

PROPERTY AND CASUALTY INSURANCE (C) COMMITTEE

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Draft: 12/21/20

Property and Casualty Insurance (C) Committee
Virtual 2020 Fall National Meeting
December 8, 2020

The Property and Casualty Insurance (C) Committee met Dec. 8, 2020. The following Committee members participated: Vicki Schmidt, Chair (KS); Mike Chaney, Vice Chair (MS); Jim L. Ridling (AL); Ricardo Lara (CA); Andrew N. Mais and George Bradner (CT); David Altmaier (FL); Colin M. Hayashida (HI); James J. Donelon and Warren Byrd (LA); Kathleen A. Birrane (MD); Tynesia Dorsey represented by Tom Botsko (OH); Glen Mulready represented by Andrew Schallhorn (OK); Larry D. Deiter represented by Maggie Dell (SD); Mike Kreidler (WA); and James A. Dodrill (WV). Also participating were: Phil Vigliaturo (MN); Gennady Stolyarov (NV); Kevin Gaffney (VT); and Don Beatty (VA);

1. Adopted the Reports of its Task Forces and Working Groups

Mr. Vigliaturo reported the Casualty Actuarial and Statistical (C) Task Force met Nov. 10. During this meeting, the Task Force received an update from an ad hoc group that has been working on a referral on a proposal for the Retroactive Reinsurance Exception from the Statutory Accounting Principles (E) Working Group. This effort will entail examining the default assumption versus prescribed restatements using examples of insurers' and reinsurers' actual Schedule P presentation, including the two examples in the letter that gave rise to this project. The ad hoc group hopes to recommend appropriate Schedule P guidance for each exception. The Task Force also heard an update on communication about the Casualty Actuarial Society (CAS)/Society of Actuaries (SOA) Task Force's Appointed Actuary continuing education (CE) log. The Casualty Actuarial and Statistical (C) Task Force will not take further action on this item until it receives a report from the CAS/SOA task force summarizing its CE study.

Mr. Vigliaturo said the Task Force heard reports from its two working groups and adopted their reports. Specifically, the Actuarial Opinion (C) Working Group adopted proposed changes to the *Financial Analysis Handbook* and the *Financial Condition Examiners Handbook*. In addition, the Actuarial Opinion (C) Working Group adopted the 2020 *Regulatory Guidance on Property and Casualty Statutory Statements of Actuarial Opinion* (Regulatory Guidance). The Statistical Data (C) Working Group noted that that the *Dwelling Fire, Homeowners Owner-Occupied, and Homeowners Tenant and Condominium/Cooperative Unit Owner's Insurance Report* (Homeowners Report), the *Report on Profitability by Line by State* (Profitability Report) and the *Competition Database Report* will be considered for adoption during its next meeting. The *Auto Insurance Database Report* has been delayed, given NAIC staff's focus on COVID-19 activities, but it is expected to be provided for review during the Working Group's next meeting.

Mr. Vigliaturo said the Task Force continues to meet monthly in regulator-to-regulator session to discuss rate filing issues when state insurance regulators provide agenda items. Also, the Task Force has been continuing to have monthly book club meetings, which have generally been educational presentations on various aspects of predictive modeling.

Mr. Gaffney said the Title Insurance (C) Task Force met Oct. 21 to adopt its 2021 proposed charges. The charges included adding a charge to its existing charges to explore short-term and long-term issues and solutions from the COVID-19 pandemic. The Task Force also included elevating the existing charge to revise the *Title Insurance Consumer Shopping Tool* to include fraud topics, such as closing protection letters (CPLs) and wire fraud, to an essential work item for 2021. In addition to updating the Title Insurance Shopping Tool, the Task Force has asked industry representatives to investigate and report back in 2021 on CPL claim volume and frequency statistics.

Commissioner Donelon said the Surplus Lines (C) Task Force will continue to collect private flood data from alien insurers in order to monitor the market to understand the degree to which alien insurers will participate. The Task Force also spent a considerable amount of time discussing a blanks proposal to add a "Home State" reporting section to Schedule T of the financial statement. Commissioner Donelon said the Task Force provided the forum for good discussion on the topic. However, the proposal failed to gain overall Task Force approval. The Task Force also discussed and referred to the Surplus Lines (C) Working Group the Trust Agreement for Alien Excess or Surplus Lines Insurers. The Working Group will study and propose amendments to the trust agreement and report back to the Task Force next year.

Mr. Byrd said the Workers' Compensation (C) Task Force met Nov. 16. During this meeting, the Task Force adopted its Oct. 26 and Summer National Meeting minutes. Additionally, the Task Force heard a presentation from the ReedGroup about workers' compensation treatment guidelines and formularies. The information presented included items such as: what qualifies as an evidence-based guideline and the criteria used to determine what is evidence-based; reasons why a formulary that includes

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a patient's condition and phase of care is the most medically responsible approach; and the similarities and differences between the American College of Occupational and Environmental Medicine (ACOEM) guidelines and the Official Disability Guidelines (ODG). Mr. Byrd said the Task Force will be discussing COVID-19 and its impact on workers' compensation once more data has been collected.

Commissioner Chaney said the Catastrophe Insurance (C) Working Group recently heard from states about their experiences dealing with the response to multiple hurricanes this year. He said states discussed the issue of multiple deductibles as some states have legislation and/or procedures in place for multiple hurricane deductibles, while others do not. The Working Group discussed solutions for this issue. The Working Group also heard a summary about the NAIC/Federal Emergency Management Agency (FEMA) regional roundtables that have been held with FEMA Region IV and FEMA Region VII states. The NAIC/FEMA will be holding another event in February 2021 with FEMA Region VIII, Region IX and Region X. Commissioner Chaney said there has been a positive response to these roundtables as they provide a forum for discussions between state insurance regulators and FEMA.

Commissioner Kreidler said the Climate Risk and Resilience (C) Working Group held two conference calls in addition to drafting groups meeting to: 1) compile a resource library and outline potential revisions to update the NAIC *Financial Condition Examiners Handbook* for climate risk to be utilized by the Financial Examiners Handbook (E) Technical Group; and 2) draft the *Insurance Regulatory Discussion Points on Catastrophic Events* document. The document will provide a source of robust sharing among states on how they address resiliency efforts and activities before and after catastrophes.

Commissioner Kreidler noted the Working Group will not be reappointed under the Property and Casualty Insurance (C) Committee in 2021. The workstreams of the Working Group will be folded into the Climate and Resiliency (EX) Task Force. The Task Force will be the coordinating NAIC body for discussion and engagement on climate-related risk and resiliency issues. It will have five workstreams, some of which will be informed or developed by the Property and Casualty Insurance (C) Committee. The five workstreams are: 1) solvency; 2) disclosure; 3) pre-disaster mitigation; 4) innovation; and 5) technology.

Commissioner Altmaier said the Lender-Placed Insurance Model Act (C) Working Group met twice since the Summer National Meeting to review comments from interested parties on the Real-Property Lender Placed Insurance Model Act. He said the Working Group adopted the model act during its Nov. 13 meeting.

Mr. Beatty said the Pet Insurance (C) Working Group has met four times since the Summer National Meeting to discuss Sections 5 through 9 of the proposed Pet Insurance Model Act. Mr. Beatty said the Working Group had extensive conversations about licensing and decided to remove the section on licensing and add a drafting note asking each state to review the NAIC *State Licensing Handbook* and other guidance adopted by the Producer Licensing (D) Task Force with respect to licensing issues. Mr. Beatty said the Working Group is currently accepting comments on Section 7B having to do with waiting periods. He said the Working Group hopes to finalize the model before the 2021 Spring National Meeting.

Mr. Bradner said the Transparency and Readability of Consumer Information (C) Working Group has been discussing the need for disclosures for significant premium increases since the Summer National Meeting. The Working Group has determined that there is a need for consumer disclosures regarding premium increases to better help consumers understand why their premiums have increased and what, if anything, consumers might be able to do to reduce premiums. Disclosures would also assist state insurance regulators in responding to consumer inquiries regarding rate increases. Mr. Bradner said the Working Group proposes preparing a best practices guidance document that addresses the content, method of delivery, threshold for disclosure and respective roles of state insurance regulators and insurers.

Commissioner Schmidt noted the Cannabis Insurance (C) Working Group and the Terrorism Insurance Implementation (C) Working Group have not met since the Summer National Meeting.

Commissioner Mais made a motion, seconded by Commissioner Dodrill, to adopt the following task force and working group reports: Casualty Actuarial and Statistical (C) Task Force; Surplus Lines (C) Task Force; Title Insurance (C) Task Force; Workers' Compensation (C) Task Force; Cannabis Insurance (C) Working Group; Catastrophe Insurance (C) Working Group (Attachment One); Climate Risk and Resilience (C) Working Group (Attachment Two); Lender-Placed Insurance Model Act (C) Working Group (Attachment Three); Pet Insurance (C) Working Group (Attachment Four); Terrorism Insurance Implementation (C) Working Group; and Transparency and Readability of Consumer Information (C) Working Group (Attachment Five). The motion passed unanimously.

2. Adopted an Extension for Revisions to the Pet Insurance Model Act

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Commissioner Chaney made a motion, seconded by Commissioner Kreidler, to adopt an extension to the 2021 Spring National Meeting for revisions to the proposed Pet Insurance Model Act. The motion passed unanimously.

3. Adopted the *Real Property Lender-Placed Insurance Model Act*

Commissioner Altmaier said real property lender-placed insurance (LPI) issues were explored during a 2012 public hearing, as well as addressed by a New York regulation and Florida orders. The Creditor-Placed Insurance Model Act (C) first considered revising the *Creditor-Placed Insurance Model Act* (#375) having to do with creditor-placed automobile insurance throughout 2015, 2016 and 2017. In July 2017, the Working Group decided it would need to split the personal property from real property into two different models, and the Property and Casualty Insurance (C) Committee adopted a Request for NAIC Model Law Development on July 18, 2017. Since that time, the Lender-Placed Insurance Model Act (C) Working Group has been tasked with creating a new model law focusing on lender-placed homeowners insurance.

Commissioner Altmaier said the Working Group reviewed sections of the model during various meetings and asked for comments on an ongoing basis throughout 2017 and 2018. A draft model was exposed in March 2018 and was discussed on Sept. 18, 2018. The final draft of the model was exposed on Oct. 19, 2020, for a public comment period ending Nov. 3, 2020. Commissioner Altmaier noted numerous written comments were submitted to the Working Group, including from: the Center for Economic Justice (CEJ); the National Consumer Law Center (NCLC); and a joint industry group made up of the American Bankers Association (ABA), the Consumer Credit Industry Association (CCIA), the Council of Insurance Agents & Brokers (CIAB), the National Association of Mutual Insurance Companies (NAMIC), and the American Property Casualty Insurance Association (APCIA), as well as numerous states.

Commissioner Altmaier said the Working Group had vigorous debate on a few issues, primarily the idea of tracking expenses and whether they should be prohibited by the model, as well as whether the model should only permit dual-interest LPI. Ultimately, tracking expenses were not prohibited in the model, and a section was added about rate review, including noting that analysis should include a determination as to whether expenses included by the insurers in the rate are appropriate. Commissioner Altmaier said the Working Group believes states retain the ability to review expenses in rate filings and judge whether expenses are appropriate to pass to consumers. The absence of a prohibition is not permission as the state insurance regulator might find the expense inappropriate and reject it.

Commissioner Altmaier noted the Committee recently received a comment letter from the CEJ. He said Birny Birnbaum (CEJ) has been involved in the drafting process from the beginning and has added valuable input throughout. He said Mr. Birnbaum would like to see some edits within the model that the Working Group did not ultimately agree to. Commissioner Altmaier said during the Working Group's last meeting, Superintendent Dwyer made edits to the model that all members of the Working Group thought were good compromises, and the Working Group unanimously adopted the model on Nov. 13.

Commissioner Altmaier made a motion, seconded by Commissioner Chaney, to adopt the *Real Property Lender-Placed Insurance Model Act* (Attachment Six). The Committee adopted the motion, with California abstaining. Commissioner Altmaier made a motion, seconded by Commissioner Chaney, to disband the Lender-Placed Insurance Model Act (C) Working Group. The motion passed unanimously.

4. Adopted the *Regulatory Review of Predictive Models White Paper*

Mr. Vigliaturo said the Casualty Actuarial and Statistical (C) Task Force had two charges related to predictive models: 1) drafting changes to the *Product Filing Review Handbook* to include best practices for review of predictive models and analytics; and 2) drafting guidance for the review of state rate filings based on complex predictive models. To address these charges, the Task Force undertook writing a white paper. Mr. Vigliaturo said more than 10 state actuaries contributed in the drafting of the paper, there were many public exposures of the paper, and it was unanimously adopted by the Task Force in the fall of 2020.

As background, Mr. Vigliaturo said models are complicated and are getting more and more statistically advanced. He said it is a challenge for state insurance regulators to keep up with technology, modeling techniques and the application of models in insurance. When reviewing a rate filing based, in whole or in part, on a predictive model, state insurance regulators want to know if a predictive model is compliant with state laws and regulations. Mr. Vigliaturo said the first charge to the Task Force refers to the *Product Filing Review Handbook*. The NAIC developed the handbook about 10 years ago as an educational resource about rate and form review and the System for Electronic Rate and For Filing (SERFF) electronic filing system. Unlike financial analysis and examination handbooks, the *Product Filing Review Handbook* is not built into the state regulatory system, meaning a state insurance regulator is not required to follow any guidance in the handbook. However, it is still an important tool. The proposed edits to the handbook are included in the white paper.

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Mr. Vigliaturo said the second charge goes a bit further than best practices, asking the Task Force to provide state guidance on the review of models in rate filings. The Task Force fulfilled this charge by documenting specific knowledge a state insurance regulator should have when reviewing a predictive model that supports a rating plan. To identify knowledge elements that would lead to best practices, the Task Force took a deep dive into generalized linear models (GLMs) as used in private passenger auto and home insurance rate filings. This deep dive identified detailed knowledge that many state insurance regulators already request from insurance companies. The Task Force prioritized each element's importance to the review process and provided guidance that may assist a state insurance regulator in the review of a rating plan that includes a GLM. These elements were organized in an appendix in the white paper into three areas of regulatory interest: 1) how model input was selected; 2) how the model was built; and 3) how the final rating plan, including the model, was implemented. From this guidance, the Task Force developed best practices adoptable to the review of any model, line of business and insurance application. At the highest level, the best practices are: ensure compliance with current rating laws; review all aspects of the model, including input, assumptions, adjustments and output; evaluate how the model interacts with and improves the rating plan; and enable competition and innovation in the rate review process.

Mr. Vigliaturo said during the development of best practices and state insurance regulator guidance, many interesting topics and industry concerns around the use of complex predictive models arose that are not addressed in the white paper. Generally, it was believed that these topics were beyond the scope of the Task Force's charges and include the identification of disparate impact and proxies that are expected to be addressed by the new Special (EX) Committee on Race and Insurance. The white paper also does not include causality versus correlation as it does not recommend or introduce a requirement to prove causality but instead suggests that companies should be prepared to provide a rational explanation why a variable should be included in a filed rating plan, if a state insurance regulator inquires. The white paper also does not address confidentiality of model responses as nothing in the paper changes the requirement for state insurance regulators to abide by state confidentiality laws and/or regulations.

Mr. Vigliaturo said some interested parties thought the paper was overly prescriptive and burdensome. Since some state insurance regulators are already asking for the information identified in the white paper, the Task Force disagreed with this opinion. However, upon the advice of the NAIC Legal Division, the Task Force added a paragraph to the introduction that summarily says this white paper is for guidance only and has no direct impact on any state unless the state chooses to use the guidance.

