NATIONAL MEETING
SPRING / PHOENIX
2024
NAIC

Draft date: 3/6/24

2024 Spring National Meeting
Phoenix, Arizona

CASUALTY ACTUARIAL AND STATISTICAL (C) TASK FORCE
Saturday, March 16, 2024
2:00 – 3:00 p.m.
Phoenix Convention Center—101 West—Level 1

ROLL CALL

D.J. Bettencourt, Chair	New Hampshire	Anita G. Fox	Michigan
Chlora Lindley-Myers, Vice Chair	Missouri	Grace Arnold	Minnesota
Mark Fowler	Alabama	Eric Dunning	Nebraska
Lori K. Wing-Heier	Alaska	Justin Zimmerman	New Jersey
Barbara D. Richardson	Arizona	Alice T. Kane	New Mexico
Ricardo Lara	California	Judith L. French	Ohio
Andrew N. Mais	Connecticut	Glen Mulready	Oklahoma
Karima M. Woods	District of Columbia	Andrew R. Stolfi	Oregon
Michael Yaworsky	Florida	Michael Humphreys	Pennsylvania
Gordon I. Ito	Hawaii	Alexander Adams Vega	Puerto Rico
Amy L. Beard	Indiana	Michael Wise	South Carolina
Doug Ommen	Iowa	Cassie Brown	Texas
Vicki Schmidt	Kansas	Kevin Gaffney	Vermont
Timothy J. Temple	Louisiana	Mike Kreidler	Washington
Robert L. Carey	Maine	Allan L. McVey	West Virginia
Kathleen A. Birrane	Maryland		

NAIC Support Staff: Kris DeFrain

AGENDA

1. Consider Adoption of its Feb. 13, 2024, Feb. 14, 2024, and 2023 Fall National Meeting Minutes—*Christian Citarella (NH)* — Attachment One

2. Consider Adoption of its Working Group Reports — Attachment Two
   A. Actuarial Opinion (C) Working Group—*Miriam Fisk (TX)*
   B. Statistical Data (C) Working Group—*Sandra Darby (ME)*

3. Hear a Report on its Schedule P Proposal to the Blanks (E) Working Group and Discuss Comments Received—*Christian Citarella (NH)* — Attachment Three

4. Consider Adoption of Comments to Send to the Actuarial Standards Board on the Exposed Actuarial Standard of Practice (ASOP) No. 12, *Risk Classification—Julie Lederer (MO) and Kris DeFrain (NAIC)* — Attachment Four

5. Discuss the NAIC Rate Model Review Team's GLM Information Needs *—Sam Kloese (NAIC)* — Attachment Five

6. Hear a Presentation about Casualty Actuarial Society (CAS) Current Education and Other Activities—*Frank Chang (CAS)* — Attachment Six

7. Hear Activity and Research Reports from the Actuarial Standards Board (ASB), the Actuarial Board for Counseling and Discipline (ABCD), the American Academy of Actuaries (Academy), and the Society of Actuaries (SOA)—*Christian Citarella (NH)* — Attachment Seven

8. Discuss Any Other Matters Brought Before the Task Force—*Christian Citarella (NH)*

9. Adjournment

Draft: 3/13/2024

Casualty Actuarial and Statistical (C) Task Force
Virtual Meeting
February 13, 2024

The Casualty Actuarial and Statistical (C) Task Force met Feb. 13, 2024. The following Task Force members participated: D.J. Bettencourt, Chair, represented by Christian Citarella (NH); Chlora Lindley-Myers, Vice Chair, represented by Julie Lederer (MO); Lori K. Wing-Heier represented by Sian Ng-Ashcraft (AK); Mark Fowler represented by Charles Hale (AL); Ricardo Lara represented by Mitra Sanandajifar and Lynne Wehmueller (CA); Andrew N. Mais represented by Wanchin Chou (CT); Karima M. Woods represented by David Christhilf (DC); Michael Yaworsky represented by Catherine Chen and Peshala Disanayaka (FL); Doug Ommen represented by Travis Grassel (IA); Amy L. Beard represented by Larry Steinert (IN); Vicki Schmidt represented by Craig VanAalst (KS); Kathleen A. Birrane represented by Walter Dabrowski (MD); Timothy N. Schott represented by Sandra Darby (ME); Anita G. Fox represented by Kevin Dyke (MI); Grace Arnold represented by Phil Vigliaturo (MN); Eric Dunning represented by Michael Muldoon (NE); Alice T. Kane represented by Melissa Robertson (NM); Judith L. French represented by Tom Botsko (OH); Glen Mulready represented by Andrew Schallhorn (OK); Andrew R. Stolfi represented by David Dahl (OR); Michael Humphreys represented by Michael McKenney (PA); Cassie Brown represented by J'ne Byckovski and Miriam Fisk (TX); Kevin Gaffney represented by Rosemary Raszka (VT); and Allan L. McVey represented by Juanita Wimmer (WV).

1. Adopted the Report of the Actuarial Opinion (C) Working Group

Fisk said the Actuarial Opinion (C) Working Group submitted a proposal to the Blanks (E) Working Group with changes to the 2024 Property/Casualty (P/C) Opinion and the 2024 Title Opinion instructions.

The proposed P/C Opinion instructions would limit the requirement to send qualification documentation to a company's board of directors only at the initial appointment and not annually thereafter. The reason is that while the qualification documentation provides useful information to the board and state insurance regulators, the information does not change significantly from year to year. The proposed Title Opinion instructions include changes to make them as consistent as possible with the P/C instructions. These proposed changes were adopted by the Actuarial Opinion (C) Working Group via e-vote Jan. 3.

Fisk made a motion, seconded by Dyke, to adopt the report of the Actuarial Opinion (C) Working Group. The motion passed unanimously.

2. Adopted the Report of the Statistical Data (C) Working Group

Kris DeFrain (NAIC) said the Statistical Data (C) Working Group adopted the *Report on Profitability by Line by State* (Profitability Report) and the *Competition Database Report* (Competition Report). The Task Force will be asked to review those reports as soon as it finishes its e-vote on the 2020/2021 *Auto Insurance Database Report* (Auto Report).

Darby made a motion, seconded by Chou, to adopt the report of the Statistical Data (C) Working Group. The motion passed unanimously.

3. Discussed its 2024 Charges and Work Plan

Citarella presented the Task Force's 2024 charges and a proposed 2024 work plan (Attachment XXX). He reminded the Task Force of its mission and goals and the charges that were newly created for 2024. Citarella said each item in the work plan is mapped to the 2024 charges. He said a priority will be to investigate the challenges of regulating cyber liability insurance products and assess our data needs to understand this new area of risk. He said the Task Force will also adapt its work plan to address any issues that arise during the year.

Chou said the cybersecurity issues will need to be coordinated with the Cybersecurity (H) Working Group. He said he also invited the American Academy of Actuaries (Academy) Committee on Cyber Risk to come speak at a Cybersecurity (H) Working Group meeting.

4. Discussed the NAIC Rate Model Review Team's Model Review Scheduling

DeFrain said the NAIC Rate Model Review Team currently operates on a first-come, first-served basis when it schedules its states' filing review requests. State insurance regulators initially agreed to the first-come, first-served method in hopes it would be the fairest method to help the most states. The method worked well when the queue was short. Now that the queue is long (with a wait time of more than three months), the only states that can use the service are those that can wait that long to respond to the filing. DeFrain said the Rate Model Review Team is hoping to modify the first-come, first-served method slightly by leaving some openings for: 1) states that have a deadline for response, such as 30 days; 2) states that have requested little assistance during the prior 12 months; 3) emergency requests; and 4) other special circumstances. She emphasized that under the planned method, state insurance regulators would still receive a proposed delivery date at the beginning of the process for a filing review. That date would not change over time due to this new method. DeFrain said that if a motion is wanted, she suggests the Task Force's motion could be to allow NAIC staff to modify its workload process from a strict first-come, first-served process to one that also considers special circumstances.

Citarella agreed with the proposal. He said New Hampshire has not used the process, primarily because the queue is too long. Insurers will likely file an increasing number of models, so this resource is greatly needed. Vigliaturo asked if there is a possibility of increasing the number of staff on the NAIC Rate Model Review Team because the workload is so large. DeFrain said the 2024 budget includes hiring another actuary. She said this does not solve the problem of queues longer than 30 days. She said instead of one new position, the team needs three additional actuaries to meet current demand and get the queue under 30 days. Vigliaturo asked if the Task Force could adopt a motion to increase staffing. After discussion, Citarella said he and DeFrain would talk to leadership to find out how such a need should be handled. Citarella said that with future reviews of vendor models and data reviews, there will be more staff needs down the line.

