in underwriting or pricing unless the insurer can establish through a comprehensive assessment that the underwriting or pricing guidelines are not unfairly or unlawfully discriminatory in violation of the Insurance Law. A comprehensive assessment of whether an underwriting or pricing guideline derived from ECDIS or AIS unfairly discriminates between similarly situated individuals or unlawfully discriminates against a protected class should, at a minimum, include the following steps:

- i. assessing whether the use of ECDIS or AIS produces disproportionate adverse effects in underwriting and/or pricing on similarly situated insureds, or insureds of a protected class.
    - i. If there is no prima facie showing of a disproportionate adverse effect, then the insurer may conclude its evaluation.
    - ii. if there is prima facie showing of such a disproportionate adverse effect, further assessing whether there is a legitimate, lawful, and fair explanation or rationale for the differential effect on similarly situated insureds.
      - 1. If no legitimate, lawful, and fair explanation or rationale can account for the differential effect on similarly situated insureds, the insurer should modify its use of such ECDIS or AIS and evaluate the modified use of ECDIS or AIS.
      - 2. if a legitimate, lawful, and fair explanation or rationale can account for the differential effect, further conducting and appropriately documenting a search and analysis for a less discriminatory alternative variable(s) or methodology that would reasonably meet the insurer’s legitimate business needs. If a less discriminatory alternative exists, the insurer should modify its use of ECDIS or AIS accordingly.
6. The Department might consider including or referring to the definition of “rational explanation” in the NAIC’s *Regulatory Review of Predictive Models* [white paper](#) as another means to describe the “intuitive, logical relationship” in section 18 within a qualitative assessment. In the paper, a “rational explanation” refers to:
- ...a plausible narrative connecting the variable and/or treatment in question with real-world circumstances or behaviors that contribute to the risk of insurance loss in a manner that is readily understandable to a consumer or other educated layperson. A “rational explanation” does not require strict proof of causality but should establish a sufficient degree of confidence that the variable and/or treatment selected are not obscure, irrelevant, or arbitrary. A “rational explanation” can assist the regulator in explaining an approved rating treatment if challenged by a consumer, legislator, or the media. Furthermore, a “rational explanation” can increase the regulator’s confidence that a statistical correlation identified by the insurer is not spurious, temporary, or limited to the specific datasets analyzed by the insurer.
7. The councils support section 34, which is consistent with actuaries’ professional responsibilities in accordance with ASOPs.

## Casualty Practice Council (CPC)'s Committee on Equity and Fairness Comments

The CPC's Committee on Equity and Fairness provide the following comments that pertain specifically to property and casualty insurance:

1. In the definitions of AIS and ECDIS in sections 4 and 5, we encourage further clarification on the meaning of "traditional medical, property or casualty underwriting or pricing" when used in AIS or ECDIS. Many variables based on external data are developed using ASOPs and have been used for years, sometimes decades, for pricing or underwriting and may be considered "traditional." As an example, credit-based insurance scoring, prior carrier information, motor vehicle reports, and geographic location have been used for decades in the pricing and underwriting of private passenger automobile insurance. We note the Circular specifically mentions that motor vehicle reports are not included in the definition of ECDIS, but other variables many would deem "traditional" are not excluded in the definition.
2. We recommend that the Department specifically define the terms "unfair discrimination" and "unlawful discrimination" beyond the references in section 12, to help insurers differentiate between the terms to ensure appropriate and consistent compliance.
3. In section 14, the Department includes terms such as "disproportionate adverse effect" to identify existence of unfair or unlawful discrimination and includes, as a possible remedy, a "legitimate, lawful, and fair explanation." We encourage the Department to consider defining these terms. Alternatively, the Department might consider using the term "disproportionate impact," as described by the Casualty Actuarial Society<sup>2</sup> and Academy,<sup>3</sup> which exists when there are higher or lower rates for a protected class after controlling for other distributional differences. We also encourage the Department to provide guidance on how an insurer should determine whether a disproportionate adverse effect is "material," because every variable will exhibit some level of differing effects across protected classes.
4. Also in section 14, the Department might consider differentiating, if appropriate, between testing requirements for underwriting and pricing. Testing required for pricing may be more intuitive than testing required for underwriting. For instance, to test for unfair discrimination in rates by race, insurers can use a loss ratio or other appropriate measure of profitability. It is not clear how to test for unfair discrimination between races in an underwriting context. Similarly, there are techniques that can be used in building pricing loss models to protect against statistical proxy discrimination, but it is not clear how to test for proxy discrimination in the underwriting context.
5. In the proposed Quantitative Assessment section (section 17), the Department includes various tests of outcomes between protected classes and control groups. Control groups have a particular meaning in experimental design, where the control group is not