Commissioner Mais made a motion, seconded by Commissioner Chaney, to adopt the *Regulatory Review of Predictive Models* white paper.

Commissioner Donelon said that the "rational explanation" definition was discussed one time earlier this year and that all stakeholders—including actuaries, industry and consumers—expressed opposition to the "rational explanation" language. He said the definition for "rational explanation" instructs state insurance regulators to deny filings not "readily understandable to a consumer" and should be used to "explain an approved rating treatment" if challenged by a consumer, legislator or the media. Commissioner Donelon said such an explicitly subjective and political standard is unprecedented and that regulatory actuaries are professionals and have a fiduciary duty to the public. He said actuaries' professional judgment on intricate models may not necessarily be readily understandable to a consumer, but they must be made in the public interest and in fairness to consumers.

Commissioner Donelon said the CEJ found "rational explanation" to be inappropriate because it introduces subjective interpretation by the state insurance regulator in place of a valid statistical analysis. He said the Committee should make proposed amendments as distributed to the Committee. The amendments would make the following changes:

On page 27, amend Section 3, B.3.d as follows:

In column 2: Obtain a rational explanation for why an increase in each predictor variable ~~should~~ has a connection to the expected increase or decrease in frequency, severity, loss costs, expenses, or any element or characteristic being predicted.

In column 4: ~~The~~ Although it may be appropriate for the explanation ~~should~~ to go beyond demonstrating establishing correlation. ~~Considering possible causation may be relevant, but proving, requiring a demonstration of~~ causation is neither practical nor expected. If no rational explanation can be provided, greater scrutiny may be appropriate. For example, the regulator should look for unfamiliar predictor variables and, if found, the regulator should seek to understand the connection that variable has to increasing or decreasing the target variable.

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On page 52, amend the definition of “Rational Explanation” as follows:

Rational Explanation – A “rational explanation” refers to a plausible narrative connecting the variable and/or treatment in question with real-world circumstances or behaviors that contribute to the risk of insurance loss in a manner that is readily understandable to ~~a consumer or other educated layperson~~ another actuary. A “rational explanation” does not require ~~strict~~ proof of causality but should establish a sufficient degree of confidence that the variable and/or treatment selected are not obscure, irrelevant, or arbitrary.

A “rational explanation” can assist the regulator in explaining an approved rating treatment ~~if challenged by a consumer, legislator, or the media~~. Furthermore, a “rational explanation” can increase the regulator’s confidence that a statistical correlation identified by the insurer is not spurious, temporary, or limited to the specific datasets analyzed by the insurer. If that “rational explanation” is not found, then more effort should be expended or data collected to ensure the correlation is not spurious, temporary, or limited to the specific datasets analyzed by the insurer.

Mr. Stolyarov said he would like to present concerns that many members of the Task Force have about the proposed amendments presented by Commissioner Donelon. He said the definition of “rational explanation” currently in the white paper has been in many drafts over many months, has been worked on by many actuaries and deliberated upon based on interested party comments. He said the proposed amendments are flawed.

Mr. Stolyarov said the current description in the white paper recommends the state insurance regulator obtain a rational explanation for why an increase in each predictor variable should increase or decrease frequency, severity, loss costs or any element being predicted. He said one should expect a real-world relationship between the variable and what it is intended to predict. The proposed change from “should increase or decrease” to “has a connection to the expected increase or decrease” presumes that the insurer is correct in expecting an increase or decrease, and it posits a more nebulous reference to a connection so that an insurer may fall back to a statistical correlation only position that the definition of “rational explanation” is intended to move beyond.

Mr. Stolyarov said instead of the current wording that the explanation should go beyond demonstrating correlation, the amendment proposes the phrase “although it may be appropriate for the explanation to go beyond establishing correlation,” which shifts emphasis from going beyond correlation to requiring that demonstration of correlation is neither practical nor expected. Mr. Stolyarov said the Task Force phrasing was proving causation is neither practical nor expected, so requiring a demonstration of causation is a much more modest task rather than proving it. He said the revision seeks to change that the explanation be readily understandable to a layperson to refer to another actuary. He said the role of the regulatory actuary is to protect consumers, not other actuaries. He also noted another actuary could be an industry actuary, which could override the concern of the regulatory actuary. He also said some states do not have an actuary on staff.

Mr. Stolyarov said he also believes removing the word “strict” is unnecessary. He said he is against removing “if challenged by” consumers and others because the purpose is to allow the state insurance regulator to respond to such challenges. He said that is a protection for the reviewer because the state insurance regulator is accountable to industry and consumers. Mr. Stolyarov said he does not object to the addition of the last sentence and that the Task Force likely would have been receptive to that sentence though this sentence should be expanded to include the possibility of removing a variable from a model if no rational explanation can be found.

Mr. Bradner said he echoes Mr. Stolyarov’s concerns and pointed out that wording referring to “only an actuary” removes regulatory staff from having comments on what an industry is presenting. He also said the use of credit is an example of consumers not necessarily understanding a rating variable, but most states accepted its use based on statistical information and correlation with loss. He said a company should be required to explain the use of a variable. Commissioner Lara said California agrees with Nevada and Connecticut.

Commissioner Birrane said that a lot of work went into the white paper and that it is a very valuable document. She said she has issues with some of the language related to “rational explanation.” She said she does not see the edits as making it easier for industry to discuss its variables because the current language speaks to variables “should” increase or decrease frequency and severity rather than having a “connection to” frequency and severity. Commissioner Birrane said when the word “strict” is deleted, it goes from saying that rational explanation does not require strict proof of causality to saying it requires some proof of causality. She said she agrees with Commissioner Donelon’s amendments.

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Commissioner Donelon said there was important work that went into the white paper, but the amendments strengthen the actuarial part of the white paper and diminish the layperson language. He said variables should have a statistical evaluation rather than subjective interpretation.

Mr. Birnbaum said Commissioner Donelon's argument against the language is based on the flawed claim that simple correlation is the only requirement to justify a rating factor. He said that has never been the case and has the unintended consequence of endorsing systemic racism through proxy discrimination. Mr. Birnbaum said these amendments would upset the overall balance of the paper. He said the proposed amendments contradict the recent action by the NAIC when it adopted the principles for artificial intelligence (AI). Those principles asserted a responsibility for state insurance regulators and insurers to proactively avoid proxy discrimination against protected classes. He said the proposed language would undermine and contradict that principle, and the current language in the white paper does not introduce any concept of causality. The rational language is used to distinguish between a simple correlation and an actuary's effort to identify a spurious correlation. Mr. Bradner said Mr. Birnbaum appears to agree with the most recent revisions made by the Task Force that appear in the current version of the white paper.

Commissioner Mais withdrew his motion to adopt the White Paper.

Commissioner Donelon made a motion, seconded by Commissioner Birrane, to adopt the *Regulatory Review of Predictive Models* white paper with amendments as described by Commissioner Donelon. A voice vote was held by the Committee, and the motion failed three votes to nine votes.

Commissioner Mais made a motion, seconded by Commissioner Lara, to adopt the *Regulatory Review of Predictive Models* white paper (Attachment Seven). The Committee adopted the motion, with two states objecting and one abstaining.

5. Adopted its 2021 Proposed Charges

Commissioner Schmidt said the Committee's 2021 proposed charges were posted on the Committee website on Nov. 16. She said charges previously in other groups have been moved back to the Committee, such as evaluation of the cyberinsurance market and examining regulatory challenges related to autonomous vehicles.

Commissioner Kreidler made a motion, seconded by Commissioner Donelon, to adopt the Committee's 2021 proposed charges (Attachment Eight). The motion passed unanimously.

6. Adopted a Request for NAIC Model Law Development Related to Model #870

Commissioner Donelon said the Surplus Lines (C) Task Force previously developed a drafting group to study the *Nonadmitted Insurance Model Act* (#870) and decide if significant amendments were necessary. He noted that the model has been in place since 1994 and was last updated in 2002. He said some of the model is not compliant with the requirements outlined within the federal Nonadmitted and Reinsurance Reform Act (NRRRA) of 2010 and that the model should be modernized with respect to these elements.

Commissioner Donelon made a motion, seconded by Commissioner Lara, to adopt the Request for NAIC Model Law Development related to Model #870 (Attachment Nine).

7. Heard a Report on Private Flood Insurance Data

Commissioner Schmidt said that results from the state insurance regulator private flood insurance data call are included within Committee materials and that the data is also linked on the NAIC website.

Having no further business, the Property and Casualty Insurance (C) Committee adjourned.

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Catastrophe Insurance (C) Working Group
Virtual Meeting
November 17, 2020

The Catastrophe Insurance (C) Working Group of the Property and Casualty Insurance (C) Committee met Nov. 17, 2020. The following Working Group members participated: Mike Chaney, Chair, and Andy Case (MS); Robert X. Lee, Vice Chair, and Virginia Christy (FL); Brian Powell and Willard Smith (AL); Katie Hegland (AK); Lynne Wehmueller (CA); George Bradner (CT); Colin M. Hayashida (HI); Travis Grassel (IA); Robert Rapp (IL); Brenda Johnson (KS); Warren Byrd (LA); Matthew Mancini (MA); Joy Hatchette (MD); Jeana Thomas (MO); Kelly Ricketts (Smith) (NC); Carl Sornson (NJ); Tom Botsko (OH); Cuc Nguyen and Andrew Schallhorn (OK); Beth Vollucci (RI); and Marianne Baker, J'ne Byckovski and Mark Worman (TX). Also participating was: Donna Stewart (WY).

1. Heard an Update Regarding Federal Legislation

Brooke Stringer (NAIC) said the National Flood Insurance Program (NFIP) is operating on a one-year extension through Sept. 30, 2021. This is the 16th short-term extension of the NFIP since the 2017 expiration of the program, but this is the longest of those extensions. Ms. Stringer said it will be up to the next Congress, which officially convenes in January, to decide how to address a long-term reauthorization. She said that given the COVID-19 pandemic and other competing priorities, as well as the one-year extension, NFIP reauthorization is unlikely to be one of the top priorities at the beginning of the new Congress. She said it is likely that the same debates will come up again over whether more private insurers should take over, affordably, rebuilding repetitively flooded homes.

Ms. Stringer said that on Nov. 10, the U.S. Department of Housing and Urban Development (HUD) released a proposed amendment to Federal Housing Administration (FHA) regulations that would allow lenders to accept private flood insurance policies on FHA-insured properties located in Special Flood Hazard Areas (SFHAs). She said this is noteworthy as the FHA's current rules do not allow private flood insurance to satisfy the mandatory purchase requirement. Ms. Stringer said that the proposed rule would amend FHA regulations to include the definition of "private flood insurance" from the federal Biggert-Waters Flood Insurance Reform Act of 2012 (Biggert-Waters Act). It also includes a "compliance aid" allowing mortgagees to accept private policies, without further review, where the policy or an endorsement includes the language: "This policy meets the definition of private flood insurance contained in 24 CFR 203.16a(e) for FHA-insured mortgages." She said the proposed rule also says it "will not permit Mortgagees to exercise their discretion to accept flood insurance policies, provided by private insurers or mutual aid societies, that do not meet the definition and requirements for a private flood insurance policy as laid out in this rule." Ms. Stringer said that because of the differences between HUD and the federal banking regulators' rules, compliance with the banking rule will not be interpreted as compliance with HUD's requirements. She said HUD will accept comments for 60 days following the date of the proposed rule.

Mr. Byrd said he read something a few days ago in an article where the author suggested property developers developing property in areas presumed to be at sea level upon completion should not be allowed to obtain flood insurance. Not allowing flood insurance would be used as a way to prevent developers from developing in areas that might potentially soon be flood-prone areas. He asked if there has been any traction for this type of legislation in Congress. Ms. Stringer said that with the incoming administration, there will likely be more of a focus on issues related to climate risk and resiliency. She said there will likely be more action at the federal regulatory level in the next four years too. Ms. Stringer said Congress is getting close to the end of the session, but she believes there will be more action at the federal regulatory level than in the past couple of years.

Mr. Bradner asked where Federal Emergency Management Agency (FEMA) stands regarding Risk Rating 2.0 and asked if it was still on schedule for 2021. He also asked if states would be provided with data so states would know how it is going to affect home property owners in their respective states. Ms. Stringer said this is a good question and that she believes it was set to go into effect in October 2021. She said she is not sure if there will be any changes that will take place due to the incoming administration. Ms. Stringer said Congress has shown some concern regarding Risk Rating 2.0.

Jeffrey Klein (Consumer Representative) said he was on the Southeast State Emergency Response Agency (SERA) meeting a couple of weeks ago and heard from Tony Hake (FEMA). Mr. Hake said FEMA was planning to roll out training for state insurance regulators, realtors, banks and others sometime in early 2021.

Commissioner Chaney said he is also hearing that FEMA may enact a regulation to raise the sea level requirement, so they do not have to go through Congress to be eligible to write flood insurance through the NFIP. He said this is what FEMA does in counties and parishes throughout the country.

2. Discussed NAIC/ FEMA Regional Meetings Held with Various Regions

Commissioner Chaney said the NAIC has been partnering with FEMA and holding joint meetings in various regions to present a better understanding of the flood event response process and to discuss ways in which FEMA and state Departments of Insurance (DOIs) can better coordinate in this process. He said to date, the NAIC and FEMA have held events with FEMA Region 7 states and FEMA Region 4 states. The NAIC and FEMA will hold another event in January with FEMA Region 8, FEMA Region 9 and FEMA Region 10 states. Commissioner Chaney said these events have transitioned to virtual events as a result of the pandemic.

Jeff Czajkowski (Center for Insurance Policy and Research—CIPR) said the joint meetings with the NAIC and FEMA in 2020 will continue into 2021. He said the purpose for the roundtables is to make recommendations and to discuss solutions related to insuring for catastrophe risk. These roundtables discuss ways in which the NAIC can assist states in responding to disasters. Mr. Czajkowski said in January 2020 that the NAIC and FEMA held a forum with FEMA Region 7, which includes Iowa, Kansas, Missouri and Nebraska; this roundtable was organized in the aftermath of the 2019 Midwest flooding. The second roundtable was held with FEMA Region 4, which includes the eight Southeast zone states. He said the discussion at the second roundtable was centered on the possibility of an active hurricane season, as well as incorporating issues regarding how the response might be different due to the COVID-19 pandemic. Mr. Czajkowski said while the goals were similar, the topics of discussion were different. He said highlighting the NAIC Disaster Assistance Program was an important part of the discussions that took place. Mr. Czajkowski said the roundtable also highlighted best practices that some of the state DOIs have put into place during a catastrophic event. These discussions helped other states, as well as FEMA, learn from each other. He said part of the goal was to make sure states understood FEMA's response at both the regional and federal level and what the touchpoints were for the states. The roundtable focused on the before, during and after aspects of a catastrophic event.

Mr. Czajkowski said part of the purpose of these events was to begin laying or expanding the relationship between FEMA and the states. He said many of these states have already established a relationship with FEMA. Mr. Czajkowski said the states and FEMA were both able to share resources available. He said the states and FEMA also found some areas to collaborate on in the future.

Mr. Czajkowski said some of the topics discussed are geared toward 1) how can the NFIP and the private marketplace work together moving forward; and 2) how FEMA and the NAIC can collaborate on messaging around flood insurance and mitigation. He said from a research perspective, the roundtable highlighted some academic outreach; for example, the University of Iowa and its Iowa flood center was introduced to the state insurance regulators.