Dyke asked whether the NAIC can make changes to its process and report the change to the Task Force rather than vote on it. He said that given there was no actual vote for the first-come, first-served method initially, the state insurance regulators do not need to vote now. DeFrain said most of the principles were developed by the Big Data (EX) Working Group (now called the Big Data and Artificial Intelligence (H) Working Group), and there has been no change to principles since then. She said this is the first time a change to the principles is being requested and it is up to the Task Force whether to effectively give the team a nod of approval or officially vote on it. Citarella said it might be better to have a vote so that states acknowledge they agreed to this revised plan (where the state insurance regulator that asks first might not get the earliest deadline). DeFrain said the minutes can reflect agreement or a vote, but the vote is more definitively approved.

Byckovski asked if there were concerns about members of the Task Force voting who do not have the Rate Review Support Services Agreement with the NAIC. DeFrain said she believes it is fair for all members to vote because it

is part of the NAIC budget for all states. She said 37 states currently have the agreement with the NAIC, and she expects that the number of states might increase with the first communication to the commissioners about issues being sent soon after the National Meeting. DeFrain said the models are also getting more complex and harder to review; also, one rate filing could contain five models.

Dyke said it might be useful to develop a procedure manual that would codify the principles and processes. DeFrain said the team has an internal procedures manual that could be split into a regulatory procedure manual and an internal procedures manual that describes who on the team does what. Dyke said it would be helpful to differentiate between what the state insurance regulators decide and what the team needs internally. He said he hoped the regulatory manual would be short.

Chou made a motion, seconded by Darby, to allow NAIC staff to modify its workload process from a strict first-come, first-served process to one that also considers special circumstances. The motion passed unanimously.

5. Discussed the NAIC Rate Model Review Team's GLM Information Needs

DeFrain said that without the full staffing of this team, the team is trying to add efficiency. She said one idea is to document the NAIC Rate Model Review Team's needs to review a generalized linear model (GLM) so that states could: 1) modify their or create a model checklist; or 2) compare information in the model to the NAIC checklist and create an objection to gather all information before asking the states to review. She said some information items in the NAIC white paper have not proved to be essential in the team's review process, so it proposes to deviate from the white paper to narrow the list of items needed up-front in the filing. She said adopting this NAIC checklist might also lead to revising the white paper's appendix.

Sam Kloese (NAIC) said the checklist was first presented at the 2023 Fall National Meeting. He said the items on the list are built from what team members found they were often asking in the first round of objections and responses. He said having that information up front could potentially limit one round of objections, thereby shortening the review process. Kloese said the proposal shows information needs provided in two categories: "essential information" and "sometimes needed information." The items labeled "essential information" are those needed for a full-scope initial assessment. The label "sometimes needed information" is meant for items that may be useful if something appears non-standard about the modeling approach. Kloese said the list is also divided by category. He walked through the list's content.

Kloese said some items, such as indicated and selected factors, are requested to be submitted in Excel. He said that would speed up the process of those parts of the analysis so the team could automate some reviews. Darby suggested the information be requested in both Excel and PDF form. The PDF form is needed so the information is included in the System for Electronic Rates & Forms Filing (SERFF) pipeline, which is a compilation of all documents in the filing. Excel files are not added to the pipeline.

Citarella asked for a few more weeks for state insurance regulators to review the document and submit written comments to the NAIC. Grassel thanked the team for its work on this and noted that as SERFF functions are improved, this could help with states' and NAIC's rate model reviews in the future. Citarella said it might be 2026 before the state insurance regulators see that functionality implemented.

Chou asked if the shared model database is built in a way that makes the review process more efficient. While the database has company, line of business, model name, and other information, he thinks it should be even more detailed. In addition to the name of the telematics model, the database could include coding of whether telematic data is from a telematics device, global positioning system (GPS), or something else. He said that information would be helpful in the future to find the exact filing of when the company filed specific parts of their model.

DeFrain said the group compiles data dictionaries but has not gathered information as specific as proposed. She suggested that Chou meet with NAIC staff to discuss this further. Potentially, regulatory actuaries might need to meet and decide what columns or notes should be added to the database.

6. Discussed Liaison Positions

Citarella said liaison positions were created in 2023 whereby Task Force members who are monitoring other NAIC committee work are asked to bring interesting developments to the Task Force and to share the Task Force's activities with other NAIC groups. He provided a list of last year's liaisons and asked if anyone on the list wished to have their positions reassigned to another member. Citarella said there are a couple of openings this year in the: Title Insurance (C) Task Force, the Statutory Accounting Principles (E) Working Group, and the Third-Party Data and Models (H) Task Force. Grassel volunteered to be the liaison for the third-party work. The revised liaison list, as discussed on the call, is attached (Attachment XXX).

Citarella said he does not expect the liaisons to report at every meeting. He asked liaisons to let him know if there is a topic of interest to present. Citarella also thanked numerous NAIC staff for keeping him apprised of issues.

Having no further business, the Casualty Actuarial and Statistical (C) Task Force adjourned.

SharePoint/NAIC Support Staff Hub/Member Meetings/C CMTE/2024_Spring/CASTF/021324 min.docx

Draft: 3/11/24

Casualty Actuarial and Statistical (C) Task Force
E-Vote
February 14, 2024

The Casualty Actuarial and Statistical (C) Task Force conducted an e-vote that concluded Feb. 14, 2024. The following Task Force members participated: D.J. Bettencourt, Chair, represented by Christian Citarella (NH); Ricardo Lara represented by Lynne Wehmueller (CA); Andrew N. Mais represented by Wanchin Chou (CT); Karima M. Woods represented by David Christhilf (DC); Doug Ommen represented Travis Grassel (IA); Amy L. Beard represented by Scott Shover (IN); Timothy N. Schott represented by Sandra Darby (ME); Anita G. Fox represented by Kevin Dyke (MI); Grace Arnold represented by Phil Vigliaturo (MN); Judith L. French represented by Thomas Botsko (OH); Glen Mulready represented by Andrew Schallhorn (OK); Andrew R. Stolfi represented by David Dahl (OR); Michael Humphreys represented by Michael McKenney (PA); Michael Wise represented by Will Davis (SC); Cassie Brown represented by J'ne Byckovski (TX); Kevin Gaffney represented by Rosemary Raszka (VT); Mike Kreidler represented by Eric Slavich (WA); and Allan L. McVey represented by Juanita Wimmer (WV).

1. Adopted the 2020/2021 Auto Report

The Task Force conducted an e-vote to consider adoption of the 2020/2021 *Auto Insurance Database Report* (Auto Report). The motion passed unanimously.

Having no further business, the Casualty Actuarial and Statistical (C) Task Force adjourned.

SharePoint/NAIC Support Staff Hub/Member Meetings/C CMTE/2024_Spring/CASTF/021424 Auto evote min.docx

Draft Pending Adoption

Draft: 12/15/23

Casualty Actuarial and Statistical (C) Task Force
Orlando, Florida
December 1, 2023

The Casualty Actuarial and Statistical (C) Task Force met in Orlando, FL, Dec. 1, 2023. The following Task Force members participated: D.J. Bettencourt, Chair, represented by Christian Citarella (NH); Chlora Lindley-Myers, Vice Chair, represented by Julie Lederer (MO); Lori K. Wing-Heier represented by Sian Ng-Ashcraft (AK); Mark Fowler represented by Chuck Hale (AL); Ricardo Lara represented by Mitra Sanandajifar (CA); Andrew N. Mais represented by George Bradner and Wanchin Chou (CT); Michael Yaworsky represented by Michelle Brewer (FL); Doug Ommen represented by Travis Grassel (IA); Dana Popish Severinghaus represented by Julie Rachford (IL); Amy L. Beard represented by Lawrence Steinert (IN); Vicki Schmidt represented by Nicole Boyd (KS); Timothy N. Schott represented by Sandra Darby (ME); Anita G. Fox represented by Kevin Dyke (MI); Grace Arnold represented by Phil Vigliaturo (MN); Mike Causey represented by Robert Croom (NC); Eric Dunning represented by Michael Muldoon (NE); Alice T. Kane represented by Melissa Robertson (NM); Judith L. French represented by Tom Botsko (OH); Glen Mulready represented by Andrew Schallhorn (OK); Michael Humphreys represented by Michael McKenney (PA); Cassie Brown represented by Miriam Fisk (TX); Kevin Gaffney represented by Rosemary Raszka (VT); Mike Kreidler represented by Eric Slavich (WA); and Allan L. McVey represented by Ellen Potter (WV).

