



AMERICAN ACADEMY of ACTUARIES

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July 8, 2022

Commissioner Karima Woods
District of Columbia Department of Insurance, Securities & Banking
1050 First Street NE, #801,
Washington, DC 20002

Dear Commissioner Woods:

On behalf of the American Academy of Actuaries¹ Casualty Practice Council, I am pleased to provide this written testimony as respects the District of Columbia Department of Securities and Banking (DISB) efforts to evaluate unintentional bias in private passenger automobile insurance.

Professional Standards of Practice

As a profession, actuaries are guided by a Code of Professional Conduct and various actuarial standards of practice (ASOPs). Regarding the former ([Code of Professional Conduct](#)), I would draw your attention to Precept 1, which states:

- “An Actuary shall act honestly, with integrity and competence, and in a manner to fulfill the profession’s responsibility to the public and to uphold the reputation of the actuarial profession.”

Regarding the [ASOPs](#), the standards listed below (among others) would apply to our discussion:

ASOP No. 12, Risk Classification

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 they focus only on the question of “fair” insurance rates, they are guided by ASOPs. ASOPs provide guidance on the techniques, applications, procedures, and methods that reflect appropriate actuarial practices in the United States. Guidance on this topic is included in ASOP No. 12, Risk Classification.

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.

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 regarding practicality, applicable law, and data quality (among others).

ASOP No. 23, Data Quality

The purpose of this ASOP is to provide guidance to the “actuary when performing actuarial services involving data... [It] provides guidance to actuaries when selecting data, performing a review of data, using data, or relying on data supplied by others, in performing actuarial services... that are applicable to particular areas of practice or types of actuarial assignment.”

Data frequently contain errors, are not complete, and are not precisely appropriate for the intended analysis. The accuracy and validity of the actuarial analysis are dependent on, among other things, the quality and appropriateness of the data used. Other actuarial standards of practice contain additional considerations related to data quality.

ASOP No. 53, Estimating Future Costs for Prospective P/C 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.”

ASOP No. 56, Modeling

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.”

Recent Academy Activity

Within the Academy, there are a number of standing committees that track issues and develop analysis important to property and casualty insurance and risk management. The Casualty Practice Council oversees much of these activities. Of particular note to the topic of this hearing is the Property and Casualty Racial Equity Task Force. The objective of this group is to provide an independent actuarial perspective to inform public policy on issues related to property and casualty insurance practices that potentially disadvantage people of color and/or other groups. Selected activities for the task force include:

- [Comment letter to the NAIC Special Committee on Race and Insurance](#)
- [Presentation to National Council of Insurance Legislators \(NCOIL\)](#)
- [Letter regarding Colorado law on unfair discrimination](#)
- [Contributed to Automobile Committee comment letter to Federal Insurance Office \(FIO\) on automobile insurance affordability](#)
- [Issue brief on Sourcing Protected Class Information in P&C Insurance](#)
- [Issue brief on Causation and Correlation topics](#)

Discrimination

The Oxford English Dictionary defines discrimination as follows:

1. the unjust or prejudicial treatment of different categories of people or things, especially on the grounds of race, age, or sex.
2. recognition and understanding of the difference between one thing and another.

It is perhaps useful to provide some basic background on insurance ratemaking. It is important to keep in mind that insurance is sold and priced prospectively. As such, prices are set ahead of the sale of a policy based on measurement of expected costs, including losses, expenses, capital costs, and profit. The more accurately the prices reflect the expected costs of the insured population, the better the insurance mechanism functions. This includes prices down to the classification group level. Note, for personal lines property and casualty insurance, actuaries do not develop expected cost data for individual policyholders as data at this level would not be sufficiently credible. Consequently, individual policyholder rates are based upon estimates of the overall expected aggregate costs to run the insurance mechanism in combination with a classification structure that fits with the relative expected costs across the class groups. In short, prices are set based on costs.

So, how does this relate to the concerns of discrimination? Traditionally, the regulatory standard for rates is that they should be adequate, not excessive, and not unfairly discriminatory. Rates are considered to meet this standard if they are an actuarially sound estimate of expected future costs associated with an individual risk transfer. Clearly, the term ‘discrimination’ has a negative connotation. However, within the context of insurance, the ability to reflect risk-based pricing requires making distinctions among insureds using a number of factors that are relevant to placing individuals expected to have similar risks into pricing groups. The more accurate the grouping of individuals with similar risk profiles, the more accurate the price, which in turn benefits consumers overall because it improves competition, affordability, and availability of insurance.