Mr. Czajkowski said a memorandum of agreement with schema has been formulated that allows for future partnership building to take place at the regional level as state DOIs and FEMA see fit. He said FEMA Region 4 states and FEMA were interested in forming a disaster resiliency working group within that region. This allows the states and FEMA to collaborate on resiliency moving forward. Mr. Czajkowski said the next roundtable will be held with FEMA Region 8, Region 9 and Region 10 and will focus on wildfire and earthquake.

Mr. Czajkowski said in early 2021, he will begin to work on some long-term planning around mitigation funding.

3. Discussed Hurricane Response During This Year's Hurricane Season

Commissioner Chaney said this year has been a highly active hurricane season; as a matter of fact, 2020 now officially has had the most named storms on record. This hurricane season brings twice the usual number of storms. Five of these storms have become named hurricanes, as of Nov. 15. Iota became the 30th named storm and made landfall in Central America. This storm is extremely dangerous. Commissioner Chaney said many residents in the Gulf states have suffered considerable losses this year. He said the Working Group will hear from Alabama, Louisiana and Mississippi about their experiences this year. Commissioner Chaney said he realizes other states have also experienced devastation from hurricanes this year and asked them to speak up and add their experiences during these discussions.

Commissioner Chaney said the Working Group also realizes there have been many devastating wildfire events across the U.S. and would like to meet a month following the Fall National Meeting to discuss this peril.

Mr. Powell said this was an exciting year for Alabama as far as the hurricane season was concerned. He said Alabama is fairly well prepared for hurricanes, and the industry responded well to the multiple storms that occurred. Mr. Powell said the storms took different tracks as they came through Alabama, so the damage was spread throughout the state, although there were some areas where damage was overlapping. He said the areas where the damage overlaps between more than one storm caused more issues than other areas.

Mr. Powell said Hurricane Sally caused a lot of flooding and flood damage. He said the second storm to hit was Hurricane Zeta, which was a fast-moving hurricane that caused widespread wind damage.

Mr. Powell said Alabama used the NAIC for data collection following the storms. He said this was the first year they used NAIC services, and they were happy with the assistance they have received.

Mr. Powell said one of the challenges faced in Alabama is the multiple deductible issue they are faced with due to multiple storms. He said Alabama does not have a mechanism in place to address the multiple deductible issue. Mr. Powell said multiple deductible issues were seen in the areas where storm paths overlapped, and storm damage occurred from multiple storms that occurred in fairly quick succession. He said Alabama does not have a mechanism in place for handling multiple deductibles, such as a seasonal deductible, or something of that nature, which caused some issues for some policyholders. Mr. Powell asked for other states to share suggestions or ideas regarding what mechanisms states might have in place. Mr. Bradner said Florida and Rhode Island have legislation in place that addresses how multiple named storms can be addressed so that the consumer is not affected as greatly. Ms. Vollucci said Rhode Island has a requirement that hurricane deductibles are only allowed to be charged once in full per each policy term. She said for damages other than hurricane, policyholders are charged their regular deductible.

Commissioner Donelon said in 2009, Louisiana experienced two hurricanes, Gustaf and Ike, within a three-week period. He said in 2008, Louisiana had reached out to Florida and used the legislation they had passed in the aftermath of four storms they experienced in 2004. Commissioner Donelon said the legislation in Louisiana applies a single hurricane named storm and wind/hail deductible per hurricane season. He said if a policyholder does not exhaust the named storm deductible with the first event, the remainder carries over to the second hurricane event. Commissioner Donelon said once the hurricane deductible is met, the all-perils policy deductible kicks in. Commissioner Donelon said this year, there are a couple of insurers that have announced they will waive any deductible for the second hurricane event for damage occurring from Hurricane Delta. Commissioner Chaney asked if the deductible accumulation applied to roofs. Commissioner Donelon said yes, it applies to any damage.

Mr. Byrd said Louisiana gets claim reporting from FEMA on a regular basis for the three hurricanes that have caused flood events this year.

Mr. Case said Mississippi was also affected by Hurricane Zeta. He said Mississippi experienced more wind damage than what was expected. Mr. Case said Mississippi did have a forecast surge of nine feet in some areas, and the forecast was accurate. He said the surge actually exceeded 11 feet in some areas.

Mr. Case said Mississippi staff members traveled some 60 miles of coastline after the storm, and virtually no property was untouched. He said much of the damage was not considered major, and there were many claims filed below the policyholder's deductible. Mr. Case said there are roughly 18,000 claims reported to date, and 60% of those claims have been closed without payment. He said through Nov. 6, there has been roughly \$14 million paid in residential losses; however, this is only on roughly 25% of the reported claims being closed to date.

Mr. Case said that the personal auto claims reported were 80% less than the property claims, yet the paid loss on auto is nearly half of the paid losses on the property claims.

Mr. Case said there are less than 300 claims reported on commercial losses. He said the number of claims closed is probably a 2:1 ratio of those claims that are closed. The current commercial losses paid are currently less than \$500,000. However, less than 50% of those claims have closed to date.

Mr. Case said the insurance response has been robust, and they are currently seeing some price gouging. He said there are some out-of-state roofers and out-of-state tree services charging for unnecessary equipment. Mr. Case said there are some contractors

out of Florida that are attempting to obtain assignment of benefits, which are not recognized in Mississippi, so they are working closely with the attorney general's office for some assistance on those issues.

Mr. Case said the DOI is currently dealing with a number of inquiries and concerns regarding the named storm deductibles. He said some consumers are not quite understanding these deductibles when they purchase the policy, as well as not understanding that by Mississippi statute, they are able to buy down the deductible. Mr. Case said the DOI is providing a lot of education and coaching on this issue.

Mr. Case said Mississippi had a number of wind pool policies that were underinsured. He said the wind pool worked with policyholders previously to make sure they were paid at a replacement cost level. Mr. Case said Mississippi made some statutory changes to allow the wind pool to make sure policyholders are insured for at least 100% to replacement cost value. He said the idea behind this was that they did not want a storm coming through that resulted in a bunch of actual cash value (ACV) policies.

Mr. Smith asked if someone from Louisiana would discuss suspension of cancellation of a policy during the time an emergency rule is in effect due to a hurricane. Mr. Byrd said Emergency Rule 45 dealt with Hurricane Laura and stated that from the day the emergency rule was issued, if a cancellation had not gone into effect, then the insurer had to remain on the risk during the emergency rule. He said once the emergency rule lifts, an insurer can reissue a non-renewal or cancellation. Policyholders are still obligated to pay their premium. However, policyholders should pay their premium during the emergency rule if they are able to because the premium will come due.

Commissioner Chaney said it might be worthwhile to collect information on the practices of the various DOIs during the hurricane season.

Having no further business, the Working Group adjourned.

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Draft: 10/27/20

Climate Risk and Resilience (C) Working Group
Virtual Interim Meeting
October 14, 2020

The Climate Risk and Resilience Insurance (C) Working Group of the Property and Casualty Insurance (C) Committee met Oct. 14, 2020. The following Working Group members participated: Mike Kreidler, Chair, and Jay Bruns (WA); Ricardo Lara, Vice Chair, represented by Michael Peterson (CA); Alex Romero (AK); Peg Brown (CO); George Bradner (CT); Colin M. Hayashida (HI); Travis Grassel (IA); Robert Baron (MD); Peter Brickwedde (MN); Troy Smith (MT); Tom Green (NE); Barbara Richardson and Gennady Stolyarov (NV); Marshal Bozzo (NY); and Shannen Logue (PA).

1. Adopted its Sept. 30 Minutes

Commissioner Richardson made a motion, seconded by Mr. Bradner, to adopt the Working Group's Sept. 30 minutes (Attachment Two-A). The motion passed unanimously.

2. Heard a Presentation on *Climate Change in the American Mind*

Dr. Anthony Leiserowitz (Yale Program on Climate Change Communication—YPCCC) stated that the YPCCC is a research center within the Yale School of the Environment that conducts scientific research on public climate change knowledge, attitudes, policy preferences and behavior at the global, national and local scales. According to Dr. Leiserowitz, the key ideas about climate change are: 1) scientists agree; 2) it is real; 3) it is us.; 4) it is bad; and 5) there is hope. It is not enough to understand that there is a threat and risk associated with climate change. It must be coupled with solutions so people have something to support because they need to feel agency. Currently, 73% of Americans believe global warming is happening, which is an all-time high compared to the low of 57% in 2010. However, the U.S. remains behind other countries. For example, in Japan, 95% of people believe climate change is underway. Recent data show that 62% of Americans believe global warming is mostly caused by humans. This is an important statistic because society must decrease carbon pollution to address climate change. People will not support policies to do this if they do not believe it is caused by humans. Additionally, while more than 90% of scientists agree that global warming is caused by humans, only 21% of Americans believe there is scientific consensus on human causation. This is largely attributed to a well-funded campaign against the legitimacy of climate change originating from the tobacco industry. Only 26% of people are "very worried" about climate change because they see it as a distant problem. However, the number of Americans who are at least "somewhat worried" about climate change increased to 66% in 2020 from 49% in 2010. This progression shows the role of recent extreme events in helping people to understand how climate change connects to their immediate environment and the things they care about.

The YPCCC produces Yale Climate Opinion Maps to show what people believe about climate change in each U.S. state, congressional district, metro area and county. The public opinion estimates are produced using a statistical model based on national survey data collected between 2008 and 2020 by the YPCCC and the George Mason Center for Climate Change Communication. The maps show that a high percentage of adults along the southern border of Texas are worried about climate change. Further research into this has shown that the concern is coming from Latinos who see climate change as a high priority concern that can personally affect them. However, one cannot simply divide the population into climate change "believers" and "deniers." Instead, there are "six Americas": those who are alarmed, concerned, cautious, disengaged, doubtful or dismissive regarding climate change. The largest group, at 31%, are those who are "alarmed." It is closely followed by those who are "concerned" at 26%. The "cautious" group, who can see the effects of climate change but not understand its causes, are 16% of the population. Those that have never heard about climate change and are "disengaged" represent 7% of the population. The "doubtful" and "dismissive" groups are each 10% of the population. Although the dismissive group is small, they are highly vocal; therefore, it appears as if much more of the population is dismissive of climate change. The communicator's job is to meet each person where they are and help them walk their path to understanding, which may be different than that of the communicator or anyone else.

Commissioner Kreidler said it is interesting that the research showed that only 10% of the population is dismissive, but due to historic economic interests and how vocal they are, the dismissive group appeared much larger. He stated that the Working Group has had issues with getting engagement on climate change beyond resilience, and he asked if Dr. Leiserowitz could opine on why. Dr. Leiserowitz stated that he is seeing progress on both vulnerability and resilience. Climate change requires large systemic changes that can only be done through government, but a large share of the population is philosophically opposed to such large scale government action and thus reject this as a solution. Because it does not fall within their values, they are

likely to reject the legitimacy of the problem itself. Also, we should have communicated the need to adapt from the beginning instead of fearing that it would impede the desire to address the underlying risk. Communication should have started at the local level, explaining how individuals are personally affected by extreme events. Additionally, people should be shown how risk changes with each degree of warming both locally and globally. Addressing the impact from the global level first overwhelms people.

Mr. Bradner stated that he represents the Commissioner Andrew N. Mais (CT) on the Governor's Council on Climate Change, also known as the GC3. He asked how the Council can get people on board with accepting that they must pay for increased risk. He stated that there needs to be a shift in how risk is financed from retroactive to proactive, and government subsidies need to tie in accordingly. Dr. Leiserowitz stated that discourse of risk is a key issue. The impact of climate change risk is uncertain, but communicating the range of possible outcomes influenced by the policy choices is key. You cannot control a hurricane, but you can control the policies you implement to help mitigate them. There is a lack of understanding on the significance of fat tail risk. Although, the extreme scenario may only be 5%, that is a 1 in 20 risk. We must consider what we are willing to pay in an extreme scenario. In terms that people can better connect, most people would not travel by plane if the chance of crashing were 1 in 20.

Mr. Stolyarov asked what happened between 2009 and 2010 to cause a dramatic drop in concern for global warming. Dr. Leiserowitz stated that the percent of Americans who believe global warming is happening was 57% in 2010. This was the lowest point in the past decade, and it was largely attributed to the rise of the Tea Party.

David F. Snyder (American Property Casualty Insurance Association—APCIA) asked what the most effective way is to respond to the argument that acting on climate change will cost jobs. Dr. Leiserowitz stated that the YPCCC found that only 20% of Americans believe addressing climate change had to come at the cost of economic activity. It is best to communicate that evidence shows that clean energy and economic growth go hand-in-hand. Almost 58% of Americans recognize that policies that promote clean energy will not only improve economic growth but will create more jobs as well.

Having no further business, the Climate Risk and Resilience (C) Working Group adjourned.

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Draft: 10/6/20

Climate Risk and Resilience (C) Working Group
Conference Call
September 30, 2020

The Climate Risk and Resilience Insurance (C) Working Group of the Property and Casualty Insurance (C) Committee met via conference call Sept. 30, 2020. The following Working Group members participated: Mike Kreidler, Chair, and Jay Bruns; Ricardo Lara, Vice Chair, represented by Michael Peterson (CA); Katie Hegland (AK); Peg Brown (CO); William Arfanis (CT); Colin M. Hayashida (HI); Judy Mottar (IL); Travis Grassel (IA); Robert Baron (MD); Peter Brickwedde (MN); Troy Smith (MT); Tom Green (NE); Gennady Stolyarov (NV); Anna Krylova (NM); Nina Chen (NY); Rafael Cestero Lopategui (PR); and Pat Murray (VT).

1. Adopted its Summer National Meeting Minutes

Mr. Baron made a motion, seconded by Ms. Mottar, to adopt the Working Group's July 31 minutes (*see NAIC Proceedings – Summer 2020, Property and Casualty Insurance (C) Committee, Attachment Three-A*). The motion passed unanimously.

2. Heard a Presentation on Ceres' Regulating Climate as a Financial Risk Report

Steven Rothstein (Ceres) stated Ceres' *Addressing Climate as a Systemic Risk: A Call to Action for U.S. Financial Regulators* report outlines why and how key U.S. financial regulators can and should take action to protect the financial system from climate-related shocks. Climate impacts are already manifesting themselves in California and Florida, the largest state economies. An unplanned, though inevitable, transition to a low-carbon economy will likely cripple key industries. Insurance companies and banks are on the frontlines of risk, including extreme event losses and investment risks. The cumulative and unpredictable nature of these impacts poses the real risk to financial market stability. The report makes a series of recommendations that build on the existing mandates of the relevant regulatory agencies. It also identifies similar actions being taken by global regulators that could serve as important models for U.S. agencies to consider. The report is built on detailed legal analysis and a comprehensive literature review; three dozen interviews with current and former regulators, academics, investors and non-governmental organizations (NGOs); and an assessment of evolving practice globally. Evidence strongly indicates that climate change is a systemic risk as evidenced by mounting losses from increasingly frequent extreme weather events. Social and environmental factors are exacerbating economic impacts, including health and productivity, community impacts and population upheaval, and biodiversity losses.

