



AMERICAN ACADEMY of ACTUARIES

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Comments to the National Association of Insurance Commissioners  
Special (EX) Committee on Race and Insurance  
November 12, 2020

## Lauren J. Cavanaugh—Vice President, Casualty American Academy of Actuaries

On behalf of the Casualty Practice Council (CPC) of the American Academy of Actuaries<sup>1</sup> (“Academy”), I commend the National Association of Insurance Commissioners (NAIC) for organizing this dialogue on important questions regarding race and insurance. I would like to reiterate the comments<sup>2</sup> previously provided to the NAIC on this important initiative by the Academy’s president, Joeff Williams, in that we share the goal of identifying and exploring issues pertaining to race, diversity, and inclusion and ways to address practices that could create barriers to, or conversely provide incentives for inclusion to, insurance products. Thank you for inviting us to share our thoughts with you relative to property/casualty (P/C) insurance.

In these comments, I will address some of the topics in the Special (EX) Committee on Race & Insurance (“Committee”) *Initial List of Potential Issues for Workstream Three to Consider* (“Issues List”). Specifically, these comments address:

- Certain actuarial guidance that address selected topics on the Issues List;
- Data quality considerations;
- Disparate impact analysis; and
- Use of socioeconomic factors in auto insurance.

### **Actuarial Standard of Practice (ASOP) No. 12, *Risk Classification***

As the Committee continues to look into these topics, the Academy’s CPC notes that in order to properly discuss “unfair discrimination,” it is important to have a clear definition of “fairness.” Fairness is defined many different ways, and what may seem “fair” to some will seem “unfair” to others. For U.S. actuaries, when we focus only on the question of “fair” insurance rates, we are guided by ASOPs; guidance on this topic is included in ASOP No. 12, *Risk Classification*.

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<sup>1</sup> 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.

<sup>2</sup> D. Joeff Williams letter to NAIC Special (EX) Committee on Race & Insurance, Sept. 10, 2020:  
<https://www.actuary.org/sites/default/files/2020-09/Academy-Comments-NAIC-Race-Insurance-Cttee.pdf>.

Using ASOP No. 12 as guidance, rates within a risk classification system would only be considered equitable if differences in rates reflect material differences in expected cost for risk characteristics. This is demonstrated if it can be shown that the variation in actual or reasonably anticipated experience *correlates* to the risk characteristic. For the purposes of rate setting guided by risk classification, it is important to note that it is not necessary for an actuary to establish a *cause-and-effect* relationship between the risk characteristic and expected outcome. ASOP No. 12 recognizes that there can be significant relationships between risk characteristics and expected outcomes where a cause-and-effect relationship cannot be demonstrated. ASOP No. 12 also includes important considerations on practicality, applicable law, and data quality (among others).

## Other Actuarial Standards

In addition to ASOP No. 12, there are other ASOPs that have been produced that speak to many components of the Issues List. These include:

1. **ASOP No. 23**, which discusses data quality. The purpose of this ASOP is to provide guidance to the actuary when performing actuarial services involving data. This may prove helpful in light of the extended discussion of data in the following paragraphs.
2. **ASOP No. 53**, *Estimating Future Costs for Prospective Property/Casualty Risk Transfer and Risk Retention*. This ASOP states that: “Estimating future costs for prospective property/casualty risk transfer and risk retention has been a fundamental part of actuarial practice since the beginning of the profession. Estimating future costs based on sound actuarial practice is essential to the integrity of the insurance and risk financing system and is key to fulfilling the promises embodied in insurance contracts.”
3. **ASOP No. 56**, which covers modeling. This standard became effective on October 1, 2020. The stated purpose of this ASOP is to provide “guidance to actuaries when performing actuarial services with respect to designing, developing, selecting, modifying, using, reviewing, or evaluating models.”

The [full list of ASOPs](#) is extensive, and it is certainly possible that guidance from others not noted above may prove useful to the Committee’s ongoing discussions.

Also, members of U.S. actuarial organizations are subject to the *Code of Professional Conduct* promulgated by the Academy. As discussed therein, the *Code of Professional Conduct* sets forth what it means for an actuary to act as a professional. It identifies the responsibilities that actuaries have to the public, to their clients and employers, and to the actuarial profession.