Further, when legislatures determine that a factor’s social unfairness exceeds the benefit of its predictive value, they imbed social considerations into insurance codes — on top of the unfair discrimination principle. These insurance codes have and will evolve over time.

Additional reading on the topic of discrimination in insurance can be found in the following paper published by the Casualty Actuarial Society: [Casualty Actuarial Society: *Defining Discrimination In Insurance*](#).

DISB Proposed Study—Actuarial Considerations

The stated goal of the DISB initiative to evaluate unintentional bias in auto insurance is to “explore whether the use of certain information by auto insurers in the application and underwriting process may cause harm to Black, indigenous, people of color, and other protected classes of Washington, D.C., consumers.” To explore this question, DISB seeks to define data that will be pertinent to this analysis. Actuaries strongly believe in using data and information to perform analyses that solve problems or address issues. Having the full range of pertinent data along with a clear understanding of the question at hand provides a greater likelihood of arriving at suitable conclusions.

When considering the stated goal of this project there are key terms that could use further clarification. Specifically, the following key terms will be addressed in this testimony:

- “Use of certain information”
- “Application and underwriting process”
- “Harm”

There are a number of possible definitions of “harm,” including:

- Premiums are higher for protected class individuals
- Protected class individuals are unable to access auto insurance (e.g., lack of appointed agents, barriers in application process)
- Protected class individuals are unable to access auto insurance at an affordable premium
- Premiums are higher for protected class individuals, after controlling for risk factors unrelated to protected classes (disproportionate impact)

In keeping with actuarial principles and in keeping with regulatory intent, DISB is encouraged to recognize underlying costs of the individual risk transfer that does not have a disproportionate impact on protected classes. Disproportionate impact occurs when a rating tool results in higher or lower rates, on average, for a protected class, after controlling for other distributional differences. ([*The Use of Credit History For Personal Lines Insurance, American Academy of Actuaries, 2002*](#)).

Practices that consider disproportionate impact are consistent with applicable actuarial standards of practice, including ASOP No. 12 on Risk Classification mentioned earlier, and the [Casualty Actuarial Society’s \(CAS\) Statement of Principles Regarding Property/Casualty Insurance Ratemaking](#) which supports cost-based pricing (also discussed above) wherein CAS Principle 4 defines reasonable rates as those that reflect the “expected value of all future costs associated with an individual risk transfer.” These same principles have formed the basis for most state laws and regulations designed to protect consumers.

As DISB considers insurers’ use of certain information in the underwriting process it will be important to consider whether there will be sufficient data to stratify the observed outcomes for protected classes across significant risk characteristics, such as years of driving experience. Without sufficient data for credible stratification across risk characteristics, it may be difficult to draw meaningful conclusions from the observed outcomes.

It is also important to consider the underwriting and rating variables currently being used, and to consider what process/methodology will be used to identify the variables creating unintentional bias, if

such bias is observed in the outcomes collected in the study. It may be difficult to identify such variables if rating variables will not be collected as part of the study.

Also, a clear understanding of the limitations of the inference approach to identifying race and ethnicity is recommended. For example, a [RAND study](#) states that: “Concordance between self-reported race/ethnicity and BISG [Bayesian Indirect Surname Geocoding] estimates are typically 90-96% accurate for the four largest racial/ethnic groups (Asian/Pacific Islander, Black, Hispanic and White),” but are “less accurate and not recommended for American Indians/Alaskan Natives and Multi-racial persons, due to small numbers.” Further analysis and information on the collection of protected class data is provided in [Academy Issue Brief on Sourcing Protected Class Information in P&C Insurance](#).