The report's key recommendations for insurance regulators focus on risk management, investments, disclosure and products. They include:

- Prioritization
 - Acknowledge climate change risks to the insurance sector and pledge coordinated action to address them.
 - Assess the adequacy of current insurer actions for addressing climate risks.
 - Join the Sustainable Insurance Forum (SIF).
- Risk management
 - Require insurers to conduct climate risk stress tests and scenario analyses.
 - Require insurers to integrate climate change into their enterprise risk management (ERM) and Own Risk and Solvency Assessment (ORSA) processes.
- Investments
 - Require insurance companies to assess and manage their climate risk exposure through their investments.
 - Examine how climate trends affect insurance company investment holdings and long-term solvency.
- Products
 - Encourage insurers to develop products for the new technologies, practices and business models that will emerge in response to climate risk that are responsive to climate risks and opportunities.
- Disclosure
 - Mandate insurer climate risk disclosure using the Task Force on Climate-related Financial Disclosures (TCFD) recommendations.

- Assess the insurance sector's vulnerabilities to climate change, and report findings to the Financial Stability Oversight Council (FSOC).

The work being done around climate risk disclosure is important. The Climate Smart Insurance Products Database built by California is also helpful in supporting insurance products in this space. The leadership that California, New York, Washington and now the NAIC are providing as members of the SIF are also important. It is hoped more states will join the SIF. Insurers need to account for climate change risk in their risk management and investments and perform scenario and stress tests. To support this, Ceres plans to submit a comment letter to the NAIC to incorporate these points in the *ORSA Guidance Manual*.

There have been several recent climate change reports from the U.S. Congress. In 2019, the House of Representatives established the House Select Committee on the Climate Crisis to make climate policy recommendations to Congress that "achieve substantial and permanent reductions in pollution and other activities that contribute to the climate crisis." The committee undertook a process of learning from community leaders, environmental justice advocates and policy experts, and it sought public input to inform its recommendations. On June 30, it delivered its final report, *Solving the Climate Crises: The Congressional Action Plan for a Clean Energy Economy and a Healthy and Just America*, to Congress. The report serves as a road map for policymakers to tackle the climate crisis. It proposes a number of policies to advance clean energy; protect 30% of U.S. lands and oceans by 2030; address pollution from transportation, buildings and industry; and increase federal investment and outreach in agriculture resilience.

On Aug. 25, the Senate Special Committee on the Climate Crisis released *The Case for Climate Action* report. The report states three overarching goals: 1) reduce U.S. emissions to 100% global net-zero emissions by 2050; 2) stimulate the economy by increasing federal spending on climate action to at least 2% of gross domestic product (GDP) annually, ensuring that at least 40% of the benefits help disadvantaged communities; and 3) create 10 million new jobs. The report lists policy options by emissions sector.

The Climate-Related Market Risk Subcommittee (Climate Subcommittee) under the Commodity Futures Trading Commission (CFTC) released a report on *Managing Climate Risk in the U.S. Financial System*. The report of the Climate Subcommittee calls on financial regulators to move "urgently and decisively" to measure, understand and address climate risks. It notes that climate change poses serious risk to financial stability and that financial regulators have existing authority to incorporate climate-risk management into their regulatory and supervisory frameworks.

3. Discussed Climate Risk-Related State Activities

Commissioner Kreidler stated that Washington's Climate Summit will be on Oct. 7. The Summit is free and virtual. He said there is a great line-up of speakers discussing: the latest climate science; how leading companies such as Amazon, Microsoft and Zurich are addressing climate change; and updates on the regulatory environment. Mr. Rothstein underscored the importance that Ceres and others attach to the TCFD. The multi-state initiative has for the past two years encouraged the companies that are required to take the annual *NAIC Climate Risk Disclosure Survey* to submit a TCFD report in lieu of the survey. Last year, only one company did so. This year, 12 companies submitted TCFD reports. The rapid growth over just one year suggests that leading insurers are turning to the TCFD as the reporting mechanism of choice for climate change.

Ms. Chen stated that the New York State Department of Financial Services (DFS) issued a circular letter on Sept. 22 outlining the DFS' expectations for the industry in managing the financial risks from climate change. The DFS will publish detailed guidance consistent with international best practices on climate-related financial supervision with input from industry in that process. As a first step to support the industry, the DFS will organize a series of global knowledge exchange webinars to allow industry participants to share their goals, experiences and lessons learned to date. The DFS expects New York insurers to start integrating financial risks from climate change into their governance frameworks, risk management processes and business strategies. For example, insurers should designate a board member or a committee of the board, as well as a senior management function, as accountable for the company's assessment and management of the financial risks from climate change. An ERM function and the ORSA process should address climate change as a reasonably foreseeable and relevant material risk and should consider how it affects risk factors such as investment risk, liquidity risk, operational risk, reputational risk, strategy risk and underwriting risk. In addition, insurers should start developing their approach to climate-related financial disclosure and consider engaging with the TCFD framework and other established initiatives when doing so. Questions pertaining to an insurer's approach and activities related to the financial risks from climate change will be integrated into the DFS' examination process starting in 2021. In this process, each insurer should take a proportionate approach that reflects its exposure to the financial risks from climate change and the nature, scale and complexity of its business. This is in recognition that climate

change affects each insurer in different ways and to different degrees depending on the insurer's size, complexity, geographic distribution, business lines, investment strategies and other factors. Insurers have different levels of resources to manage these risks and are at different points in the process of incorporating these risks into their governance, strategy and risk management. The DFS also became a supporting institution of the United Nations' (UN's) Principles for Sustainable Insurance (PSI). Additionally, it signed a memorandum of understanding with New York State Energy Research and Development Authority to accelerate low-carbon transition and boost climate cooperation and solutions among the state's financial institutions.

Birny Birnbaum (Center for Economic Justice—CEJ) asked how Ceres' recommendations address environmental justice and systemic racism, as well as the impacts of climate change. Mr. Rothstein stated the report recommendations address those issues through the federal Community Reinvestment Act (CRA) and the Federal Housing Finance Agency (FHFA). A proposal to modernize the CRA is currently underway. Ceres' fundamental belief is that to deal with community justice and systemic racism in society, environmental justice needs to be integrated into disadvantaged communities that are more affected. As such, Ceres has discussed several ideas with members of banking regulatory agencies on the CRA and the FHFA, due to its role with mortgages through Freddie Mac and Fannie Mae. He welcomed Mr. Birnbaum to contact him to further discuss additional suggestions.

John Huff (Association of Bermuda Insurers and Reinsurers—ABIR) asked if the Ceres recommendations tie the risk-transfer potential of the re/insurance sector to the identified climate risks of other financial services industries. Mr. Rothstein said that Ceres' recommendations address it at a high level, but not specifically. He stated he would welcome the opportunity to speak further on this and other issues to take a deeper dive.

Dave Snyder (American Property Casualty Insurance Association—APCIA) asked why Ceres' recommendations did not mention the importance of regulators supporting risk-based pricing to signal climate risk. Mr. Rothstein stated Ceres does support the concept. Ceres wanted the report to focus on affirming that climate change is a systemic risk and build on the disclosure work currently being done.

Commissioner Kreidler stated the smoke from the California wildfires is being blown back in from the Pacific and lowering the air quality in Washington. It serves as an immediate reminder we should all do our parts in addressing climate change.

Having no further business, the Climate Risk and Resilience (C) Working Group adjourned.

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Draft: 12/3/20

Lender-Placed Insurance Model Act (C) Working Group
E-Vote
December 2, 2020

The Lender-Placed Insurance Model Act (C) Working Group of the Property and Casualty Insurance (C) Committee conducted an e-vote that concluded Dec. 2, 2020. The following Working Group members participated: Elizabeth Kelleher Dwyer, Vice Chair (RI); Alex Romero (AK); Ken Allen (CA); Sharon Shipp (DC); Ron Henderson (LA); Mike Chaney (MS); Cuc Nguyen (OK); Mark Worman (TX); and Rebecca Nichols (VA).

1. Adopted its Nov. 13 Minutes

The Working Group conducted an e-vote to consider adoption of its Nov. 13 minutes (Attachment Three-A). The motion passed with a majority of the Working Group members voting in favor of adopting the minutes.

Having no further business, the Lender-Placed Insurance Model Act (C) Working Group adjourned.

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Draft: 11/30/20

Lender-Placed Insurance Model Act (C) Working Group
Virtual Meeting
November 13, 2020

The Lender-Placed Insurance Model Act (C) Working Group of the Property and Casualty Insurance (C) Committee met Nov. 13, 2020. The following Working Group members participated: David Altmaier, Chair (FL); Elizabeth Kelleher Dwyer, Vice Chair, and Matt Gendron (RI); Alex Romero (AK); Ken Allen and Lynne Wehmueller (CA); Sharon Shipp (DC); Warren Byrd and Ron Henderson (LA); Mike Chaney and David Browning (MS); Mike Andring (ND); Cuc Nguyen (OK); J'ne Byckovski and Mark Worman (TX); and Rebecca Nichols (VA).

1. Adopted its Oct. 19 Minutes

The Working Group met Oct. 19 and took the following action: 1) heard from commenters on the most recent version of the proposed Real Property Lender-Placed Insurance Model Act; and 2) exposed the model for a 15-day public comment period ending Nov. 3.

Birny Birnbaum (Center for Economic Justice—CEJ) recommended revising a sentence in the minutes to read: “He said, when tracking expenses are included in LPI rates, these expenses are not charged to the entire portfolio but to only 1,000 or 2,000 borrowers out of 100,000 borrowers.” The Working Group agreed to this change.

Mr. Birnbaum also suggested that a sentence be revised to read: “Mr. Birnbaum said there is no evidence of that assertion and CEJ has provided evidence to the contrary.” The Working Group did not agree to this change.

Mr. Byrd made a motion, seconded by Ms. Nichols, to adopt the Working Group’s Oct. 19 minutes (Attachment Three-A1). The motion passed unanimously.

2. Discussed Comments Received on the Real Property Lender-Placed Insurance Model Act

Commissioner Altmaier said comments were received from a joint industry group, the CEJ and the National Consumer Law Center (NCLC). He said Superintendent Dwyer has made changes that may appease interested parties and said that version of the model was distributed.

Superintendent Dwyer discussed the changes, including:

- Adding manufactured and mobile homes to the Scope.
- Revising 3H from lender-placed insurance (LPI) “is purchased unilaterally by the lender or servicer ...” to “may be purchased unilaterally by the lender or servicer ...”
- Adding a new definition – “Master lender-placed insurance policy” means a group policy issued to a lender or servicer providing coverage for all loans in the lender or servicer’s loan portfolio as needed.
- Adding a new definition – “Person” means an individual or entity.
- Adding the following to Section 5A(2): “The insurer shall inquire of the insured, at least once, as to the LKCA and if it is not able to obtain the LKCA from the insured or in another manner may proceed as set forth below.”
- Making non-substantive changes to Section 6A to make it read more clearly.
- Changing “will” to “shall” in Section 6B.
- Removing references to implementation expenses in Section 6F.
- Adding reference to the Electronic Transaction Act in Section 8.
- Adding Section 9B referencing review of rates. This was subsequently revised to read: “The Commissioner shall review the rates to determine whether the rates are excessive, inadequate or unfairly discriminatory. This analysis shall include a determination as to whether expenses included by the insurer in the rate are appropriate.”
- Making edits to Section 9F adding reference to insurers “with at least \$100,000 in direct written premium for lender-placed insurance in this state during the prior calendar year.”

Commissioner Chaney inquired about Section 9B referring to rate review. Superintendent Dwyer said a state could remove this section if it did not want to review rates.

Mr. Allen said many of these changes address concerns California had. He said he would prefer the model require dual interest coverage and add a section on disclosures. He also said the loss ratio threshold of 35% might be too low and that a penalty section should be in the model.

Mr. Birnbaum said he has four suggestions to revise the model. He recommended the definition of “implementation expenses” be removed. The Working Group agreed with this suggestion. He said Section 9B should read “shall” instead of “may,” and he suggested revisions to make the language clearer. He suggested a drafting note after Section 9G that states: “The 35% trigger for re-filing rates is not intended to be nor should be interpreted as a loss ratio standard for determining whether rates are excessive or inadequate. The loss ratio standard in this section is solely directed to prompt a re-filing of rates by the insurer.” Commissioner Altmaier said Florida would interpret Section 9G in this way. The Working Group agreed to add the drafting note.

Chrys Lemon (McIntyre & Lemon) said he supports Superintendent Dwyer’s changes. Eddie Rodriguez (Assurant) suggested Section 9B should read: “The Commissioner shall review the rates to determine whether the rates are excessive, inadequate or unfairly discriminatory. This analysis shall include a determination as to whether expenses included by the insurer in the rate are appropriate.” The Working Group agreed to this language.

3. Adopted the Revised Real Property Lender-Placed Insurance Model Act

Commissioner Altmaier said states held hearings on LPI in 2012, and a lot of effort has since been put into settlements and the Real Property Lender-Placed Insurance Model Act.

Superintendent Dwyer made a motion, seconded by Commissioner Chaney, to adopt the Real Property Lender-Placed Insurance Model Act with revisions made during the meeting. The motion passed unanimously.

Having no further business, the Lender-Placed Insurance (C) Working Group adjourned.

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Draft: 11/4/20

Lender-Placed Insurance Model Act (C) Working Group
Virtual Meeting
October 19, 2020

The Lender-Placed Insurance Model Act (C) Working Group of the Property and Casualty Insurance (C) Committee met Oct. 19, 2020. The following Working Group members participated: David Altmaier, Chair (FL); Elizabeth Kelleher Dwyer, Vice Chair (RI); Eric DeMesa and Tina Zhao (CA); Angela King (DC); Warren Byrd (LA); Mike Chaney (MS); Mike Andring (ND); Mark Worman (TX); Rebecca Nichols (VA).

1. Discussed Comments on the Draft Model

Commissioner Altmaier noted that the Working Group has not met in quite some time but said he would like to review comments received on the draft model related to lender-placed homeowners insurance and possibly consider the model for adoption to present to the Property and Casualty Insurance (C) Committee at the Fall National Meeting.

Birny Birnbaum (Center for Economic Justice—CEJ) said there are two main issues he would like to discuss. He said there is a need for a prohibition on the lender-servicer having a financial interest in the placement of lender-placed insurance (LPI) other than the protection of the property serving as collateral for the mortgage. He said reverse competition exists in this market, and insurers compete for business by providing considerations to the lender-servicer, unrelated to insurance. He said this drives up the cost of insurance. He said there were kickbacks following the 2008 financial crisis when borrowers were overcharged, and money went to lender-servicers instead of protecting property serving as collateral. Mr. Birnbaum said LPI insurers continue to seek kickbacks.

Mr. Birnbaum said insurance tracking is a responsibility of the lender-servicer and not an appropriate expense to include in LPI rates. He said tracking involves setting up a database on the required insurance, gathering information from insurers and borrowers of required insurance, using the database to update the system, and sending notices to borrowers. He said these lender-servicer responsibilities apply to every loan in the portfolio. The lender-servicer is compensated through loan interest fees or servicer fees. He said federal regulations have been issued by the Consumer Financial Protection Bureau (CFPB), and Fannie Mae and Freddie Mac have servicer guidelines having to do with tracking activities. Mr. Birnbaum said a portfolio-wide expense is the responsibility of the lender-servicer. He said it is unfair to charge the small percentage of borrowers for tracking costs related to all borrowers. If every borrower maintained the required insurance and there were no claims, the servicer would still be required to perform the tracking function. He said insurers do not need individual tracking data to manage their exposure. He said the cancellation rate is high with LPI, and insurers underwrite by evaluating characteristics of the loan portfolio and then estimate a placement rate for LPI. He said Fannie guidelines specify what servicers must do in verifying that the insurer coverage meets Fannie requirements. He said individual tracking information is not required to underwrite or price LPI. New York has prohibited the inclusion of tracking expenses in LPI rates. However, LPI insurers continue to operate in New York but charge servicers amounts for tracking that better reflect the cost of tracking and exclude those expenses from LPI rates. Mr. Birnbaum stated the prohibition of tracking expenses from LPI rates does not limit the ability of state insurance regulators to evaluate LPI rates. He also noted a second issue of the model requiring dual interest coverage. He said consumers should have rights in an insurance claim, and single interest coverage excludes such rights for consumers.