1. Adopted its Oct. 24, Oct. 10, Sept. 5, Aug. 30, and Summer National Meeting Minutes

The Task Force met Oct. 24, Oct. 10, Sept. 5, and Aug. 30. During these meetings, the Task Force took the following action: 1) adopted the *Auto Insurance Database Average Premium Supplement* and the 2021 *Dwelling, Fire, Homeowners Owner-Occupied, and Homeowners Tenant and Condominium/Cooperative Unit Owner's Insurance Report* (Homeowners Report); 2) adopted its proposed 2024 charges; and 3) adopted a blanks proposal to require insurers to report 10 years of data for all lines of business in Schedule P.

Botsko made a motion, seconded by Chou, to adopt the Task Force's Oct. 24 (Attachment One), Oct. 10 (Attachment Two), Sept. 5 (Attachment Three), Aug. 30 (Attachment Four), and Aug. 12 (*see NAIC Proceedings – Summer 2023, Casualty Actuarial and Statistical (C) Task Force*) minutes. The motion passed unanimously.

2. Adopted the Report of the Actuarial Opinion (C) Working Group

Fisk said the Actuarial Opinion (C) Working Group met Sept. 27 and Aug. 23. During these meetings, the Working Group took the following action: 1) adopted the *Regulatory Guidance on Property and Casualty Statutory Statements of Actuarial Opinion, Actuarial Opinion Summaries, and Actuarial Reports for the Year 2023* (2023 Regulatory Guidance); and 2) exposed the draft 2024 Statement of Actuarial Opinion instructions for property and title for a 30-day public comment period that ended Oct. 27. The Working Group plans to consider adoption in early 2024.

Fisk made a motion, seconded by Dyke, to adopt the report of the Actuarial Opinion (C) Working Group, including its Sept. 27 (Attachment Five) and Aug. 23 (Attachment Six) minutes. The motion passed unanimously.

3. Adopted the Report of the Statistical Data (C) Working Group

Darby said the Statistical Data (C) Working Group met Oct. 30 and Sept. 29. During these meetings, the Working Group took the following action: 1) discussed the statistical reports. The Working Group decided to adopt more granular insurance ranges for homeowners' data collection and a separation of sellers into mutual and reciprocal companies versus stock companies; and 2) adopted the 2021 Homeowners Report. Requests for the data for the

2022 Homeowners Report, the 2022 auto database, and average premium supplement have been sent to participating statistical agents and residual markets with an estimated release in spring of 2024 for both reports.

Darby made a motion, seconded by Chou, to adopt the report of the Statistical Data (C) Working Group, including its Oct. 30 (Attachment Seven) and Sept. 29 (Attachment Eight) minutes. The motion passed unanimously.

4. Heard a Report on its 2024 Schedule P Proposal to the Blanks (E) Working Group

Citarella said that during its Oct. 10 meeting, the Task Force adopted a proposal to the Blanks (E) Working Group to require 10 years of reporting for all lines of business in Schedule P. The motion included the request to specify in the instructions that all 10 years of data would be reported at the end of 2024. Rebecca Armon (TX) made those changes as instructed. Subsequently, Blanks (E) Working Group staff modified the proposal to: 1) incorporate any Schedule P changes already adopted by Blanks (E) Working Group; and 2) remove unneeded information to save space in the proposal. Beyond making the attachments to the proposal shorter, the significant difference is that the already-adopted agreement by the Blanks (E) Working Group was to include pet insurance as its own line of business. Pet insurance was initially planned by the Blanks (E) Working Group to be a two-year line of business in Schedule P; with the Task Force's proposal, it would now be proposed to follow suit with other two-year lines of business and require 10 years of data. This changes the blanks proposal form in that there are now seven lines of business proposed to change from two to 10 years of data, and pet insurance is now specifically mentioned.

Blanks (E) Working Group leadership will consider exposing the proposal after the Fall National Meeting.

5. Heard a Report about the Homeowners Insurance Data Call

Aaron Brandenburg (NAIC) provided a report on the upcoming Property and Casualty Insurance (C) Committee's homeowners insurance data call. Brandenburg said the project will address the Committee's charge to assist state insurance regulators in better assessing their markets and insurer underwriting practices by developing property market data intelligence.

A drafting group of subject matter experts (SMEs) identified the questions regulators want to be able to answer. Brandenburg said there is a longer list, but the questions are broad ones, such as: 1) What is driving affordability and availability challenges in the homeowners' market? 2) Are insurers changing limits, deductibles, and policy coverages? 3) How has the cost of residential homeowners' insurance changed by geography?

For each question, the drafting group created formulas and metrics and then developed data elements that would go into those metrics—both insurer data and some third-party data. The drafting group then proceeded to use the insurer data elements to create a data template. The data template asks for five years of data, at a ZIP code level and by homeowner policy type. Some of the data elements included within the final template include: premiums and policies – with and without certain coverages; non-renewals and cancellations; claims and losses; coverage a, b, c, and d amounts; deductibles, bucketed by type of deductible, whether a flat dollar or percentage deductible and by peril type; and mitigation discounts.

Brandenburg said the next steps are to decide the timing of the data call, have states sign up to participate in the data call, and decide how much of the market will be requested to submit data.

6. Received a Report on the Speed to Market (D) Working Group

Maureen Motter (OH) submitted a written report. In the report, she said the last significant revision to the *Product Filing Review Handbook* (Handbook) was in 2016. Fueled by the updates that the Task Force provided regarding the review of models, the entire Handbook was reviewed, updated, and posted to the Speed to Market (D)

Working Group's web page. Comments on the updated Handbook will be taken until Jan. 12, 2024. She said the aim is to approve the updated Handbook in February 2024. Going forward, there will be the ability to suggest Handbook revisions annually.

7. Received a Report on the SERFF Modernization Project

Darby said the System for Electronic Rates & Forms Filing (SERFF) group has met monthly and met in person in October for a training session. She said the Interstate Insurance Product Regulation Commission (Compact) is effectively doing a pilot with a life and annuity focus, so it should be distributed for use in 2024. A new Tableau dashboard, which all regulators have access to, contains different metrics such as completion dates and timing of objections. This is expected to be rolled out in 2025.

Some of the new features include additional checks for filing submissions as well as for completeness of the filings. States can choose to use the checklist they have internally trained the new SERFF to use for checks. There will be SERFF integration with other business partners. She said there will be customization available for each SERFF user.

8. Received a Report on the Capital Adequacy (E) Task Force and Property and Casualty Risk-Based Capital (E) Working Group

Botsko gave an update on the Capital Adequacy (E) Task Force's Risk Evaluation Ad Hoc Group. He mentioned that the Ad Hoc Group is designed to evaluate risk-based capital (RBC), both from a holistic view, as well as considering any other factors that should be added or removed. He mentioned that three subgroups were created: 1) Geographic Concentration, which serves to identify localized companies; 2) Guidelines & Education, which serves to re-educate about the purpose of RBC and identify minimum capital for companies; and 3) Asset Concentration, which serves to evaluate the need to have asset concentration factors.

9. Received a Report on the Innovation, Cybersecurity, and Technology (H) Committee

Citarella said the *Use of Artificial Intelligence by Insurers* model bulletin is expected to be adopted by the Innovation, Cybersecurity, and Technology (H) Committee and then presented to Plenary at this Fall National Meeting. As a model bulletin, it would be available to each jurisdiction to adapt to their laws and regulations before issuance. He said the aim is to encourage a uniform method of carrier corporate governance around artificial intelligence (AI) and machine learning (ML) that will ease the regulatory process down the road. There is nothing in the bulletin that specifically addresses the use of AI in ratemaking. The model outlines guidelines and expectations for the insurance providers with the goal to protect consumer data and maintain professional ethical standards in the use of big data and predictive analytics.