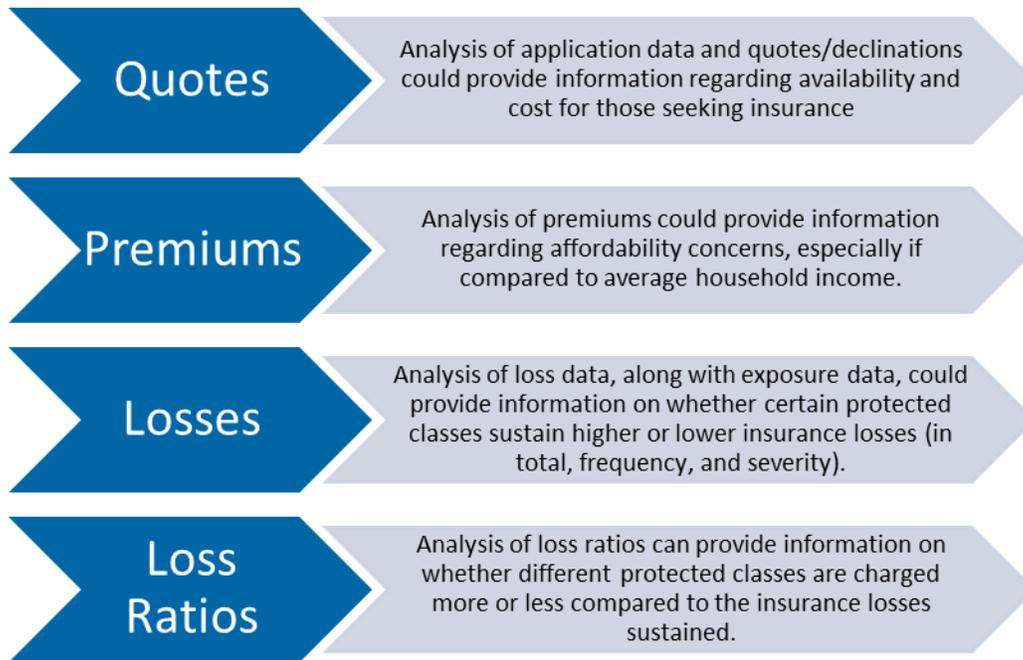
It is cautioned not to use premium data without the corresponding use of loss data. Without loss data, it will not be possible to determine whether there are expected cost differences between groups. There may be unintended impacts of proposing solutions to mitigate observed differences among groups based on premium data that do not also consider whether there are expected cost differences among groups.

Regarding application and underwriting data there are a number of considerations:

- The time period over which application and underwriting data will be collected. Data collected since the beginning of the COVID-19 pandemic may have over-/under-representation of certain classes as compared to prior history.
- Quotes may not be equivalent to final premiums charged.
- Whether reliance on application data for new customers would introduce statistical bias if that population does not reflect the full population of policyholders. The quote process is highly likely to be skewed toward higher priced policies as those policyholders would be more likely to shop for new coverage. Further, it is possible that the same customer could seek multiple quotes from multiple carriers.

Conclusions

In conclusion, I would like to highlight that it is important to consider carefully what questions will be studied. Different measures will provide insights on various questions. The following graphic shows a number of metrics that could be reviewed, along with certain information that could be gained from review of each:



The selected measure(s) will impact the data necessary to arrive at a suitable analysis. Further, if the DISB desires to draw conclusions regarding the extent to which use of certain variables may cause unintended bias in private passenger automobile insurance, consideration of gathering information regarding the specific use of such variables unique to each insurer is recommended. As the objective of the analysis is solidified, the Academy's Casualty Practice Council would be happy to assist with the data specification. Given the potential amount of data needed to complete a comprehensive study, the DISB could also consider a phased approach.

As your work progresses, it is important to consider potential impacts from legislative or other changes. Specifically:

- Whether and how any changes may impact individuals belonging to more than one protected class.
- Whether changes may result in a trade-off between mitigating unintended bias and expected cost differences.
- How changes may impact the insurance marketplace and accessibility.
- Whether a phase-in period for any proposed changes may be appropriate.

Finally, the Casualty Practice Council of the American Academy of Actuaries appreciates the opportunity to provide this input and look forward to opportunities to participate in the ongoing work effort to define and perform the study.

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Chair, Racial Equity Task Force
American Academy of Actuaries

Additional Resources to Consider

- [Academy Report to the NAIC: The Use Of Credit History For Personal Lines Of Insurance](#)
- [Academy Comment Letter to the Colorado Division of Insurance](#)
- [Academy Comment Letter to the Federal Insurance Office on Affordability in Auto Insurance](#)
- [Academy Comment Letter to the NAIC's Special Committee on Race and Insurance](#)
- [Academy Presentation to NCOIL on Race and Insurance](#)
- [Academy Issue Brief on Sourcing Protected Class Information in P&C Insurance](#)
- [Academy Issue Brief on Causation and Correlation](#)
- [CAS: Defining Discrimination in Insurance](#)
- [CAS: Approaches to Address Racial Bias in Financial Services: Lessons for the Insurance Industry](#)
- [CAS: Methods for Quantifying Discriminatory Effects on Protected Classes in Insurance](#)
- [CAS: Understanding Potential Influences of Racial Bias on P&C Insurance: Four Rating Factors Explored](#)