Commissioner Chaney asked for additional information about dual interest coverage. Mr. Birnbaum said single interest coverage is typically found in auto insurance or collateral protection products. He said it is typically blanket coverage for which there is no separate charge to borrowers, so the lender has the only interest. He said there are no rights regarding a claim for the borrower, but in LPI, it is the borrower's home, so an individual having single interest coverage with damage to the property has no rights to challenge the lender if the borrower wants to make a claim. He said with dual interest coverage, the borrower has some rights under the policy. Commissioner Chaney said in the 2012 hearings, some people abandoned their homes, and the homes were foreclosed. Mr. Birnbaum said the majority of policies are dual coverage in homeowners. He said the bank already owns foreclosed homes, and it is a real-estate owned (REO) property with REO insurance at that point. He said making a requirement for dual interest does not reduce the lender's rights, but it does give borrowers rights in the event the borrower wants to make a claim on the insurance they have been charged for.

Superintendent Dwyer asked if the industry believes the Fannie Mae and Freddie Mac guidelines and CFPB Regulation X do not apply. Chrys Lemon (McIntyre & Lemon) said Regulation X and Fannie Mae and Freddie Mac guidelines focus on lenders

and servicers, while the model focuses on insurance aspects. Superintendent Dwyer said both require the lender to track and have evidence of insurance before placing or charging insurance. She said the proposal is that the insurer would do that work and share it with the lender. Mr. Lemon said the lender has outsourced the tracking to the insurer because insurers' risk management is important as part of the acquisition. Superintendent Dwyer asked why a lender can put the charge on the consumer by saying it is insurer tracking instead of having the lender pay for it. Mr. Lemon said it is not the lender's risk but the insurer's risk. Superintendent Dwyer said there cannot be a charge placed unless there is evidence. Superintendent Dwyer said Regulation X, 12 CFR § 1024.37, states the servicer cannot accept premium unless it has reasonable basis to believe the borrower has failed to comply. She said she wants to know why that is not the responsibility of the lender. Mr. Lemon said he would follow up with additional information on this matter.

Mr. Lemon said multistate agreements were entered into five years ago, and most states have entered into those agreements that reflect the current regulatory setting. He said the draft model reflects the settlements. He said what the CEJ said about insurance tracking is not accurate, and it is important for states to control rate-making authority and process. He said he is in favor of the Working Group voting on the draft.

Commissioner Chaney asked what it costs to track coverage. Mr. Birnbaum said there is a range of cost for insurance tracking between 40 cents and 50 cents to 80 cents and 90 cents per loan per month. He said this is around \$10 per loan per year, so a portfolio with 100,000 loans would have \$1 million in tracking expenses. He said, when tracking expenses are included in LPI rates, these expenses are not charged to the entire portfolio but to only 1,000 or 2,000 borrowers out of 100,000 borrowers. Commissioner Chaney asked if the expense is so low per loan, how do individuals have trouble paying it. Mr. Birnbaum said it is a lot, and that is why lenders are fighting to maintain kickbacks. He said if tracking costs are allowed to be in the LPI premium and then the servicer passes the charge to the borrower, then it is a kickback because the servicer is getting free or low-cost tracking services and is being paid again by the LPI insurer, and this is being paid for by the low percentage of borrowers being charged for the LPI insurance. Mr. Lemon said the servicer is not compensated. Mr. Birnbaum said there is no evidence of that assertion.

Mr. DeMesa said California has an issue with tracking expenses and has submitted a redline version of a modified model.

Commissioner Chaney said he is going to move to adopt the model but will wait so the industry can respond to Superintendent Dwyer's inquiry. Superintendent Dwyer said she will likely vote against the model. Commissioner Altmaier said he believes all policies are dual interest in Florida. He said he has talked to his actuarial staff about tracking expenses, and he does not believe it would be appropriate to prohibit tracking expenses in Florida as the state wishes to retain the ability to review expenses in rate filings and judge whether expenses are appropriate to pass to consumers. He noted that the absence of a prohibition is not permission as the state insurance regulator might find the expense inappropriate and reject it.

Commissioner Altmaier said the draft model would be exposed for a 15-day public comment period ending Nov. 3. He said the Working Group will meet in November to consider adoption of the model.

Having no further business, the Lender-Placed Insurance (C) Working Group adjourned.

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Draft: 12/3/20

Pet Insurance (C) Working Group
E-Vote
December 2, 2020

The Pet Insurance (C) Working Group of the Property and Casualty Insurance (C) Committee conducted an e-vote that concluded Dec. 2, 2020. The following Working Group members participated: Don Beatty, Chair (VA); Kendra Zoller, Vice Chair (CA); Katie Hegland (AK); George Bradner (CT); Shirley Corbin (MD); LeAnn Cox (MO); Michael McKenney (PA); Kathy Stajduhar (UT); and David Forte (WA).

1. Adopted its Nov. 24 Minutes

The Working Group conducted an e-vote to consider adoption of its Nov. 24 minutes (Attachment Four-A). The motion passed with a majority of the Working Group members voting in favor of adopting the minutes.

Having no further business, the Pet Insurance (C) Working Group adjourned.

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Draft: 11/30/20

Pet Insurance (C) Working Group
Virtual Meeting
November 24, 2020

The Pet Insurance (C) Working Group of the Property and Casualty Insurance (C) Committee met Nov. 24, 2020. The following Working Group members participated: Don Beatty, Chair, and Phyllis Oates (VA); Kendra Zoller, Vice Chair (CA); Katie Hegland (AK); Kristin Fabian (CT); Angela King (DC); Warren Byrd (LA); Shirley Corbin (MD); Michael McKenney (PA); Elizabeth Kelleher Dwyer and Matt Gendron (RI); Kathy Stajduhar (UT); Jamie Gile (VT); and David Forte (WA).

1. Adopted its Nov. 6 Minutes

The Working Group met Nov. 6 to discuss Section 7 and Section 8 of the proposed Pet Insurance Model Act.

Mr. McKenney made a motion, seconded by Mr. Forte, to adopt the Working Group's Nov. 6 minutes (Attachment Four-A1). The motion passed unanimously.

2. Discussed Section 7, Section 8 and Section 9 of the Draft Pet Insurance Model Law

Mr. Beatty said the Working Group started discussing Section 7 of the draft model law and has since received written comments from the North American Pet Health Insurance Association (NAPHIA). Kate Jensen (NAPHIA) said some insurers have offered policies only covering illness for a certain time period. She said Section 7 would require coverage for all preexisting conditions. This would increase the cost of the policy and, therefore, the price for many consumers, leading to fewer consumers purchasing the product. She said the model should rely on clear disclosures to help consumers understand what they are purchasing. She said the industry wants the policy to be clear.

Ms. Oates said she has concerns about requiring a pet owner to be the one to detect clinical signs. She said if there are preexisting condition exclusions, it should be based on documented conditions for which the preexisting condition has been identified. Jules Benson (Nationwide) said he agrees with NAPHIA that Section 7 should be removed.

Mr. McKenney asked why preexisting conditions should be covered. He said insurance is not meant to be available for a person to purchase after a known event. He said preexisting conditions should be addressed in the Disclosures section instead of Section 7A.

Mr. Forte said he does not want to place the burden on the insured to know a pet's condition. Mr. Benson said relying on a veterinarian may not be broad enough to avoid covering all preexisting conditions. He said if someone knows of a condition, even without documentation, that should count as a preexisting condition. He said he understands the concern about clinical signs. The industry does not want surprises for consumers, but it wants to avoid adverse selection.

Brenden Bridgeland (Center for Insurance Research—CIR) said the current language in Section 7A is unclear when it says: "A pet insurer shall not exclude coverage on the basis of a preexisting condition provision for a period beyond six months following the insured's effective date of coverage." He said life and health insurance policies usually reference the application that asks for medical conditions. He said he believes Section 7A is needed instead of language on clinical signs. He said if there is no diagnosis, then the condition should be covered.

Lisa Brown (American Property Casualty Insurance Association—APCIA) said Section 7A is confusing, narrow and prescriptive. She said the APCIA would prefer preexisting conditions be handled through consumer disclosures as proposed by Mr. McKenney.

Jack Chaskey (Westmont Associates) said the six-month language in Section 7A could drive prices up. He said he agrees that the section should be eliminated. Mr. Forte asked if there are a lot of denial of claims due to preexisting conditions within the first six months. Mr. Chaskey said preexisting conditions are identified at the time of the application and then excluded.

Mr. McKenney said if coverage is required for preexisting conditions, it may become an underwriting standard to exclude certain older pets. Mr. Byrd asked if a veterinarian conducts an exam before a policy is issued. Ms. Jensen said product offerings differ. For some, a customer might pay for an upfront veterinarian visit, but many do not. He said there should be flexibility

with policies. Mr. Byrd asked if there is no exam, could there be a dispute over what the pet owner should have known. Ms. Jenson said the carrier has the burden of proof to determine a preexisting condition, and this is why a clear definition is needed. She said the definition offered in the model is close to what is in California law. Mr. Byrd said he worries about what an owner should have known if a veterinarian says there is a condition that should be exhibiting symptoms.

Ms. Zoller said California created definitions to align with industry practices, and she said she is not aware of complaints. She said California would want the 30-day free look language in the model if Section 7A is eliminated. She said California actuaries indicate the free look cost is small.

Mr. Forte asked how to address the situation where a person does not know of a preexisting condition, but then a veterinarian discovers it. Mr. McKenney said this is a concern and why the definition is important. Mr. Gendron asked if it is fair if a certain breed of dog is given a higher rating and also has conditions excluded. Mr. Benson said a rating is based on populations and not typically adjusted based on a single condition.

Mr. McKenney made a motion, seconded by Ms. Stajduhar, to change the language in Section 7A to read: “A) A pet insurer may issue policies that provide coverage and may issue policies that exclude coverage on the basis of one or more preexisting conditions with appropriate disclosure to the consumer.”

Ms. Fabian asked if the “and” should be “or.” Mr. McKenney said his language allows for a single pet insurer to include or exclude coverage for preexisting conditions. Ms. Zoller said this language is already in the definitions and is not needed in the section. A voice vote was held, with all states voting in favor except for California, which voted against.

Mr. Bridgeland said the onus on proof of a preexisting condition should not be on the consumer. Mr. Beatty said the definition of “preexisting condition” would be revisited.

Ms. Jenson said NAPHIA prefers to eliminate Section 7B because it is confusing and not intuitive. She said the language is too prescriptive concerning waiting periods as products differ. She said this should be handled through upfront disclosures. Mr. Benson said waiting periods are helpful because some diseases cannot be assessed until a veterinarian conducts an exam.

Mr. Gendron asked if some waiting periods are more than 30 days. Ms. Jenson said waiting periods can vary within a policy. An accident would not have a long waiting period, but certain diseases could have a waiting period up to six months. Different policies also have different waiting periods.

Mr. Gendron said if a disease that shows up after policy inception but before the end of a 6-month waiting period would be excluded. Ms. Jenson said the waiting period applies and is trying to address adverse selection. Mr. Benson said insurers are trying to offer a range of policies and control their prices. He said if a condition is identified in the waiting period, then it becomes a preexisting condition. Mr. Gendron said this needs clarification within the model. Mr. Benson said the consumer has an option of having a veterinarian examine the pet to get the waiting period removed.

Mr. McKenney said it is important to retain Section 7B and that there should be a standard for waiting periods. Mr. Beatty asked that interested parties offer comments and propose a solution to the issues found in Section 7B.

The Working Group agreed to leave Section 9 as is.

Having no further business, the Pet Insurance (C) Working Group adjourned.

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Draft: 11/18/20

Pet Insurance (C) Working Group
Virtual Meeting
November 6, 2020

The Pet Insurance (C) Working Group of the Property and Casualty Insurance (C) Committee met Nov. 6, 2020. The following Working Group members participated: Don Beatty, Chair, Jessica Baggarley and Phyllis Oates (VA); Kendra Zoller, Vice Chair, and Risa Salat-Kolm (CA); Katie Hegland (AK); Kristin Fabian (CT); Warren Byrd (LA); Rasheda Chairs and Shirley Corbin (MD); LeAnn Cox and Carrie Couch (MO); Michael McKenney (PA); Matt Gendron (RI); and John Haworth and Eric Slavich (WA). Also participating were: Vanessa Darrah (AZ); Michele MacKenzie (ID); Brenda Johnson, Heather Droge, and Tate Flott (KS); Tracy Burns (NE); and Larry D. Dieter and Maggie Dell (SD).

1. Adopted its Oct. 21 Minutes

The Working Group met Oct. 21 to discuss Section 6 of the proposed Pet Insurance Model Act.

Mr. Byrd made a motion, seconded by Mr. Gendron, to adopt the Working Group's Oct. 21 minutes (Attachment Four-A1a). The motion passed unanimously.

2. Discussed Section 7 and Section 8 of the Draft Pet Insurance Model Law

Mr. Beatty said the group would discuss comments received from the North American Pet Health Insurance Association (NAPHIA) on Section 7—Preexisting Conditions and Section 8—Reimbursement Benefits. Mr. Gendron said the use of the term “clinical signs” in the proposed definition of preexisting condition would not be clear and obvious for consumers. Jules Benson (Nationwide) said the use of “clinical signs” is about how a clinician views the signs of illness presented by the pet. Mr. Gendron said he would be concerned with the use of this term for consumers who would not have the same training as a clinician to understand the meaning of “clinical signs.” Mr. Haworth said the proposed definition of clinical signs is too broad in scope regarding the inclusion of observed signs from any individual, not just clinicians. Mr. Byrd agreed that the phrase “observed by any individual” is too broad. Mr. Benson said the way that veterinarians put together the picture of clinical health is not just what is seen in the exam room, but also the health history that comes from owners or other individuals such as a pet groomer who found signs of illness. Mr. Byrd asked if those observations would be included in the pet's medical records, which would be covered in the definition by the phrase “recorded in the pet's medical record.” Mr. Haworth said he is concerned that the current language of the “clinical sign” definition may allow certain signs of illness to be misclassified as a preexisting condition and, therefore, not be covered. Mr. Benson said the burden of proof for relating a clinical sign to a preexisting condition is already on the insurer.

Mr. McKenney said there needs to be clarification on inception date and effective date in the definition of preexisting conditions. Mr. Benson said that there are some policies that are treated as single-year policies and that the coverage for a condition does not roll over if a new policy is purchased. Mr. McKenney said the model law should be establishing uniformity with the definition of “preexisting condition” and how policies treat coverage for those conditions. Kate Jensen (NAPHIA) said that even with the different types of policies, the term “effective date” should still be used within this definition. Ms. Corbin said there would not be the same guidelines for preexisting conditions on new business and renewal business. Mr. Beatty said if the subsequent policies would not cover a condition found during the first policy term, then the insurer would need to send out a non-renewal notice because the policy is not being renewed on the same terms and conditions. Lisa Brown (American Property Casualty Insurance Association—APCIA) said it may be that those policies are written as non-renewable, such as a limited duration pet policy. Ms. MacKenzie said if policies are going to be written on a non-renewable basis, then it needs to be printed on the first page of the policy. Ms. Jensen said she would like time to consult with NAPHIA members about the types of policies currently being written to bring more clarity to this discussion.