New charges are proposed for the Innovation, Cybersecurity, and Technology (H) Committee. First, there are a new set of tasks for the Cybersecurity (H) Working Group to monitor industry trends pertaining to cyber insurance in areas such as availability and affordability of cyber coverage, disclosures, limits, policy language and trends in requirements, underwriting practices, and the role of reinsurance. Furthermore, the Working Group is specifically charged to coordinate with the Task Force, among other NAIC groups, to address cyber insurance issues. This coincides with the focus of the Task Force on cyber insurance in 2024. Second, a new Third-Party Data and Models (H) Task Force was created with charges to do the following: 1) develop and propose a framework for the regulatory oversight of third-party data and predictive models; 2) monitor and report on state, federal, and international activities related to governmental oversight and regulation of third-party data and model vendors and their products and services; and 3) provide recommendations to the committee regarding responses to such activities.

Citarella said it would be preferable for some Task Force members to join the new Third-party Data and Models (H) Task Force. He said the actuaries have seen AI in ratemaking with models that use machine learning for tiering or to inform a generalized linear model (GLM). He said the Task Force will need to work collaboratively and in coordination with Kris DeFrain's (NAIC) rate model review team and this new Task Force to effectively meet the regulatory challenges in this space.

10. Received a Report on the Cybersecurity Insurance Supplement

Sara Robben (NAIC) described proposed changes to the Cybersecurity Insurance Supplement being made at the Blanks (E) Working Group. She said the aim is to improve the quality of reporting. She said two current reporting issues include: 1) reporting for package policies has been incorrect because cyber can be provided via endorsement, which is included, or packaging in another policy, which was sometimes included. Often it was not included when the premium is undiscernible for cyber when written in a package; and 2) reporting for claims made versus occurrence policies was confusing because sometimes both types are included on the same policy form. Robben said the proposal maintains first-party versus third-party data reporting but removes identify theft reporting. She said definitions were strengthened and made consistent, and a chart was added to identify the types of coverage written in each state. New policy buckets include primary policies, endorsements to another policy, and excess policies. For endorsements, reporting would be for incurred losses instead of case reserves.

11. Received a Report on the Special (EX) Committee on Race and Insurance

Vigliaturo said Nicole Price (Lively Paradox) presented at the diversity, equity, and inclusion (DE&I) event. He said she discussed empathy and encouraged people to go beyond recognition to take action. He said the Property/Casualty (P/C) Workstream met with two large auto carriers. One presented on the claims process, and the other presented on the rating process.

12. Received a Report from the NAIC Rate Model Review Team

DeFrain reported on the NAIC Rate Model Review Team's current activities. She said her work to create this team began at the Big Data (EX) Working Group in 2018 with a request to research the possibility of creating an NAIC service. The NAIC officially implemented the project in 2019 with a pilot and consultant Dorothy Andrews. Then DeFrain hired one full-time staff member, Sam Kloese (NAIC), in 2020 and other actuaries (Dorothy Andrews, Roberto Perez, and April Yu) since. She said Nancy Beydler (NAIC) now provides administrative assistance by gathering early background work and then finalizing the reports. DeFrain said an additional actuary is likely to be hired in 2024. She said hiring one actuary will help to produce more reports but will not be enough staff support to decrease the queue from three months to below 30 days.

Since 2020, 37 states have signed the NAIC Rate Review Support Services Agreement, which allows states the option to use the NAIC rate model review services. These services include an NAIC rate model review, a shared model database, and numerous education and training opportunities. DeFrain said the team produced 129 rate model reports last year and completed 158 reports so far this year. A multitude of Book Club recordings are on the Task Force's website on the documents tab. She said the team is currently creating module training, which will be a more "hands-on" educational program to show regulatory staff what to look for in a filing and how to interpret rate filing documentation. She said the NAIC continues to abide by the primary principle that the NAIC will not assume any regulatory authority.

DeFrain said feedback from state insurance regulators has been that the NAIC resource is valuable to them, with some states requesting model reviews and other states evaluating those reports in the database to potentially apply to their state's filings. She said it is difficult in an open session to describe the team's findings because of confidentiality provisions. At a high level, she said the big innovations in AI rate reviews have been in auto

insurance telematics and in neural networks with use of techniques to evaluate and score property, such as roofs, using pictures. There is a lot of creativity when it comes to the data being used to allocate insurance prices by risk category. She said the requirement to provide rational reasons for the use of specific variables has aided regulators to make decisions about whether specific variables are unfairly discriminatory. The team has documented numerous technical issues, including statistical or actuarial errors, and has evaluated new and more complex statistics and methodologies.

With many initial objections to insurers in rate model reviews being requests to insurers for additional information, regulators using the NAIC service want to help speed up the entire rate model review process. These regulators asked the NAIC team to create a list of GLM information items needed in an insurer's rate filing so the NAIC can conduct what it considers to be a full-scope review. DeFrain said the list was included in materials for the meeting, and the NAIC team is requesting regulatory feedback in regard to the categorization of what information is essential and what remains as sometimes needed information.

Sam Kloese (NAIC) presented a first draft of a potential list of rate filing documentation needed before submitting a rate review request to the NAIC (Attachment Nine). He said the current plan is for regulators to evaluate what information is provided by the insurer and obtain any additional items on the list before sending the filing for review by the NAIC Rate Model Review Team. He said two other improvements on the speed to market are: 1) a request that certain information be provided in Excel so it can be evaluated quickly; and 2) the introduction of some automation in the review process.

13. Heard Reports from Professional Actuarial Associations

The American Academy of Actuaries (Academy), the Actuarial Board for Counseling and Discipline (ABCD), the Actuarial Standards Board (ASB), the Casualty Actuarial Society (CAS), and the Society of Actuaries (SOA) provided reports on current activities and research.

SharePoint/NAIC Support Staff Hub/Committees/C Cte/CASTF/120123 Minutes CASTF.docx

Draft: 1/23/24

Actuarial Opinion (C) Working Group
E-Vote
January 5, 2024

The Actuarial Opinion (C) Working Group of the Casualty Actuarial and Statistical (C) Task Force conducted an e-vote that concluded Jan. 5, 2024. The following Working Group members participated: Miriam Fisk, Chair (TX); Julie Lederer, Vice Chair (MO); Susan Andrews (CT); David Christhilf (DC); Chantel Long (IL); Sandra Darby (ME); and Tom Botsko (OH).

1. Adopted the 2024 Property and Title SAO Instructions Proposal

The Working Group conducted an e-vote to consider adoption of the blanks proposal for the 2024 Statement of Actuarial Opinion (SAO) instructions for property and title insurance. The motion passed unanimously.

Having no further business, the Casualty Actuarial and Statistical (C) Task Force adjourned.

SharePoint/NAIC Support Staff Hub/Member Meetings/C CMTE/2024_Spring/CASTF/AOWG/010524 SAO Blanks evote min.docx

Draft: 12/20/23

Statistical Data (C) Working Group
Virtual Meeting
December 11, 2023

The Statistical Data (C) Working Group of the Casualty Actuarial and Statistical (C) Task Force met Dec. 11, 2023. The following Working Group members participated: Sandra Darby, Chair (ME); Qing He, Vice Chair, and George Bradner (CT); Charles Hale (AL); Arthur Schwartz and John Sobhanian (LA); Cynthia Amann (MO); Christian Citarella (NH); Tom Botsko (OH); Andrew Schallhorn (OK); and David Dahl (OR). Also participating was: Luciano Gobbo (CA).

1. Discussed Changes to the NAIC *Report on Profitability by Line by State*

Starting with the NAIC's *Report on Profitability by Line by State* (Profitability Report), Darby discussed where to place the new sections—mutual and reciprocal and stocks—in the report. She said the current section, which is a total, cannot be replaced with the two new sections because mutual and reciprocal and stocks will not add up to the total. Darby suggested either putting the two new sections directly after the total or putting the two new sections at the end in an appendix.

Schwartz referenced a paper by Richard Roth about fundamental differences between mutual and reciprocal, stock insurers, and long-term profitability. Schwartz stated that his original proposal was only to add mutual and reciprocal and stocks as a countrywide basis and not in its entirety by line and by state.

Darby asked whether a countrywide breakout could be provided, and NAIC staff responded that it could. Darby asked the Working Group if it wanted to include both the countrywide breakout and the by state, by line breakout, which was already produced.