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<sup>2</sup> [Defining Discrimination in Insurance](#); Casualty Actuarial Society; 2022.

<sup>3</sup> [The Use of Credit History for Personal Lines of Insurance: Report to the National Association of Insurance Commissioners](#); American Academy of Actuaries; December 2002.

subjected to the experiment or test. To avoid confusion with the statistical term, we recommend an alternative term, such as “other classes,” or rewriting the individual tests without referencing a control group. We encourage the Department to refer to the Academy’s recently published issue brief<sup>4</sup> on correlation vs. causation, which includes a discussion on the use of control groups for randomized control trials.

6. Throughout the Circular, and specifically with respect to qualitative information shared in section 13, it may be beneficial to confirm how an insurer’s confidential and proprietary information would be protected by the Department, to encourage more detailed sharing of testing methods, results, and compliance assessments.

### **Life Practice Council (LPC)’s Life Underwriting and Risk Classification Subcommittee Comments**

The LPC’s Life Underwriting and Risk Classification Subcommittee provides the following comments that relate specifically to life insurance:

1. With respect to medical and personal information in section 35, the Department might consider following a process similar to the Fair Credit Reporting Act (FCRA), where the insurer informs the applicant how they can contact the third party to remedy their incorrect data. Individuals, not insurers or other third parties, have the most up-to-date information and are best positioned to correct any inaccuracies. For example, the applicant is likely to be better suited to update a prescription found to be incorrect.
2. We appreciate the clarifications to NY Circular Letter 1 found in *F. Clarification of Insurance Circular Letter No. 1 (2019)*. We strongly encourage the Department to include these clarifications in further amendments of NY Circular Letter No. 1.
3. Regarding the “objective threshold criteria” described in section 42, we suggest additional clarity around the level of detail to be disclosed. We acknowledge that the ideal amount of disclosure provides the applicant with enough information but does not include proprietary company information that allows for reverse engineering by competitors.
4. Section 46 refers to random holdouts; we suggest asking companies to include the rationale as to why an applicant was moved to the traditional underwriting process to the disclosure. This inclusion could help the applicant understand the process. For example, the included rationale could state that the removal was due to “quality assurance” or something similar.

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<sup>4</sup> [\*An Actuarial View of Correlation and Causation—From Interpretation to Practice to Implications\*](#); American Academy of Actuaries; July 2022.

## Health Practice Council (HPC)'s Comments

The HPC offers the following comments that relate specifically to health insurance:

1. Most major medical coverage does not engage in individual-level underwriting, but rather underwrites groups of individuals. Consequently, premiums for any individual are developed as a subset of a larger pool of risks, even for individual coverage. The Department should consider clarifying how this guidance would apply, considering the pooled nature of both underwriting and pricing for major medical coverage. These provisions may be more directly applicable for other health insurance coverage, such as disability income and long-term care insurance (LTCI), where individual-level decisions are more typically made.

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If you have any questions or would like to discuss further, please contact Amanda Barry-Moilanen, the Academy's life policy analyst, at [barrymoilanen@actuary.org](mailto:barrymoilanen@actuary.org), Matthew Williams, the Academy's senior health policy analyst, at [williams@actuary.org](mailto:williams@actuary.org), and Rob Fischer, the Academy's casualty policy analyst, at [fischer@actuary.org](mailto:fischer@actuary.org).

Sincerely,

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