Mr. Gendron asked if a consumer has creditable coverage and chooses to switch to a new insurance company, how would preexisting conditions be treated. Ms. Jensen said many of these issues would appear in the disclosures and the rating information. She said limiting what could be covered under pet insurance policies, inserting time frames for coverage or requiring certain coverages would constrain innovation and drive up the cost of coverage. Mr. Beatty said state insurance regulators do not want a scenario where people can game the system. However, he said most complaints received from consumers are because coverage was denied even though the consumer had no way of knowing the pet had a preexisting condition. He asked if there were some agreeable time frame that would eliminate this issue. Ms. Jensen said this issue is why

NAPHIA believes waiting periods are important in pet insurance and that the model should not be restrictive with its time frames relating to preexisting conditions. She said it is important to have a solid definition of “preexisting condition” within the model. Ms. MacKenzie said some policies have eligibility requirements that require exams prior to a pet being eligible for coverage. She said she has also seen language that states a preexisting condition in a prior policy would be considered preexisting in a policy with a new insurer. Ms. Jensen said that while eligibility exams are one way to determine coverage, they can be a cost barrier for consumers. She said NAPHIA wants to preserve flexibility in the market and that mandating time frames and eligibility requirements would prevent insurers from offering a range of pet insurance products.

Ms. Jensen said NAPHIA’s overall position is that Section 7 and Section 8 are not needed in this model law. She said there is confusion about what is required in Section 8 of the model and what is already required in Section 4—Disclosures. She said the model should refrain from including overly prescriptive policy provisions that have impact premiums and availability of coverage. She said the policy should inform consumers upfront about exactly what they are buying but still allow the industry to offer a range of products and features with their policies.

Ms. MacKenzie said Idaho has received a pet insurance filing that has reference to in-network and out-of-network providers. She said she asked for a schedule of benefits and a provider directory. Mr. Byrd said he has not seen those types of policies yet. Mr. Beatty said the Working Group should get more information on if the industry is moving to network providers and balance billing. Mr. Byrd agreed that more information is needed to see if the industry is shifting to those types of policies and if so, he said it should be addressed in the model. Ms. Jensen said if these types of policies exist currently, it would be very rare. Jack Chaskey (Westmont Associates) said he has seen those types of policies and that those would be innovative policies in this line of business.

Mr. Beatty said the phrasing in Section 8(A) that states “Provide reimbursement for the covered veterinary expenses incurred by the insured without limitation” does not seem to exist with other types of insurance policies. He said the insurance policy itself would explain what would be paid and the “without limitation” term is too extreme. Ms. Brown said if Section 8 remains in the model, it should address that “without limitations” would be limited by co-insurance. Mr. Byrd agreed that “without limitations” is a broad term.

The Working Group will continue discussion of submitted comments during future meetings.

Having no further business, the Pet Insurance (C) Working Group adjourned.

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Draft: 11/3/20

Pet Insurance (C) Working Group
Virtual Meeting
October 21, 2020

The Pet Insurance (C) Working Group of the Property and Casualty Insurance (C) Committee met Oct. 21, 2020. The following Working Group members participated: Don Beatty, Chair (VA); Kendra Zoller, Vice Chair, and Risa Salat-Kolm (CA); Kristin Fabian (CT); Tom Travis (LA); Sheri Cullen (MA); Linas Glemza, Rasheda Chairs and Shirley Corbin (MD); LeAnn Cox and Jeana Thomas (MO); Michael McKenney (PA); Matt Gendron (RI); Kathy Stajduhar (UT); Anna Van Fleet (VT); and David Forte and Eric Slavich (WA). Also participating were: Ken Williamson (AL); Brenda Johnson and Tate Flott (KS); Tracy Burns (NE); and Maggie Dell (SD).

1. Adopted its Sept. 30 Minutes

Mr. Forte made a motion, seconded by Mr. McKenney, to adopt the Working Group's Sept. 30 minutes (Attachment Four-A1a1). The motion passed unanimously.

2. Discussed Section 6 of the Draft Pet Insurance Model Law

Mr. Beatty said on the last conference call, the Working Group voted to refer the licensing portion of the model to the Producer Licensing (D) Task Force. He said there has been discussion between the leadership of the Task Force and the Working Group since the Working Group's prior conference call. He asked Mr. Gendron to give an update on those discussions and the position of the Task Force.

Mr. Gendron said the co-chairs of the Producer Licensing (D) Task Force believe the Task Force is the appropriate group to deal with the licensing issue, and the Task Force would take up the issue if presented with a formal proposal from a state insurance regulator. Mr. Forte asked if the outcome of the Task Force's decisions on pet insurance licensing would then be included in the Pet Insurance Model Law. Mr. Gendron clarified that the model would not be dependent on the actions of the Task Force. Rather the model would include a drafting note that instructs states to review the NAIC *State Licensing Handbook* and guidance provided by the Task Force when considering adoption of the model. Ms. Zoller said the current producer licensing guidance is that pet insurance producers would be required to have a limited lines license. Mr. Gendron said the Task Force would view this issue as a priority in 2021. Ms. Zoller said the licensing issue was originally a referral from the Task Force. Mr. Gendron said in 2018, the Task Force made a referral to the Property and Casualty Insurance (C) Committee to further develop the topic of pet insurance and draft a white paper and model law on pet insurance with the intent that the topic of licensing would again be taken up by the Task Force. Mr. McKenney said he would like the topics of pet retailers to get attention elsewhere in the model if Section 6—Licensing is removed. Kate Jensen (North American Pet Health Insurance Association—NAPHIA) said NAPHIA's position is that while the Task Force is the appropriate group to deal with the licensing issue, the issue of non-licensed entities, such as pet retailers, should be addressed by this model. She asked if all of Section 6 should be removed or if the section could still address the actions of non-licensed entities. Mr. Gendron said the non-licensed entities are tied into what a limited lines license would allow a producer to do; therefore, the entire section should be handled by the Task Force. Ms. Jensen said pet retailers should not be selling insurance; therefore, they would not require a license. She said this issue should be addressed elsewhere in the model law if Section 6 is removed. Paul Williams (Unum) said there is a lot of interest by employers and employees to have pet insurance offered as an employment benefit. He said allowing life and health insurers to be licensed to sell pet insurance would allow for the expansion of the scope and availability of pet insurance.

Mr. Gendron made a motion, seconded by Mr. McKenney, to remove Section 6 in the current draft model and replace it with a drafting note that reads: "When each state considers adopting this model, they should review the NAIC *State Licensing Handbook* and other guidance adopted by the Producer Licensing (D) Task Force with respect to licensing issues." The motion passed unanimously.

The Working Group will continue discussion of submitted comments for Sections 7 through 9 on the next conference call.

Having no further business, the Pet Insurance (C) Working Group adjourned.

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Draft: 10/15/20

Pet Insurance (C) Working Group
Conference Call
September 30, 2020

The Pet Insurance (C) Working Group of the Property and Casualty Insurance (C) Committee met via conference call Sept. 30, 2020. The following Working Group members participated: Don Beatty, Chair, Jessica Baggarley and Phyllis Oates (VA); Kendra Zoller, Vice Chair, and Risa Salat-Kolm (CA); Katie Hegland (AK); Kristin Fabian (CT); Warren Byrd (LA); Sheri Cullen (MA); Linas Glemza and Rasheda Chairs (MD); LeAnn Cox (MO); Michael McKenney (PA); Matt Gendron (RI); Kathy Stajduhar (UT); Anna Van Fleet and Jamie Gile (VT); and David Forte and Eric Slavich (WA). Also participating were: Colleen Pawluczyk (DE); Brenda Johnson and Heather Droge (KS); Troy Smith (MT); Chris Aufenthie (ND); Tracy Burns (NE); Fred Brinkman (NJ); Rick Campbell and Rodney Beetch (OH); Ron Kreiter (OK); and J'ne Byckovski and Laura Machado (TX).

1. Discussed Sections 5 and 6 of the Draft Pet Insurance Model Law

Mr. Beatty asked that submitted comments for Section 5 of the draft Pet Insurance Model Law be addressed. Mr. Forte said the inclusion of Section 5 in the model might be prohibitive to the majority of states adopting the model law. He recommended the removal of Section 5 or the use of more neutral language that points back to the laws and regulations that are already in place. Mr. McKenney, Mr. Gendron and Mr. Byrd agreed. Kate Jensen (North American Pet Health Insurance Association—NAPHIA) agreed that the language in Section 5 should refer to the language that appears in each state's laws.

Ms. Zoller made a motion, seconded by Mr. Byrd, to change the language of Section 5 to “[v]iolations of this Act shall be subject to the penalties pursuant to [insert state administrative code].” The motion passed unanimously.

Mr. Forte said the Working Group should consider whether this group is appropriate for declaring licensure for pet insurance. He said the Producer Licensing (D) Task Force made a referral to the Property and Casualty Insurance (C) Committee to look at pet insurance before the Task Force takes up the issue again and makes a decision about licensure. He said the white paper, *A Regulator's Guide to Pet Insurance*, fulfilled the referral request, and the Producer Licensing (D) Task Force is the appropriate group for determining pet insurance licensure. He said if the Working Group does determine that it should include the licensure issue in its model law, Washington's position as a pet insurance producer should have complete authority. He said pet insurance policy terms are longer than other limited lines, the claim activity is significantly different than other limited lines, and pet insurance policies are filled with property and casualty insurance principles. He said basic insurance knowledge is shown through the licensure, and each company should provide the product training. Mr. Byrd asked what role, if any, a customer service representative or salesclerk would play in the sale of pet insurance. Mr. Forte said the line would be compensation. Mr. Byrd said referral fees can be paid. Mr. Forte said there has been a lot of concerns and market actions concerning unlicensed pet insurance sales in Washington. Mr. McKenney said current insurance producer laws dictate what pet retailers and unlicensed people can do regarding sales and referrals. Mr. Gendron said the discussion within the group speaks to the complexity of the licensing issue. He agreed that the Working Group would not be the correct group to handle the licensing issue. Ms. Zoller said the Producer Licensing (D) Task Force was previously working on the pet insurance licensing issue, but this issue was never resolved; therefore, the licensing language that appears in the model was developed. Mr. Gendron said the *Producer Licensing Handbook* addresses pet insurance as a non-core limited line. Mr. McKenney said he agrees that the Working Group is not the correct group to determine licensing. He said if the Working Group does take up the issue, he believes it should address the language that would allow a veterinarian to be licensed to sell a product for which the payments go back to the veterinarian.

Ms. Jensen said NAPHIA urges the Working Group to keep some licensing structure in this Pet Insurance Model Law. She said other model laws within the Property and Casualty Insurance (C) Committee include licensing provisions in their model laws. She said it would be appropriate for this model law to include a basic licensing structure that includes high level requirements. She said NAPHIA favors a limited lines license for pet insurance producers. She said NAPHIA proposes a robust training program that covers pet insurance products, as well as general insurance principles, including ethical sales practices, consumer protections, and disclosures. She said the limited lines license would encourage more people to join the pet insurance industry and expand the availability of the products. She said NAPHIA agrees that pet retailers should not be involved in or compensated for the sale of pet insurance products. She clarified that pet retailers are not currently selling pet insurance.

Mr. Byrd asked if a pet retailer has information available on pet insurance. He asked whether a customer asking for a recommendation on which company to purchase a policy through would step over the line into inducement and sale of a pet insurance policy. Ms. Jensen said NAPHIA has submitted a definition of “pet retailer” that would define the line between referral and sale of pet insurance. Dr. Gail Golab (American Veterinary Medical Association—AVMA) said veterinarians do not sell insurance, but they want to be able to advise clients that pet insurance products are available. She said they would not be discussing policy details that would require an insurance license to discuss. She said there is concern about requiring training for veterinarians for pet insurance products since the sale of policies without such training is not currently allowed in the language of the model law.

Brendan Bridgeland (Center for Insurance Research—CIR) said a limited producer license may not be sufficient for someone selling the policy to fully describe policy details, such as how a preexisting condition is covered. He said this would tie into the need for a free look period for the consumer to fully understand the product before buying. He said he believes there should be no financial incentives and no pet insurance policies being sold in veterinary offices. Mr. McKenney asked if the free look period would be beneficial to help consumers understand if the producer with the license to sell the product does not fully understand. Mr. Bridgeland said this is a newer product that most people would not be familiar with. Mr. McKenney and Mr. Byrd said they do not believe a free look period should be provided.

Jack Chaskey (Companion Protect) said there should be a licensing section within the model law, and the wording of the section should be similar to the wording found in the *Producer Licensing Model Act* (#218). He said the limited lines content is relevant and more effective for consumers. He said continuing education (CE) requirements for a full property and casualty license do not often address pet insurance; although, CE specific to pet insurance could be developed. Mr. Bridgeland said this is a newer product that most people would not be familiar with.

Mr. Beatty said the issue of licensing would best be handled by the Producer Licensing (D) Task Force. Mr. Forte asked if licensing could be referred to the Task Force and then inserted into the Pet Insurance Model Act once a decision has been made. Ms. Salat-Kolm said it is important that the model addresses the transaction of insurance and the need for a license during certain sales activities, whether it be a full property and casualty license or a limited lines license.

Mr. Forte made a motion, seconded by Mr. McKenney, to make a referral to the Producer Licensing (D) Task Force to take up the issue of the need for a limited lines license versus full property and casualty license for pet insurance. The motion passed with Rhode Island abstaining.

The Working Group will continue discussion of submitted comments for Section 6 on the next conference call.

Mr. Beatty opened the comment period for Section 7 through Section 9 of the draft model law.

Having no further business, the Pet Insurance (C) Working Group adjourned.

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Draft: 12/1/20

Transparency and Readability of Consumer Information (C) Working Group
E-Vote
November 23, 2020

The Transparency and Readability of Consumer Information (C) Working Group of the Property and Casualty Insurance (C) Committee conducted an e-vote that concluded Nov. 23, 2020. The following Working Group members participated: Joy Hatchette, Chair (MD); Jimmy Gunn (AL); Ken Allen (CA); Bobbie Baca (CO); George Bradner (CT); Angela King (DC); Ron Henderson (LA); Carrie Couch (MO); Kathy Shortt (NC); Cuc Nguyen (OK); Tricia Goldsmith (OR); Vickie Trice (TN); Marianne Baker (TX); and Dena Wildman (WV).

1. Adopted its Oct. 29, Oct. 13 and Sept. 21 Minutes

The Working Group conducted an e-vote to consider adoption of its interim minutes. The motion passed, with a majority of the Working Group members voting in favor of adopting its Oct. 29 (Attachment Five-A), Oct. 13 (Attachment Five-B) and Sept. 21 (Attachment Five-C) minutes.

Having no further business, the Transparency and Readability of Consumer Information (C) Working Group adjourned.

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Draft: 11/11/20

Transparency and Readability of Consumer Information (C) Working Group
Virtual Meeting
October 29, 2020

The Transparency and Readability of Consumer Information (C) Working Group of the Property and Casualty Insurance (C) Committee met Oct. 29, 2020. The following Working Group members participated: Joy Hatchette, Chair (MD); Ken Allen (CA); Bobbie Baca (CO); George Bradner (CT); Angela King (DC); LeAnn Crow, Brenda Johnson, Shannon Lloyd and Tate Flott (KS); Jeana Thomas and Marjorie Thompson (MO); Kathy Shortt (NC); Cuc Nguyen (OK); David Combs, Jennifer Ramcharan and Vickie Trice (TN); Marianne Baker (TX); and Dena Wildman (WV). Also participating were: Vanessa Darrah (AZ); Renee Campbell (MI); Jana Jarrett (OH); Shannen Logue (PA); Kelly Christensen (UT); Manabu Mizushima (WA); and Bill Cole, Kristi Alma Jose, Donna Stewart and Amanda Tarr (WY).