Birny Birnbaum (Center for Economic Justice—CEJ) suggested that leaving by state and by line would be beneficial to states when they are assessing competition in their markets. Birnbaum said nationwide totals will vary dramatically across states because of different percentages of mutual and reciprocal and stock companies in a state.

Bradner made a motion, seconded by Citarella, to add the countrywide mutual and reciprocal and stocks pages to the report. The motion passed unanimously.

Darby then read the suggested language for the Profitability Report:

> State insurance regulators may want to distinguish between types of insurers if the profitability metrics are used in the context of a rate filing. To show the difference in the profitability metrics for Mutual and Reciprocal insurers separately from Stock insurers, the NAIC provided this information in appendices beginning with the 2022 data year.
>
> A stock insurance company is defined as a business owned by stockholders. A mutual insurance company is a privately held insurer owned by its policyholders, operated as a non-profit that may or may not be incorporated.

Birnbaum suggested softening the language of the first paragraph:

The report provides profitability by line for all insurers and is also broken out for stock insurers only and for mutual and reciprocal insurers only starting with the 2022 data year.

A stock insurance company is defined as a business owned by stockholders. A mutual insurance company is a privately held insurer owned by its policyholders and operating as a nonprofit that may or may not be incorporated.

Botsko made a motion, seconded by Dahl, to accept the language offered by Birnbaum. The motion passed unanimously.

2. Discussed Changes to the NAIC *Competition Database Report*

Darby discussed how to add the extra columns, mutual and reciprocal, stock, and market share of the top 20 market share to the *Competition Database Report*.

Steve Kincaid (NAIC) said adding to the current page would be tight. Kincaid suggested either using a smaller font or an extra page. Birnbaum suggested creating the table on a legal-size sheet. The Working Group agreed putting on a legal-size sheet would make sense.

Darby asked if the Competition Report needed to be delayed due to changes, if an addendum needed to be added later, or if the report should be released without changes this year. The Working Group decided to let NAIC staff work on adding the columns and providing a single report with changes.

3. Received an Update on the Homeowners Report and Auto Report

Darby reported the 2021 *Dwelling Fire, Homeowners Owner-Occupied, and Homeowners Tenant and Condominium/Cooperative Unit Owner's Insurance Report* (Homeowners Report) is with the Casualty Actuarial and Statistical (C) Task Force, and the 2022 Homeowners Report is going to be out later this spring on the expedited timeline. Darby said to expect the Homeowners Report to be released in the spring going forward.

Darby reported that the 2019–2020 *Auto Insurance Database Report* (Auto Report) had a data issue that was corrected, and now the data is currently with the Working Group to review. Darby said if there are no issues, the report will be voted on and moved to the Casualty Actuarial and Statistical (C) Task Force.

Aaron Brandenburg (NAIC) added that the 2021 Homeowners Report did go through the Casualty Actuarial and Statistical (C) Task Force and will go out to commissioners for embargo soon. It will then be released to the public. Brandenburg said that data for the 2022 Homeowners Report is being collected now. Brandenburg reminded the group that California data is collected every other year. Darby said NAIC staff will research whether the Working Group had previously decided to leave California out of the reports when the data is not available.

Having no further business, the Statistical Data (C) Working Group adjourned.

SharePoint/NAIC Support Staff Hub/Member Meetings/C CMTE/2023_Fall/CASTF/SDWG/StatDataWGmin_1030

GAIN COMPLIANCE
900 Walnut St, Suite 100
Des Moines, IA 50309

January 19, 2024

Ms. Pat Gosselin, Chair
Blanks Working Group
National Association of Insurance Commissioners
1100 Walnut St.
Kansas City, MO 64106

SUBJECT: Blanks Working Group ("BWG") proposals with comments due on Monday, January 22, 2024

Dear Ms. Gosselin:

Gain Compliance is an NAIC certified Annual Statement vendor, focused on compliance reporting within the insurance industry. AXA XL is a leading provider of P&C global commercial insurance offering insurance and reinsurance to enterprises of every kind and size. Collaboratively, we appreciate the opportunity to review and comment on the proposal that was exposed via email on Thursday, December 21, 2023. Gain Compliance and AXA XL support the proposal and the justification and benefits of the change.

2023-16BWG [Change Schedule P to show 10 years of data and a "prior" row for all lines of business beginning in 2024.]

We recommend the following changes to the exposure:

- Add clarification to the instructions for the "prior" line calculations for Parts 2, 3 and 5 and for claim count columns in Part 3. The Schedule P instructions for this information are either vague or not included at all, leaving the preparer or software vendors to interpret the data requested.
    - Part 2 - Line 1, Column 1, should include the loss and expense reserves (case + bulk + IBNR) previously reported at year-end of the last year for all accident years prior to the last year. The subsequent development each year across Line 1 will relate to these reserves and will show the subsequent payments and outstanding reserves. *Because loss and DCC payments accumulate over long periods of time, the prior year annual payments from Part 3 for Line 1, Column 2 and Line 2, Column 2 should be excluded from the reserves.*
        - *For example, Line 1, Column 1 should agree with Prior Year Annual, Part 2, Line 1, Column 2 + Prior Year Annual, Part 2, Line 2, Column 2 - Prior Year Annual Part 3, Line 1, Column 2 - Prior Year Annual Part 3, Line 2, Column 2*
    - Part 3 - There is no specific guidance in the instructions for Line 1 - Prior for Columns 11 and 12 claim payments. We recommend that clarification be added to the instructions for Columns 11 and 12, indicating the prior line should include the cumulative number of claims closed excluding

all claims closed before the last reporting year shown on the schedule (similar to the calculations on Lines 2 through 10, if appropriate).

- Part 5 - For section 1, we recommend clarification be added to the instructions regarding the expectation for Line 1, Column 10. Would the Task Force and Working Group also be willing to offer guidance as to whether this should be equal to Part 3, Line 1, Column 11? If these values will not match, can the Task Force and Working Group provide examples where they may deviate?

We have the following comments and questions after reviewing the exposure:

- Not all lines of business require claim counts for Column 12 and Column 25 in Part 1 and Column 11 and Column 12 for Part 3. Would the Task Force and Working Group be willing to enhance the instructions to discuss why some lines require disclosure of claim counts while others do not? This is a commonly asked question from our users.
- The NAIC specification currently does not include columns to capture the tabular discounting for case and IBNR reserves that is needed to calculate the gross incurred net losses in Parts 2 and 4. Non-tabular data is collected in Part 1, Columns 32 and 33 to develop the net reserves in Columns 35 and 36. Since the Schedule P specification is already changing to adjust the short-tail lines to 10 years of data, would the Task Force and Working Group consider an additional change to the specification to include columns to capture the tabular discount information, even if these are electronic only columns and not included in the PDF?

We appreciate the opportunity to provide feedback to the Blanks (E) Working Group. Please feel free to contact either of us at (319) 310-4087 or (203) 964-3443.

Sincerely,

Tricia Henderson
Head of Accounting Policy/NAIC Liaison
Gain Compliance
(319) 310-4087
tricia@gaincompliance.com

Rick Decker
Sr. Manager - Financial Reporting & Accounting
AXA XL, a division of AXA
(203) 964-3443
richard.decker@axaxl.com

Title of Exposure Draft: Risk Classification (for All Practice Areas)

Comment Deadline: May 1, 2024

Instructions: Please review the exposure draft, and give the ASB the benefit or your recommendations by completing this comment template. Please fill out the tables within the section below, adding rows as necessary. Sample for completing the template provided at the following link: http://www.actuarialstandardsboard.org/email/2020/ASB-Comment-Template-Sample.docx

Each completed comment template received by the comment deadline will receive consideration by the drafting committee and the ASB. The ASB accepts comments by email. Please send to comments@actuary.org and include the phrase 'ASB COMMENTS' in the subject line. Please note: Any email not containing this exact phrase in the subject line will be deleted by our system's spam filter.

The ASB posts all signed comments received to its website to encourage transparency and dialogue. Comments received after the deadline may not be considered. Anonymous comments will not be considered by the ASB nor posted to the website. Comments will be posted in the order that they are received. The ASB disclaims any responsibility for the content of the comments, which are solely the responsibility of those who submit them.

