

# Presentation of Remarks by Lauren Cavanaugh, Vice President, Casualty Practice Council, American Academy of Actuaries

Before the District of Columbia Department of Insurance,  
Securities & Banking (DISB) Hearing on Unintentional Bias in  
Underwriting and Rating of Personal Automobile Insurance



AMERICAN ACADEMY of ACTUARIES

*Objective. Independent. Effective.™*

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# American Academy of Actuaries

- 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.



# Actuarial Professionalism—Code of Professional Conduct

*Precept 1: 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.***



# Actuarial Professionalism—ASOPs

- ❑ Actuarial Standard of Practice (ASOP) No. 12, *Risk Classification*
  - ❑ Provides perspective on concept of “fairness” in insurance rates
  - ❑ Rates within a risk classification system would only be considered equitable (or fair) if differences in rates reflect material differences in expected cost for risk characteristics.
  - ❑ This is demonstrated if it can be shown that the experience **correlates** to the risk characteristic.
- ❑ ASOP No. 23, *Data Quality*
- ❑ ASOP No. 53, *Estimating Future Costs for Prospective P/C Risk Transfer and Risk Retention*
- ❑ ASOP No. 56, *Modeling*
- ❑ Other ASOPs



# P/C Racial Equity Task Force

- Objective: To provide 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
  - [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 protected class data collection](#)
  - Issue brief on causation and correlation topics



# Discrimination

- **Oxford Languages definition of discrimination:**
  - the unjust or prejudicial treatment of different categories of people or things, especially on the grounds of race, age, or sex.
  - recognition and understanding of the difference between one thing and another.
- **How does this relate to the issue of discrimination in insurance?**
  - 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 that reflect material differences in expected cost.
- **Further reading:** [Casualty Actuarial Society: \*Defining Discrimination In Insurance\*](#)



# Understanding and Defining DISB Goal

- **DISB Stated Goal:** 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.
- Key terms
  - “Use of certain information”
  - “Application and underwriting process”
  - “Harm”
- Possible definitions for “harm”
  - 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)



# Consider Disproportionate Impact as a Measure of Harm

- Encourage recognizing the underlying costs of 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, controlling for other distributional differences. ([\*The Use of Credit History For Personal Lines Insurance\*, American Academy of Actuaries, 2002](#))
- Use of disproportionate impact consistent with applicable actuarial standards of practice and the [Casualty Actuarial Society's \(CAS\) Statement of Principles Regarding Property/Casualty Insurance Ratemaking](#)
  - 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 certain state regulations to protect consumers.





# DISB Approach—Actuarial Considerations

- Stratifying Outcomes Across Risk Characteristics
  - 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.
  
- Underwriting/Rating Variable Identification
  - 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.



# DISB Approach—Actuarial Considerations (continued)

- Inference Approach
  - Consider the implications of inferring race and ethnicity.
  - Inference approaches are likely to have varying degrees of accuracy.
  - For example, a [Rand study](#) noted 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.”
- Caution Use of Premium Data Without Loss Data
  - Consider the implications of basing conclusions on premium data without also considering loss data.
  - Without loss data, it will be 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.



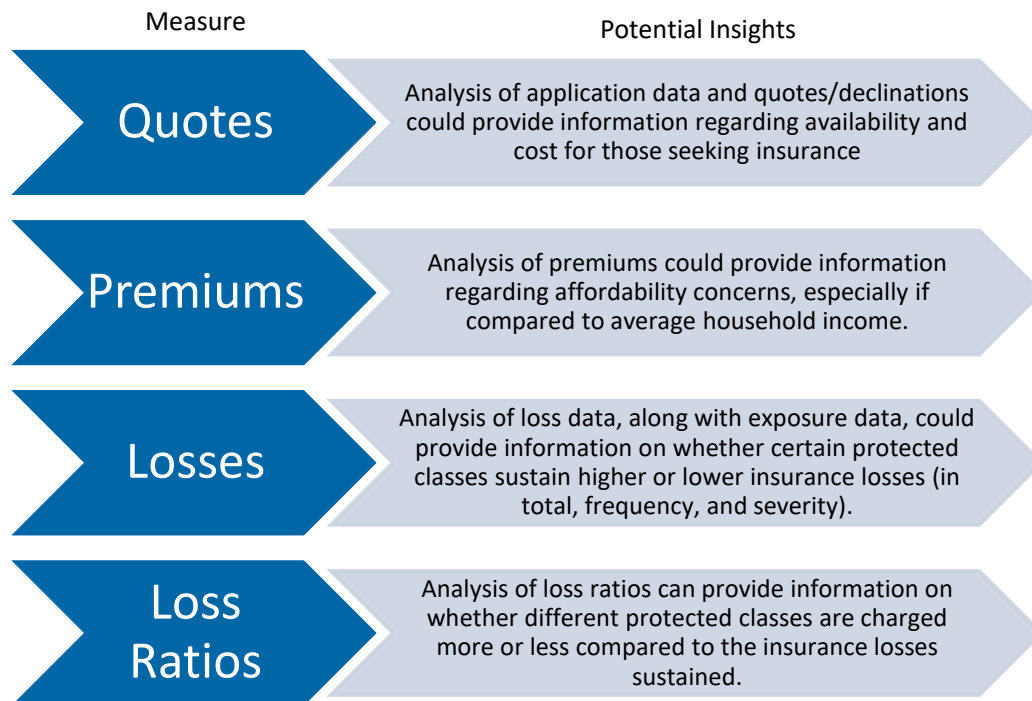
# DISB Approach—Actuarial Considerations (continued)

- Application and Underwriting Data
  - Consider 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.
  - Consider whether reliance on application data for new customers would introduce statistical bias if that population does not reflect the full population of policyholders.
  
- Consideration of Unintended Impacts From Legislative/Other Changes
  - Consider whether and how any changes may impact individuals belonging to more than one protected class.
  - Consider whether changes may result in a trade-off between mitigating unintended bias and expected cost differences.
  - Consider how changes may impact the insurance marketplace and accessibility.
  - Consider whether a phase-in period for any proposed changes may be appropriate.



# What Questions Will Be Studied?

Different measures will provide insights on various questions.



# Additional Resources

- [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 Data Sourcing](#)
- [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](#)



- Questions?
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