1. Discussed the Need for Consumer Disclosures Regarding Significant Premium Increases on P/C Insurance Products

Ms. Hatchette said the Working Group's charge was to study and discuss the need for consumer disclosures regarding significant premium increases on property/casualty (P/C) insurance products. She said on the last call, Working Group members were asked to provide the Working Group with any added input or information prior to today's call for consideration.

Ms. Hatchette said the Working Group received information from Texas about its suggestions for a work product as a result of the disclosure discussion. Ms. Baker said she had a discussion with Texas' consumer assistance department. She said the consumer assistance department emphasized the importance of getting the policyholder's attention by giving advance notice of a premium increase. She said Texas believes some ways of getting the policyholder's attention include considering: 1) sending a separate mailing or email; 2) putting something eye-catching about a premium increase on the outside of an envelope or in an email subject line; and 3) sending a text message regarding premium increases.

Ms. Baker said the Texas statute, Insurance Code §2251.005, uses a 10% threshold; therefore, Texas believes a 10% threshold for notification of a premium increase would be appropriate.

Ms. Baker said Texas also believes providing policyholder-specific information to consumers, when applicable, would be appropriate. She said policyholders are interested in why their individual premium have increased, not just what an overall premium increase might be. She said Texas additionally suggests considering listing the policyholder's old premium, the amount of increase, and the policyholder's new premium so that the policyholder can see the new premium amount, as well as the difference from the policyholder's previous premium amount.

Ms. Hatchette asked if Texas is currently using any of its suggestions or if the suggestions are simply a proposal. She asked if consumers find this information helpful if the suggestions are currently being used. Ms. Baker said she would have to defer to Texas' consumer assistance department to answer this question. She said the only place where these suggestions might currently be being used in Texas would be for residential property, as this is where Texas has a statute in place. Ms. Baker said she will talk with the consumer assistance department and provide answers on the next call. She will also provide any examples if available. She said the current Texas statute does not require a specific format. Ms. Hatchette asked Ms. Baker to also find out whether the consumer assistance department has any information about whether consumers find a particular format more useful than others. Ms. Hatchette believes these are some good ideas; however, she is curious to know how items being used in the states are working.

Mr. Allen said the Texas statute says the information about premium increase is specific to residential property insurance. He asked whether when Texas originally worked on this statute, there was any thought or consideration given to commercial insurance or if there has been any conversation about putting something into place in the commercial insurance space. Mr. Bradner asked Texas to expand on the personal auto or commercial auto space. Ms. Baker said Texas has had some internal discussions about the personal auto space, more than in the commercial auto space, but it has not set out any new requirements for these areas. She is not aware of subjects discussed when Texas originally put the statute into place.

Mr. Bradner said Connecticut has requirements in place in the event that there is a premium increase of greater than 10% on the commercial side. He said a greater than 10% premium increase would require insurer notice. Ms. Hatchette asked Mr. Bradner if Connecticut has seen issues and concerns about commercial premium increases once the notices are issued and what Connecticut's experience has been. He said Connecticut does not really have any studies; however, commercial lines customers

generally have greater contact with their agents regarding premium increases and therefore greater explanation. He said the notification requirements also apply to accounts over \$25,000.

Ms. Hatchette said automobile and commercial lines products could also be options in a best practices document for those states that want to include these lines.

Birny Birnbaum (Center for Economic Justice—CEJ) said the CEJ's comments are broken down into two sections. The first section of its comments are specific to disclosure. Mr. Birnbaum said the suggestions provided by Texas assume the use of a universal disclosure for all renewals as opposed to specific significant premium increases that occurred for a number of reasons.

Mr. Birnbaum said it helps consumers and insurers when consumers understand why their premiums increased, as it provides a consumer with detail regarding the activities that led to the increases or decreases in their premiums. He said from a loss mitigation perspective, providing information regarding the increases helps insurers empower consumers to engage in less risky activities. It also affords greater transparency in pricing to consumers. Mr. Birnbaum said this encourages stronger consumer relationships and trust.

Mr. Birnbaum said it is important to provide disclosures regarding premium increases so that there is not an unintended gap in disclosure. He said for example, a number of auto insurers are reducing rates due to current reduced risk exposure caused by less driving as the result of the pandemic. He said the policyholder could experience an increase relative to the base rate change. He said providing a disclosure to all policyholders would be more efficient for insurers and state insurance regulators, and it will be less likely to lead to compliance problems. He said insurers will only be required to develop a template containing relevant text to all consumers, which provides efficiency. There will be little or no additional cost to insurers if the disclosure is part of the renewal notice.

Mr. Birnbaum said there are two key features that the CEJ suggests: 1) the current premium versus the renewal premium; and 2) the explanation for the change in premium, if any. He said currently, for a consumer to find out what their current premium versus the renewal premium is, they must find the declarations page of their previous policy to do the comparison. He said there is no reason not to make this process easier for the consumer. He said regarding the explanation for any change, the CEJ suggests listing the reasons for the change in premium. This allows consumers to see whether any of the reported changes in rating factors or coverage have occurred. The consumer can also see which factors are the most responsible for the changes in premium, which will empower the consumer to engage in risk prevention activities and understand what information is used to determine their premium.

Mr. Birnbaum said the CEJ's comment letter (Attachment Five-A1) describes a way to show the rate change associated with a particular factor as a percentage or a dollar amount. He said it would be simpler to provide a dollar impact only; but as with any insurance consumer disclosure, there should be consumer testing to evaluate the effectiveness of the disclosure.

Mr. Birnbaum said including the specific reasons for change in premium will lead to greater regulatory and insurer efficiencies. A disclosure would enable the state insurance regulator to more easily and efficiently respond to a question or identify an issue when a consumer has a question or complaint. Consequently, this will reduce the number of communications required between state insurance regulators and insurers.

Charles Angell (AL-Retired) said he thought another reason for premium increase that could be listed on the CEJ's chart would relate to premium capping. It could be that a premium was capped strictly because of a capping rule that either the insurer employs or a state insurance department requires. There may be future increases that will be coming based on a rate increase that was already approved. Mr. Angell said long-term care (LTC) insurers do this to let the consumer know that their premium is going up not only in the current year, but in the next two years, so the insured can decide if they want to reduce coverage to offset the premium increase. He said the same logic is appropriate here to try and inform the insured that they are getting an increase now, but there is another X% increase coming in the next year and perhaps even in the following year. He said he knows this is a problem because whatever dollar amount percentage you try to describe as the future increase, that number or dollar percentage will change because of an extra rate filing. He said you may not be able to show the contribution to premium change from the capping rule, but you could at least alert the insured that this premium has been capped; and if there are no further rate increases in rate filings in the future years, the insured will still see an increase in premium.

Mr. Bradner said he fully supports the suggestion provided by Mr. Angell. He said the capping issue is an issue that should be front and center for an insured, so that when they are making decisions, they know that the insurer has a capping plan in place

and the insured knows they are going to see a premium increase of X number of years. He said he believes this is something the insured needs to understand.

Ms. Hatchette asked Mr. Bradner if he has ideas on how we would explain this to a consumer, because it is a difficult concept for consumers to understand. Mr. Bradner agreed that it is a difficult concept, but the insured needs to understand the concept, especially when an insurer acquires another insurer. He said the Working Group will have to work with the insurance industry to figure out the best way to communicate this concept. Mr. Birnbaum suggested adding wording about the renewal rate for the next renewal periods and base the chart on the total premium increase. Lisa Brown (American Property Casualty Insurance Association—APCIA) suggested that this might be confusing to an insured that had also experienced a couple of accidents. She suggested that the premium increase be referred to as, “spread over X number of years.” Mr. Bradner said this is also an area where an agent might need to explain this concept or the insurer will need to explain this to the insured.

Ms. Hatchette said during the Working Group’s next conference call, it will discuss what the report to the Property and Casualty Insurance (C) Committee will entail. The Working Group will also discuss the Kansas checklist on the next call.

Having no further business, the Transparency and Readability of Consumer Information (C) Working Group adjourned.

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**Comments for the Center for Economic Justice
To the NAIC Transparency and Readability Working Group
Disclosure to Consumers of Changes in Premiums**

September 21, 2020

CEJ offers the following comments to the Readability and Transparency Working Group regarding disclosure of premium changes.

While the charge references “significant premium increases,” it is unclear what that means or why disclosure of premium changes should be limited to “significant premium changes.” Any rationale for providing a consumer with information regarding a “significant premium increase” is relevant for any premium change.

We suggest the following disclose be required as part of the either the renewal notice or a renewal declarations page:

Your current premium is [\$XXX]

Your renewal premium is [\$YYY]

The reason(s) for this change is (are) [Insert as many as needed in the table]

The percentage shown how much your premium changed because of each factor.

Reason	Contribution to Premium Change
We increased / decreased our rates	\$X
Your coverage increased/decreased	\$Y
Your [rating/uw/tier placement factor] 1 changed	\$Z
Your [rating/uw/tier placement factor] 2 changed	\$A
Your [rating/uw/tier placement factor] 3 changed	\$B

We suggest this approach because it puts the relevant information into the hands of every policyholder getting a renewal notice. It provides critical information – current vs. renewal premium and the reasons for the premium change. This information empowers consumers in key ways. They can see whether any of the purported changes in rating factors or coverage have actually occurred. They can also see which factors are the most responsible for the change in premium. The information better empowers the consumer to engage in risk prevention activities and to understand what information is used to determine a consumer’s premium.

Draft: 10/13/20

Transparency and Readability of Consumer Information (C) Working Group
E-Vote
October 13, 2020

The Transparency and Readability of Consumer Information (C) Working Group of the Property and Casualty Insurance (C) Committee conducted an e-vote that concluded October 13, 2020. The following Working Group members participated: Joy Hatchette, Chair (MD); Jerry Workman (AL); Ken Allen (CA); Bobbie Baca (CO); George Bradner (CT); Angie King (DC); Heather Droge (KS); Ron Henderson (LA); Carrie Couch (MO); Kathy Shortt (NC); Cuc Nguyen (OK); and Dena Wildman (WV).

1. Adopted its Interim Minutes

The Working Group conducted an e-vote to consider adoption of its Fall National Meeting minutes, July 30, 2020. The motion passed, with a majority of the Working Group members voting in favor of adopting its July 30 minutes (*see NAIC Proceedings – Summer 2020, Property and Casualty Insurance (C) Committee*).

Having no further business, the Transparency and Readability of Consumer Information (C) Working Group adjourned.

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Draft: 10/15/20

Transparency and Readability of Consumer Information (C) Working Group
Conference Call
September 21, 2020

The Transparency and Readability of Consumer Information (C) Working Group of the Property and Casualty Insurance (C) Committee met via conference call Sept. 21, 2020. The following Working Group members participated: Joy Hatchette, Chair (MD); Ken Allen (CA); Tracy Garceau (CO); George Bradner (CT); LeAnn Crow, Heather Droge and Tate Flott (KS); Ron Henderson (LA); Chris Aufenthie and Chrystal Bartuska (ND); Cuc Nguyen (OK); Jennifer Ramcharan (TN); and Marianne Baker (TX). Also participating were: Vanessa Darrah (AZ); Renee Campbell (MI); Troy Smith (MT); Tynesia Dorsey and Jana Jarrett (OH); David Combs (TN); Tracy Klausmeier (UT); Manabu Mizushima (WA); and Barbara Belling (WI); and Bill Cole, Kristi Alma Jose and Donna Stewart (WY).

1. Discussed the Need for Consumer Disclosures Regarding Significant Premium Increases on P/C Insurance Products

Ms. Hatchette said Working Group members were asked to submit information concerning disclosures their state may already have regarding premium increases. She said currently, Colorado, Kansas and Maryland have sent information regarding premium increases.

Sara Robben (NAIC) said Colorado sent information regarding two regulations used in its state. Both of these regulations are about auto insurance premiums. These regulations discuss a policy that insurers have to follow in order to increase auto premiums. These regulations also discuss adverse activity and usage-based premiums, as well as disclosure requirements for private passenger auto policies.

Ms. Garceau said there is one statute and two regulations. She said Colorado requires insurers to be clear regarding increases where adverse action is involved that does not involve a state-wide premium increase. She said Colorado also requires the insurers to inform consumers that they can contact the division of insurance if they have any questions regarding these increases. She said Colorado also requires insurers to offer an exclusion if one particular driver is the reason for the premium increase. Mr. Bradner asked if the information in the Colorado regulations and statute were related to accidents, convictions and credit. He said one of the items the Working Group is looking at is how an insured might be tiered based on a number of data elements that may be affecting the tiering of that risk. Ms. Garceau said Colorado does not discuss tiering. Mr. Bradner said the Working Group wants to look at the components involved when a policyholder's premium increases by more than a certain percent, say 20%, to identify the factors that drove that premium increase. Ms. Garceau said when they receive consumer complaints, they require the insurer to provide information in monetary terms regarding the premium increases. She said the department of insurance (DOI) finds this information valuable. She said unfortunately, consumers only get this information when they file a complaint and the DOI requests the information from the insurer. She said sometimes, they figure out that a consumer may have lost a discount, which also increases a premium.

Ms. Hatchette asked Ms. Garceau if Colorado has any general consumer information available to educate consumers regarding factors that might increase a premium. Ms. Garceau said she will have to check on this, and she will let the Working Group know. She believes some of their consumer information might need to be updated.

Ms. Robben said Kansas is doing several things in its state, such as a rate and rule filing checklist and memorandums that are sent out regarding premium increases. Ms. Droge said the first document is the rate and rule checklist used by the Kansas DOI. She said this is a required document used by Kansas, and it is located under its general instructions. She said Kansas requires this information to be completed to fill out an extraordinary memorandum. She said if they do not receive everything they need on this document, they will reject the filing. She said insurers know they need to provide this information to Kansas, so there are no longer issues receiving this information.

Ms. Droge said the extraordinary memorandum is used to assist the consumer assistance division, the financial surveillance division, and the executive staff. This is done so these divisions have all of the detail available for the top 30 writers in the state. Ms. Droge said the reasons for the premium increases are listed, as well as histograms, loss ratios for the past five years, the permissible loss ratio, and why they chose to approve the filing. She said there is also a section there that includes talking points from the insurer regarding the premium increase. She said they try to provide as much information as possible to help the consumer division. She said providing this information to the consumer division has proven to be extremely helpful. She said this also helps with communications with their executive committee. Ms. Hatchette asked if the consumer is generally

satisfied when receiving the information given to the consumer division. Ms. Droge said this information is not given directly to the consumer, but it is kept on file and helps the consumer division to understand the rating process and explain generally what has occurred; and the consumer division is able to provide answers based on this information. If the consumer needs more information, it goes back to the rating department. Ms. Hatchette asked Ms. Droge if Kansas has any general consumer information available to educate consumers regarding factors that might increase a premium. Ms. Droge said Kansas does not have this information available besides some of its consumer guides. Ms. Hatchette asked if Kansas has any disclosures that they require an insurer to send out regarding premium increases. Ms. Droge said they did not have disclosures.