I. Identification:

Name of Commentator / Company

II. ASB Questions (If Any). Responses to any transmittal memorandum questions should be entered below.

Question No.	Commentator Response

III. Specific Recommendations:

Section # (e.g. 3.2.a)	Commentator Recommendation (Please provide recommended wording for any suggested changes)	Commentator Rationale (Support for the recommendation)
2.1	We recommend that this definition be discussed by the task force and revised for clarity.	1. The phrase "The result of actions regarding an element of choice taken by risk subjects" is unclear. 2. This definition appears to lack the key feature of adverse selection: the information asymmetry between the risk subject and the administrator of the financial or personal security system.
2.8	We recommend that this definition be discussed by the task force and revised.	The definition of "unintended bias" doesn't appear to capture the concept of "bias." Rather, this appears to be a definition for "unintended impacts" or "unintended outcomes." This definition would be satisfied if a risk classification system put everyone into the same class, but most would not consider that "unintended bias." With an unclear definition it is unclear what the actuary is supposed to do in Section 3.4.
3.2	Consider adding "A risk classification system assigns each risk to a risk class based on the results of measuring or observing its risk characteristics," which is in the current ASOP No. 12.	The concept of being able to measure or observe the risk characteristics is important. ASOP No. 25 on credibility defines risk characteristics as "Measurable or observable factors or characteristics that are used

		to assign each risk to one of the risk classes of a risk classification system."
3.2.6	Consider changing "The actuary should take into account whether the risk characteristics can be objectively determined" back to "The actuary should select risk characteristics that are capable of being objectively determined," which is the language in the current ASOP No. 12.	The exposure draft appears to weaken the language in the current ASOP. Objectivity is important when selecting risk characteristics.
3.2.6	When describing what is meant by "objectively determined," use "and" instead of "or."	The word "and" should be used because the class should be both 1) based on verifiable facts and 2) not easily manipulated.
3.2.7	Consider making subsections a. and b. their own paragraphs, such that section 3.2 would have 11 paragraphs instead of the current nine.	1. Subsections a. and b. don't appear related to the concept of practicality. 2. Subsection a. is one of the hallmarks of risk classification and making it a subsection seems to diminish its importance. In addition, we recommend considering adding definitions of credibility and homogeneity given the importance to this work.
4.3	Consider changing this to "Nothing in this standard is intended to require the actuary to disclose confidential information, except where required by statute or regulation."	Certain state statutes say that anything associated with or supporting a rate application is subject to public inspection.

IV. General Recommendations (If Any):

Commentator Recommendation (Identify relevant sections when possible)	Commentator Rationale (Support for the recommendation)
Add "Rates within a risk classification system would be considered equitable if differences in rates reflect material differences in expected cost for risk characteristics," from section 3.2.1 of the current ASOP No. 12.	The current ASOP 12 refers to "expected cost" twice. Both statements about "expected cost" are proposed to be removed from the ASOP completely. Putting this statement back in is helpful for describing one of the key purposes of risk classification.
The current ASOP references risk classification as "the classification of individuals or entities into groups intended to reflect the relative likelihood of expected outcomes" (section 1.2), and the definition of "risk classification system" in section 2.10 states that risks are assigned to groups "based upon the expected cost or benefit of the coverage or services provided." Consider adding similar language to sections 1.2 or 2.5 of the exposed ASOP.	The exposed ASOP doesn't appear to state the purpose of risk classification or tie risk classification to expected outcomes. Some information is provided in the background section of the appendix, but it would be helpful if the body of the ASOP referenced why an actuary might want to classify risks into groups. ASOP No. 25 on credibility defines a "risk classification system" as "A system used to assign risks to groups based upon the expected cost or benefit of the coverage or services provided." This definition, which aligns with that in the current ASOP, seems more useful and practical than the definition of "risk classification framework" in section 2.5 of the exposed ASOP.
Section 3.2.3 is important but would benefit from more clarity.	1. Section 3.2.3 says, "The actuary should have a rational explanation that the relationship between a risk characteristic and a risk measure is not obscure, irrelevant, or arbitrary." What is an example of an obscure, irrelevant, or arbitrary relationship that nevertheless results in a useful risk predictor?

	2. Section 3.2.3 says, "Whether it is appropriate to use a risk characteristic may depend on societal, regulatory, and industry practices or may depend on the scope and context of the actuary's work." Is this saying there are exceptions where class rates can deviate from expected cost? If so, this may run afoul of state statutes against "unfair discrimination." Furthermore, is this the actuary's responsibility or a management decision? If it may be the actuary's responsibility, we suggest adding "legislative and judicial pressures."
It appears that the exposure draft has combined sections 3.2.5, 3.2.6, and 3.2.7 of the current ASOP into the second sentence of section 3.2.8. It might be useful to keep these as separate sections and state that the actuary should consider these external influences.	Section 3.2.8 suggests that the actuary needs to consider external influences "that have the potential for material adverse impacts" and then gives examples of external influences. Rather, it's important to consider these external influences (applicable law and business, government, and industry practices) in every risk classification project, whether or not they could lead to material adverse impacts.
Consider addressing unfair discrimination in the standard.	The draft discusses "unintended bias" but does not mention "unfair discrimination." "Unfair discrimination" is the language used in many states' rating statutes. If addressed, the ASOP should state that the definition can vary by state.

V. Signature:

Commentator Signature	Date

11/28/23

NAIC Rate Model Review Team's GLM Checklist

Regulators frequently using the NAIC rate model review service asked the NAIC rate model review team to create a list of rate filing documentation needed for the NAIC to complete a full-scope rate model review. The goals of such a list are to make the NAIC review process more efficient and expeditious. Regulators may evaluate this list and determine the state's needs. Regulators can share this list with insurers, can revise the state's rate filing checklist, or can communicate with insurers through rate filing objections, when needed.

The list is divided by "Essential Information" and "Sometimes Needed Information." These terms are defined in this table:

Category	Description
Essential Information	Information that the NAIC rate model review team requests before writing a full-scope initial assessment of a model.
Sometimes Needed Information	Information that the NAIC model review team finds useful for model reviews but may only be needed if something appears non-standard about the modeling approach. Regulators may want to wait to request such information from insurers only when requested in the initial NAIC report.

Model Introduction – Essential Information

- A narrative discussing what the company is trying to accomplish with the model, including the following details:
  - Is this a new model or refresh? What is the prior model's SERFF number (if applicable)?
  - Does the filing impact existing renewals?
  - Who is the target consumer?
  - What is the GLM intended to model? (Frequency, Severity, Loss Ratios, Pure Premium, etc.)
  - What is being optimized? Does the model consider anything other than differences in loss cost?
- A narrative discussing the specifications and high-level assumptions of the model, including the following details:
  - Number & Type of models (GLM, GBM, etc.)
  - Split of the data into models (by coverage, by peril, etc.)
  - Split of the data into datasets (training, test, holdout)
  - How models were combined to derive the final rating algorithm

Model Introduction – Sometimes Needed Information

- A narrative discussing the credentials of the modeling team, including the following details:
  - Name of each individual
  - Relevant educational experience
  - Relevant credentials and designations
  - Years of experience building predictive models
  - Years of experience in the insurance industry

- Discuss how Actuarial Standards of Practice (ASOPs) 12, 23, 41, and 56 were considered in building the models.
- Describe the software used to build the models.
- Provide copies of or links to academic references for their modeling techniques.
- A table listing the states where the model has been filed for review, the SERFF tracking number, and an indicator showing whether the filing has been approved.

Data – Essential Information

- A narrative providing the description of each data source including the following:
    - Informational materials or website links for each 3rd party
    - Commentary on how the company reviewed the veracity of the data source
    - Why the company believes the data source is useful for the model's intended purpose
    - Disclosure of known data errors
    - SERFF filing numbers where the use of the data was previously approved (if applicable)
- A description of the relevance of the data
    - The lines of business and companies included should be identified
    - Description of any considerations or adjustments made to make the data more applicable for its intended use
- A data dictionary provided as a table with the following columns:
    - Data Source (Vendor name or "Internal")
    - Variable name
    - Alternate names appearing in other filing documents
    - Data types (discrete, continuous, logical, categorical)
    - Treatment Type (Model, Control, Offset, Target)
    - Possible values (Empirical min and max for numerical variables, all categories for categorical variables)
- Tables showing summary metrics for each dataset by year (training, testing, holdout)
    - Year
    - Losses
    - Exposures (or Policy Count)
    - Claim Count (if applicable)
- A narrative on how the company determined the final variables to include in the final model
- A narrative on the data accuracy and data reconciliation process
    - Description of the methods used to compile, filter, and/or merge data from different sources
    - How the data was reconciled to other sources
- A listing of the rational explanation for each modeled variable that discusses why it would plausibly impact insurance risk as discussed in the CASTF white paper[1].
- A guarantee that the modeling dataset will be retained for at least 7 years
- A description of any dimensionality reduction techniques (PCA, clustering, etc.) that were applied to the data.
- An Excel file with 100 anonymized sample modeling records including all predictor variables and target variables.