## Data

The insurance industry has been data-driven almost from its inception. In recent years, the availability of vast amounts of data and the rapid increase in computing power has led to dramatic increases in the amount of data analytics that is used in setting insurance rates, with this trend especially notable in personal lines such as private passenger auto. As the industry has

moved from relatively broad rating classifications to an increasingly segmented classification structure, some questions have arisen.

Of particular interest to this Committee are concerns about whether some of the external data sets that are being used in predictive models might contain hidden biases or serve as proxies for prohibited characteristics. The list of protected classes varies from state to state. While all prohibit discrimination on the basis of race, some states have added other prohibitions such as gender, marital status, and education.

ASOP No. 23, *Data Quality*, states that an actuary should review data for reasonableness and consistency, unless, in the actuary's professional judgment, such review is not necessary or practical. Oftentimes, there are practical limitations to what the individual actuary can do to review the growing volume of available data.

In 2017 and again in 2019, the Automobile Insurance Committee of the Academy's CPC responded to requests from the NAIC and conducted forums on predictive modeling at the annual Insurance Summit. In both instances, the question of data quality was discussed. One of the ideas that arose from these discussions was the concept of one or more independent third-party organization(s) that could verify and certify the various external databases that might be used by insurers in their predictive models or other data analyses.

Hidden racial biases would be one of the things that such a third-party organization could look for. For example, if a database is accurately reporting all traffic violations, does it end up inadvertently reflecting discriminatory law enforcement patterns in some jurisdictions? Or does a database of arrests take into account that some cases were dropped or that some defendants were acquitted?

There are questions about accuracy and relevance of data as well. How old is the data? When an insurer pulls data from multiple sources related to an insured named "John Smith," how certain are we that all the reports are for the same John Smith? Does an individual have the right to access his or her file in a database and to correct errors? This is mandated by federal law in the case of consumer credit reports, but not for most other databases.

While in our general observation both individual carriers and third-party data providers do take several important steps to assess quality of data, we acknowledge that there is room for improvement in assuring the quality of all the external data being used in risk classification systems, not just to guard against hidden biases but to have greater confidence in all of the information being used.

We would be happy to further discuss this issue with the NAIC.

## **Disparate Impact Analysis**

If the NAIC decides to analyze or monitor disparate impact, additional data collection would be necessary for that examination to be complete. Insurers are unable to conduct such analyses because information on protected classes are often disallowed by current state laws. The Academy welcomes the opportunity to assist the NAIC further as it considers collecting and analyzing this data.

Certain data integrity issues would need to be considered when conducting a disparate impact analysis. For example, there is some inherent subjectivity/inconsistency on data derived from questions related to the race/ethnicity a person identifies him/herself with.

Once data integrity is addressed, an investigation into whether risk characteristics have a disparate impact on certain protected classes could provide insights into key questions regulators face regarding unfair discrimination. If certain risk characteristics are demonstrated to have disparate impact to certain protected classes, additional research may be warranted to test whether unintended bias exists in a risk classification system. For example, it has historically been established that there is a material difference in expected cost for drivers that have no motor vehicle violations versus those that do. If law enforcement practices differ based on race, however, risk characteristics that use motor vehicle violation history may have a different expected cost differential for Black Americans than for white Americans.

## **Use of Socioeconomic Factors in Auto Insurance Ratemaking**

Many risk characteristics used in P/C insurance have been utilized without establishment of a proven cause-and-effect relationship. As discussed previously, U.S. actuaries are guided by the ASOP on risk classification, which states that rates within a risk classification system would be considered equitable if it can be shown that expected costs correlate to the risk characteristic.

Historically, socioeconomic factors like credit scores in private passenger auto have been shown to have strong correlation with expected costs. With the advancement of technology, risk characteristics that may be more direct indicators of outcomes are increasingly being utilized. For private passenger auto insurance, rating variables that are linked to facts about driving behavior (like those derived from telematics), vehicle safety features, and usage may reduce the predictive power of other variables that could be seen as indicating only proximal effect, such as credit scores.

Again, on behalf of the Academy's Casualty Practice Council, I appreciate having this opportunity to share with the NAIC our thoughts on the important issue of race and insurance. We look forward to working with this committee on P/C-related issues as you seek to address important questions that have been raised (other Academy committees will address issues pertaining to other practice areas). If you wish to follow up with us on any of the matters we have discussed, contact Marc Rosenberg, the Academy's senior policy analyst for casualty, at [rosenberg@actuary.org](mailto:rosenberg@actuary.org) or at 202-785-7865.

Sincerely,

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