Data – Sometimes Needed Information

- A description of steps taken to meet state requirements regarding unfair discrimination (if applicable).

[1] https://content.naic.org/sites/default/files/inline-files/9-15%20CASTF%20-%20Predictive%20Model%20White%20Paper%209-09-2020_1.pdf

- A listing of variables which are subject to the fair credit reporting act (if applicable).
- A table showing the data volume distribution by state for each dataset (training, testing, holdout)

Modeling – Essential Information

- A narrative discussing the specifications and assumptions of the model, including the following details:
    - Form of the regression equation
    - Distribution assumed for the error term
    - The link function (if applicable)
    - Weights used in regression (if appliable)
    - Hyperparameter values and tuning procedure (if applicable)
- A description of how the model differs from prior versions of the model (if applicable).
- A description for each control or offset variable of why it was necessary to treat them as control/offset variables.
- A description of how the variables with null or missing values will be treated, including the following:
    - A table showing the rate of null or missing values for each variable
    - A description of the scenarios which generated null or missing values
    - A description of how each null or missing value is treated (might include imputation method or simply left in as a control)
    - A description of what happens to null and/or missing values when generated in production. (Is there a rating factor applied for null/missing or is the data populated before policy issuance?)
- A description of any large loss capping applicable to the dataset
    - Identify the size of the large loss cap
    - Identify the percentile of claim severity represented by large loss cap
- A description of adjustments and modifications to the data including trending, loss development, capping at minimums or maximums, and removal of outliers.
- A description of variable transformations applied to the data. The description should include the name of each transformation technique used and an example transformation complete with a sample unadjusted value and a final transformed value.
- A description of each feature engineered variables. The description should include the rationale behind the feature engineered variable and a sample calculation including unadjusted original variable values and the final feature engineered variable value.
- A description of how binning was applied to numeric variables and how categorical variable values were grouped together.

Modeling – Sometimes Needed Information

- Deviance residual plots for each model demonstrating the appropriateness of the model assumptions.

Validation – Essential Information

- A narrative on how the model was validated and assessed for model stability
- A narrative on how the model was assessed for improvement over the prior version of the model (if applicable)
- An Excel file containing model output in this format:
    - Each model is a separate worksheet
    - Column A is Variable Name
    - Column B is Variable Level Name
    - Column C is the coefficient
    - Column D is the p-value (if applicable)
    - Column E is the 95th confidence interval lower bound (if applicable)
    - Column F is the 95th confidence interval upper bound (if applicable)
- Ventile plots (quantile plots with at least 20 buckets) for both state specific data and countrywide data, built on data not used for model training. Each plot should include lines for both predicted averages and actual average.
- Lorenz curve for each model built on countrywide data. The plot should include the Lorenz curve and the equality reference line. The plot should also include the Gini value for the model.
- An Excel file containing correlation matrices in this format:
    - Each model's correlation matrix is a separate worksheet
    - Row 1 and Column 1 include variable names
    - The rest of the table displays the correlation metrics
- Commentary on which correlation metric (Pearson's, Cramer's V, etc.) was provided in the correlation matrix Excel file

Validation – Sometimes Needed Information

- A description of how often the model will be validated against new data in the future
- A double lift chart comparing the newly proposed model and the current model (if applicable)
- Actual vs. Expected plots by model and variable (aka "Univariate Plots") which show the closeness between actual averages and predicted averages.
- AIC tests showing the new AIC after the introduction of each additional predictor variable
- F-nested model tests comparing the full model to subset models excluding one variable at a time to demonstrate the significance of each term. Each test should include the following:
    - F-statistic
    - F-test critical values
    - Numerator degrees of freedom
    - Denominator degrees of freedom
- Variance Inflation Factors (VIFs) for each variable

Implementation – Essential Information

- A description of how the models being filed are ultimately integrated into the company's final rating algorithm
- A narrative about all post modeling adjustments, such as smoothing, mapping to scores, and tempering of factors
- A narrative identifying the variables where deviations from indicated were made and commentary on the reason for the deviations
- A dislocation analysis, including the following:
    - Histograms showing percentage premium change on uncapped and capped basis (if applicable), using buckets of 5%
    - Descriptions of the scenarios with the highest increases
    - Descriptions of the scenarios with the biggest decreases
- Commentary on the differences between rating new and existing policyholders
- An Excel file which documents deviations between indicated and selected in this format:
    - Each model is a separate worksheet
    - Column A is Variable Name
    - Column B is Variable Level Name
    - Column C is the Current Factor (if applicable)
    - Column D is the Indicated Factor
    - Column E is the Proposed Factor
    - Column F is the percentage difference between indicated and proposed. If the absolute value of the percentage difference is > 10%, the cell should be highlighted.
- Sample rating/scoring exhibits for 10 risks in Excel, which show risk characteristics, all intermediate adjustments, and the final algorithm output considering the company's final selections.

Implementation – Sometimes Needed Information

None are listed at this time.

Expertise. Insight. Solutions.®

Devoted to actuarial research within the property & casualty insurance industry, the CAS has dozens of research projects in progress. Current topics range from the appropriate use of artificial intelligence to cyber risk and climate change. After releasing groundbreaking research into the area of race and insurance pricing in 2022, the CAS is actively working on six projects to shine more light into the issue (attached).

The CAS also supports research by partnering with other actuarial and insurance organizations. Besides relying on hundreds of volunteers, the CAS also restructured its research function. Elizabeth Smith is now director of publications and research and Annmarie Geddes Baribeau is serving as research manager.

Highlights of Recent CAS Research

- **The 2023 Hacktuary Challenge**
  - Michaël Bordeleau-Tassile, FCAS, developed the winning entry.
  - His winning entry, PropertInsight provides at-a-glance overviews of property characteristics and hazards that are helpful for consumers and insurers alike. Insurers can also benefit from the catalog of insurance-related open data sets, which can improve risk assessments, identify new opportunities, and deploy advanced analytics. The app displays property risk factors ranging from environmental and climate characteristics to fire station proximity.
- **CAS Monograph: The Actuary and Enterprise Risk Management: Integrating Reserve Variability**
  - By Mark R. Shapland and Jeffrey A. Courchene
  - The monograph uses a case study to discuss and illustrate the process of integrating the output from periodic reserve and reserve variability analysis into the wider enterprise risk management processes.
- ***Actuarial Review* Series on Inflation**
  - By James P. Lynch, FCAS, MAAA
  - The series on inflation includes:
    - A Peek at the CAS Archives: Inflation and Insurance
    - Tackling Inflation with Financial Theory
    - Inflation and Loss Reserves: Analysis Across the Decades
    - Inflation: A View from the Top

CAS Events

Regulators Welcome!

The CAS is offering regulators a special incentive to attend its continuing education programs with reduced registration fees.

The CAS also welcomes session proposals from the regulatory community. The current open calls for presentations and due dates are as follows:

- 2024 CAS Annual Meeting .....March 22, 2024
- Casualty Loss Reserves Seminar (CLRS) and Workshops ..... April 1, 2024

- **Upcoming Professional Education Events**
  - **Courses on Professionalism**
    - Kuala Lumpur, Malaysia — May 16 – 17
    - Seattle — June 10 – 11
    - Chicago — June 17 – 18
    - Virtual — June 27 – 28
  - **Virtual Events**
    - Introduction to Python Workshop, April 4 – May 16
    - Introduction to R Workshop, July 11 – August 15
    - Interactive Live Stream: Spring Meeting Workshops – May 5-8
    - Climate Risk Virtual Seminar — April 17
    - Predictive Analytics Bootcamp — September 16 – October 21
  - **Webinars (through 4Q 2024)**
    - Lights! Camera! Professionalism! — March 26
    - A Conversation with California Industry Leaders — March 28
    - The Florida Residential Property Insurance Marketplace: Has the Latest Legislation Limited Litigation? — April 25
    - Bias, Fairness, and the Modeling Lifecycle — May 14
    - State of the P&C Insurance Industry: Key Risk & Opportunities — July 16
  - **Big Five CAS Meetings/Seminars**
    - Ratemaking, Product and Modeling Seminar — New Orleans, March 17-20, 2024
    - 2024 Spring Meeting — Atlanta, May 5 – 8, 2024
    - Reinsurance Seminar — Boston, June 3 – 4, 2024
    - Casualty Loss Reserve Seminar (CLRS) — San Francisco, September 9 – 11, 2024
    - 2024 Annual Meeting — Phoenix, November 3 – 6, 2024

Casualty Actuarial Society
Race and Insurance Pricing 2024 Projects

Introduction

Actuaries have a responsibility to examine the processes, systems and models they build to understand if the inputs and outcomes reflect fair and equitable practices. In February 2021, the Casualty Actuarial Society (CAS) launched its Approach to Race and Insurance Pricing, with activities in four key areas of focus:

- Collaboration — to proactively engage and partner with regulators, insurers, actuarial organizations, consumer groups and other organizations addressing issues related to race and insurance and to ensure that diverse perspectives contribute to CAS-commissioned efforts.
- Research — to develop methodologies that identify, measure, and address potential bias to evaluate emerging technologies and prepare actuaries and insurers for potential regulatory actions, in alignment with the CAS Core Values of continual improvement and innovation.
- Basic and Continuing Education — to provide members and candidates with a strong foundation in the historical issues of systemic bias and their potential impacts on insurance, covering concepts of disparate impact and discrimination, past and current research, and professionalism implications.
- Leadership and Influence — to play a leading role in the discourse on potential racial bias in insurance pricing among our membership, the insurance industry and the public.

Phase 1: Four Introductory Papers

In 2022, during the first phase of this effort, the CAS published the first four papers in the CAS Research Paper Series on Race and Insurance Pricing. These reports were designed to guide the insurance industry toward proactive, quantitative solutions to identify, measure and address potential racial bias in insurance pricing. They are:

- Defining Discrimination in Insurance (and errata)
- Understanding Potential Influences of Racial Bias on P&C Insurance: Four Rating Factors Explored
- Methods for Quantifying Discriminatory Effects on Protected Classes in Insurance
- Approaches to Address Racial Bias in Financial Services: Lessons for the Insurance Industry

Phase 2: Six New Papers

As part of Phase 2 of the CAS Research Paper Series on Race and Insurance Pricing, the CAS is working on six new research projects. Papers are expected to be published in Spring/Summer 2024. An overview of each project (with each title subject to change) is below.

Survey of State Regulation Related to Algorithmic Bias
By Risk & Regulatory Consulting

This project will study the impact of recently proposed or enacted legislation/regulation related to algorithmic bias (including CO, DC, NAIC Model Bulletins, other proposed).

It will include a survey of insurance departments to determine what will likely be necessary for companies/actuaries in the future to demonstrate that insurers' use of models does not result in unfair discrimination. Potential items include:

1. Documentation
2. Governance
3. Use of protected class inference/imputation techniques
4. Acceptable methodologies to identify and address bias
5. Enforcement of regulatory and legal requirements

The paper will also cover practical considerations and approaches for actuaries who need to respond to regulatory and legislative requirements related to algorithmic bias, including applicable actuarial standards of practice when testing for algorithmic bias.

Comparison of International Regulatory Frameworks on Bias in Predictive Modeling and Artificial Intelligence

This report, to be developed In partnership with other actuarial organizations, will examine the legal frameworks related to bias in predictive modeling and artificial intelligence across four jurisdictions — the United States, Canada, the European Union, and China. The report will illustrate the direction of laws and regulations internationally through description of existing regulations and will compare and contrast how each region has approached the issue.

Practical Actuarial Approaches in Response to Bias Regulations
By Octagram Analytics

In the current insurance regulatory environment, a new practice is emerging around testing for bias and fairness. This paper will provide:

1. An overview of emerging insurance industry regulation (CO, DC, CA, CT, NY, Federal, Canada and EU).
2. Bias regulations in other industries such as housing, lending, hiring.
3. Approaches to minimize the chance of failing a test on unfair discrimination (model risk management, diagnose extent of potential bias, variable selection, unexpected ways one could fail fairness test).
4. What insurers can do if they fail a test on unfair discrimination (project planning, data preparation, model training, model evaluation and selection, model implementation, monitoring).
5. Three Mock Case Studies of Model fairness (Rating, Claims, Marketing).

Technical Application of Bias Measurement and Mitigation Techniques in Insurance Pricing
By the CAS Race and Insurance Task Force Subgroup

Using simulated insurance pricing data, the task force will:
1. Define and test protected class imputation methods and discuss alternative interpretations of method outcomes.
2. Define and test rate several statistical model fairness tests and compare their strengths and limitations.
3. Define and test several statistical mitigation methods and compare their strengths and limitations.
4. Discuss other considerations (model purpose/use, underwriting/expense decisions and credibility).

Potential Unintended Impacts of Bias Mitigation on Other Protected Class Dimensions
By Pinnacle Actuarial Resources

This paper will examine three types of regulatory actions aimed at improving fairness for one category of protected class and their respective potential impacts on other protected class categories.

1. Limiting the amount of differential for a rating variable
2. Prohibiting the use of a rating variable
3. Investigating model adjustment/reweighting/decorrelation approaches

These three regulatory scenarios will be applied to both a real-world insurance data set (which will not be shared) and a simulated data set. After seeing the insights from this case study approach, the researchers may attempt to mathematically generalize results.

Impacts of Telematics/Usage-Based Insurance on Racial Bias in Insurance Pricing
By Prof. Jean-Philippe Boucher & Prof. Mathieu Pigeon

This paper will include brief discussions of potential benefits of insurance telematic programs for protected classes, (ex: risk mitigation, increased availability of insurance, etc.) and potential bias or barriers to entering a telematics program for protected classes.

Utilizing a combination of real insurance data (which will not be shared) from a Canadian insurer in Ontario and a synthetic dataset, the paper will demonstrate the impact of utilizing telematics data in auto insurance pricing algorithms on model fairness with respect to protected classes.

It will also include the potential exploration of new penalty metrics to measure the level of fairness in a telematics-based pricing model.

Casualty Practice Council Update

Casualty Actuarial and Statistical (C) Task Force Meeting

March 16, 2024

Rob Fischer
Policy Analyst, Casualty

American Academy of Actuaries

About the Academy

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.

For more information, please visit:
www.actuary.org

Recent Activity

Casualty Practice Council
- Two New Task Forces Approved by the Board of Directors
  - Commercial Liability Insurance Task Force
  - Homeowners Insurance Task Force

P/C Committee on Equity and Fairness
- Comments on Colorado Insurance Regulation 10-1-1
- Webinar on Bias and Updates from the Committee

Committee on Property and Liability Financial Reporting (COPLFR)
- 2023 Effective P/C Loss Reserve Opinions Seminar (Dec. 4-5 in Charlotte, N.C.)
- 2023 Practice Note on P/C Loss Reserves Statements of Actuarial Opinion
- P/C Loss Reserve Law Manual

Looking Ahead

Academy/CAS
- Casualty Loss Reserve Seminar (Sep. 9-11 in San Francisco, CA)

Equity and Fairness
- Comment Letter to New York Department of Financial Services in Response to Proposed Insurance Circular Letter on Use of AI and ECDIS in Underwriting and Pricing (3/17)
- Insurance Fraud Issue Brief (Q2)

Cyber Risk
- Cyber Vendor Model Comparison Issue Brief (Q1/Q2)

P/C Risk-Based Capital
- Introduction to P/C RBC Webinar (5/1)
- Diversification Across Lines of Business Report (Q2/Q3)

COPLFR
- 2024 Effective P/C Loss Reserve Opinions Seminar (Dec. 9-10 in New Orleans, LA)

Thank you

Questions?

For more information, contact:
Rob Fischer, casualty policy analyst
fischer@actuary.org

American Academy of Actuaries