Mr. Bradner said Connecticut is in the process of putting together a checklist, and it is planning on putting in a question regarding using artificial intelligence (AI) in the ratemaking. He said Maryland is informing insurers regarding what they can use, and he believes that is helpful. He said at the end of the day, he believes when a consumer receives a premium increase of 20% or more, they are interested in knowing what caused this increase. He believes if there is a substantial rate increase, then the consumer should understand the component. Ms. Droge agreed that these larger premium increases will produce the most consumer calls. She said the memorandums capture the main reasons for premium increases. Mr. Bradner said the histogram shows the number of policyholders getting the premium increases, which is helpful. Mr. Hatchette said sometimes insurers are able to give the reason for the premium increases, but they do not always provide the reason.

Ms. Nguyen asked Kansas if it is a prior approval state. Ms. Droge said it is. She said Oklahoma is use and file, but they do sometimes ask insurers why there was a premium increase. She said they also have an exhibit of the number of people receiving the maximum increase and receive information from the insurer regarding the increase if the department asks. Ms. Nguyen will send the NAIC the statute used in Oklahoma that requires that insurers send a notice of increase 45 days prior to the renewal of a commercial policy and 20 days prior to the renewal of a personal lines policy.

Ms. Hatchette said Maryland does not have anything by law or by regulation that gets into the level of detail of disclosure that explains all of the factors involved in a premium increase. She said the Maryland DOI tries to educate consumers regarding premium increases so that if a consumer comes to the state with a question or complaint, the DOI gets the necessary information and level of detail regarding the increase from the insurer. She said it would require a statutory change to require a disclosure of this nature, and she said it is highly unlikely this year that the Maryland assembly would have the appetite to change existing laws this year, but she is unsure about other states.

Ms. Robben said Texas sent some information for the Working Group to consider. Ms. Baker said Texas has a statute that requires insurers to give 30 days' notice to residential property policyholders if there is a rate increase of at least 10% greater than what the policyholder paid in the last twelve months or what they paid in their preceding policy period. The statute does not require the insurer to provide specific details regarding the reason for the increase. Texas did send links to its consumer information.

Mr. Bradner said it is not a matter of having to come up with statutory language immediately, but he believes it is the matter of the Working Group deciding if it agrees that there should be better disclosure for the consumer when there is a premium increase of greater than some amount so the consumer understands what went into the increase. He said the Working Group can then identify the parameters around what each state might want to add to a checklist when reviewing a rate filing or looking at a statutory requirement a state might want to pursue. Ms. Hatchette believes it would be an excellent idea to provide states with these options.

Mr. Allen said California has quite a bit of information in the rate filings regarding rate increases. He said this has been helpful with all of the homeowners rate increases that have occurred over the past few years. He said when the renewal notice goes out to the policyholder, the "sticker shock" on some of the premium increases is difficult for the policyholder to understand. There is no information regarding the components causing the premium increase. Mr. Allen said California policyholders could benefit from something that is part of the renewal when a premium increase exceeds a pre-determined amount. He said this amount could be different for personal and commercial lines. He believes this would help policyholders better understand premium increases and help to alleviate calls to the consumer services division regarding these increases.

Ms. Garceau said many times, there is a range in a rate increase. She asked if it would create more questions if a consumer is given a number higher in the range. Ms. Droge said Kansas does not typically give the consumer the actual range of the rate increase unless necessary.

Karrol Kitt (University of Texas at Austin) asked why the rate increase ranges are not provided to the consumer when they file a complaint. Mr. Bradner said the only thing they are not providing to the consumer is the rate range unless it affects the consumer's risk. He said the DOI wants to ensure that it provides the information regarding why the particular consumer asking the question had their premium increase. He said the consumer does not really care about the range of premium increases. Ms. Kitt believes the consumer should know the median increase. Ms. Droge said if the consumer asks for this information, the DOI would provide it. She said it provides training to the consumer division so staff is able to help the consumer in a satisfactory manner. Ms. Hatchette said the question is, "do the insurers need to be doing something differently up front to inform the consumer." She said the state insurance regulators are providing the consumers with needed information, but the consumer should not have to file a complaint with a DOI to obtain the needed information. She said the insurers may need to be more proactive so consumers understand the rate increase. Ms. Droge said an insurer has the opportunity to provide as much detail as they want to the DOI; however, when they do not provide enough information, the DOI will go back to the insurer and ask for more information.

Lisa Brown (American Property Casualty Insurance Association—APCIA) said the APCIA agrees that insurers should be able to explain to their policyholders why their rates have increased. She said she believes that sometimes the policyholder will still want validation from the state insurance regulator regarding the rate increase, and they will still file a consumer complaint at times.

Birny Birnbaum (Center for Economic Justice—CEJ) said insurers should provide detailed information regarding why the rate changed at the time the policyholder is renewing.

Ms. Brown said she reached out to the APCIA's companies and received an agreement that policyholder notices regarding premium increases are not something that insurers are going to fight. She said the APCIA believes the term "significant premium increases" should be an agreed upon definition amongst the states. She said part of the reason the definition should be agreed upon is for insurers to be able to automatically generate letters with this information. She said consistency regarding this matter would be welcome as opposed to the variety of information currently requested. She said the APCIA looks forward to working with the Working Group on this matter.

Mr. Bradner said the Working Group needs to consider whether the work will be done for commercial lines or personal lines products because some states have conditional renewal requirements in place for commercial lines products. The Working Group will start with personal lines and decide on what to do with commercial lines at a later point.

Ms. Hatchette asked any states with documents or ideas to consider, to send these documents to Ms. Robben. Ms. Hatchette asked the Working Group members to also review the checklist sent by Kansas. The Working Group will discuss what approach to take on the next conference call, whether it be best practices or a list of options.

Having no further business, the Transparency and Readability of Consumer Information (C) Working Group adjourned.

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REAL PROPERTY LENDER-PLACED INSURANCE MODEL ACT

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Section 1. Purpose

The purpose of this Act is to:

- A. Promote the public welfare by regulating lender-placed insurance on real property.
- B. Create a legal framework within which lender-placed insurance on real property may be written in this state.
- C. Help maintain the separation between lenders/servicers and insurers/insurance producers.
- D. Minimize the possibilities of unfair competitive practices in the sale, placement, solicitation and negotiation of lender-placed insurance.

Section 2. Scope

- A. This Act applies to insurers and insurance producers engaged in any transaction involving lender-placed insurance as defined in this Act.
- B. All lender-placed insurance written in connection with mortgaged real property, including manufactured and mobile homes, is subject to the provisions of this Act, except:
 - (1) Transactions involving extensions of credit primarily for business, commercial or agricultural purposes.
 - (2) Insurance offered by the lender or servicer and elected by the mortgagor at the mortgagor's option.

- (3) Insurance purchased by a lender or servicer on real estate owned property.
- (4) Insurance for which no specific charge is made to the mortgagor or the mortgagor's account.

Drafting Note: Nothing in this Act shall be construed to create or imply a private cause of action for violation of this Act, and the commissioner shall have authority to enforce this Act subject to the laws of this state. Furthermore, nothing in this Act shall be construed to extinguish any mortgagor rights available under common law or other state statutes.

Section 3. Definitions

As used in this Act:

- A. "Affiliate" shall mean a person that directly, or indirectly through one or more intermediaries, controls or is controlled by, or is under common control with, the person specified.
- B. "Individual lender-placed insurance" means coverage for individual real property evidenced by a certificate of coverage under a master lender-placed insurance policy or a lender-placed insurance policy for individual real property.
- C. "Insurance Producer" means a person or entity (or its Affiliates) required to be licensed under the laws of this state to sell, solicit or negotiate insurance.
- D. "Insurer" means an insurance company, association or exchange authorized to issue lender-placed insurance in [insert applicable state] (or its Affiliates).
- E. "Investor" means a person or entity (and its Affiliates) holding a beneficial interest in loans secured by real property.
- F. "Lapse" means the moment in time in which a mortgagor has failed to secure or maintain valid and/or sufficient insurance upon mortgaged real property as required by a mortgage agreement.
- G. "Lender" means a person or entity (and its Affiliates) making loans secured by an interest in real property.
- H. "Lender-placed insurance" means insurance obtained by a lender or servicer when a mortgagor does not maintain valid and/or sufficient insurance upon mortgaged real property as required by the terms of the mortgage agreement. It may be purchased unilaterally by the lender or servicer, who is the named insured, subsequent to the date of the credit transaction, providing coverage against loss, expense or damage to collateralized property as a result of fire, theft, collision or other risks of loss that would either impair a lender, servicer or investor's interest or adversely affect the value of collateral covered by limited dual interest insurance. It is purchased according to the terms of the mortgage agreement as a result of the mortgagor's failure to provide evidence of required insurance.
- I. "Loss ratio" means the ratio of incurred losses to earned premium.

- J. “Master lender-placed insurance policy” means a group policy issued to a lender or servicer providing coverage for all loans in the lender or servicer’s loan portfolio as needed.
- K. “Mortgage agreement” means the written document that sets forth an obligation or a liability of any kind secured by a lien on real property and due from, owing or incurred by a mortgagor to a lender on account of a mortgage loan, including the security agreement, Deed of Trust and any other document of similar effect, and any other documents incorporated by reference.
- L. “Mortgage loan” means a loan, advance, guarantee or other extension of credit from a lender to a mortgagor.
- M. “Mortgage transaction” means a transaction by the terms of which the repayment of money loaned or payment of real property sold is to be made at a future date or dates.
- N. “Mortgagee” means the person who holds mortgaged real property as security for repayment of a mortgage agreement.
- O. “Mortgagor” means the person who is obligated on a mortgage loan pursuant to a mortgage agreement.
- P. “Person” means an individual or entity.
- Q. “Real Estate Owned Property” means property owned or held by a lender or servicer following foreclosure under the related Mortgage agreement or the acceptance of a deed in lieu of foreclosure.
- R. “Replacement Cost Value (RCV)” is the estimated cost to replace covered property at the time of loss or damage without deduction for depreciation. RCV is not market value, but it is instead the cost to replace covered property to its pre-loss condition.
- S. “Servicer” means a person or entity (and its Affiliates) contractually obligated to service one or more mortgage loans for a Lender or Investor. The term “Servicer” includes entities involved in subservicing arrangements.

Section 4. Term of Insurance Policy

- A. Lender-placed insurance shall become effective no earlier than the date of lapse of insurance upon mortgaged real property subject to the terms of a mortgage agreement and/or any other state or federal law requiring the same.
- B. Individual lender-placed insurance shall terminate on the earliest of the following dates:
 - (1) The date insurance that is acceptable under the mortgage agreement becomes effective, subject to the mortgagor providing sufficient evidence of such acceptable insurance.
 - (2) The date the applicable real property no longer serves as collateral for a mortgage loan pursuant to a mortgage agreement.

- (3) Such other date as specified by the individual policy or certificate of insurance.
 - (4) Such other date as specified by the lender or servicer.
 - (5) The termination date of the policy.
- C. An insurance charge shall not be made to a mortgagor for lender-placed insurance for a term longer than the scheduled term of the lender-placed insurance, nor may an insurance charge be made to the mortgagor for lender-placed insurance before the effective date of the lender-placed insurance.

Section 5. Calculation of Coverage and Payment of Premiums

- A. Any lender-placed insurance coverage, and subsequent calculation of premium, should be based upon the replacement cost value of the property as best determined as follows:
- (1) The dwelling coverage amount set forth in the most recent evidence of insurance coverage provided by the mortgagee (“last known coverage amount” or “LKCA”), if known to the lender or servicer.
 - (2) The insurer shall inquire of the insured, at least once, as to the LKCA; and if it is not able to obtain the LKCA from the insured or in another manner, the insurer may proceed as set forth below.
 - (3) If the LKCA is unknown, the replacement cost of the property serving as collateral as calculated by the insurer, unless the use of replacement cost for this purpose is prohibited by other state or federal law.
 - (4) If the LKCA is unknown and the replacement cost is not available or its use is prohibited, the unpaid principal balance of the mortgage loan.
- B. In the event of a covered loss, any replacement cost coverage provided by an insurer in excess of the unpaid principal balance of the mortgage loan shall be paid to the mortgagor.
- C. An insurer shall not write lender-placed insurance for which the premium rate differs from that determined by the schedules of the insurer on file with the commissioner as of the effective date of any such policy.

Section 6. Prohibited Practices

- A. An insurer or insurance producer shall not issue lender-placed insurance on mortgaged property that the insurer or insurance producer or an Affiliate of the insurer or insurance producer owns, performs the servicing for, or owns the servicing right to the mortgaged property.

- B. An insurer or insurance producer shall not compensate a lender, insurer, investor or servicer (including through the payment of commissions) on lender-placed property insurance policies issued by the insurer.
- C. An insurer or insurance producer shall not share lender-placed insurance premium or risk with the lender, investor or servicer that obtained the lender-placed insurance.
- D. An insurer or insurance producer shall not offer contingent commissions, profit sharing, or other payments dependent on profitability or loss ratios to any person affiliated with a servicer or the insurer in connection with lender-placed insurance.
- E. An insurer shall not provide free or below-cost outsourced services to lenders, investors or servicers, and an insurer will not outsource its own functions to lenders, insurance producers, investors or servicers on an above-cost basis.
- F. An insurer or insurance producer shall not make any payments, including but not limited to the payment of expenses to a lender, insurer, investor or servicer for the purpose of securing lender-placed insurance business or related outsourced services.

Section 7. Non-Circumvention

Nothing in this Act shall be construed to allow an insurance producer or an insurer solely underwriting lender-placed insurance to circumvent the requirements set forth within this Act. Any such part of any requirements, limitations or exclusions provided herein apply in any part to any insurer or insurance producer involved in lender-placed insurance.

Section 8. Evidence of Coverage

Lender-placed insurance shall be set forth in an individual policy or certificate of insurance. A copy of the individual policy, certificate of insurance, or other evidence of insurance coverage shall be mailed, first class mailed, or delivered in person to the last known address of the mortgagor or delivered in accordance with [inset reference to Electronic Transaction Act].. Notwithstanding any other statutory or regulatory required information, the individual policy or certificate of insurance coverage shall include the following information:

- A. The address and identification of the insured property.
- B. The coverage amount or amounts if multiple coverages are provided.
- C. The effective date of the coverage.
- D. The term of coverage.
- E. The premium charge for the coverage.
- F. Contact information for filing a claim.
- G. A complete description of the coverage provided.

Section 9. Filing, Approval and Withdrawal of Forms and Rates

- A. All policy forms and certificates of insurance to be delivered or issued for delivery in this state and the schedules of premium rates pertaining thereto shall be filed with the Commissioner.
- B. The Commissioner shall review the rates to determine whether the rates are excessive, inadequate or unfairly discriminatory. This analysis shall include a determination as to whether expenses included by the insurer in the rate are appropriate.
- C. All insurers shall re-file lender-placed property insurance rates at least once every four (4) years.
- D. All insurers writing lender-placed insurance shall have separate rates for lender-placed insurance and voluntary insurance obtained by a mortgage servicer on real estate owned property.
- E. Upon the introduction of a new lender-placed insurance program, the insurer shall reference its experience in existing programs in the associated filings. Nothing in this Act shall limit an insurer's discretion, as actuarially appropriate, to distinguish different terms, conditions, exclusions, eligibility criteria or other unique or different characteristics. Moreover, an insurer may, where actuarially acceptable, rely upon models or, in the case of flood filings where applicable experience is not credible, on Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP) data.
- F. No later than April 1 of each year, each insurer with at least \$100,000 in direct written premium for lender-placed insurance in this state during the prior calendar year shall report to the Commissioner the following information for the prior calendar year:
 - (1) Actual loss ratio.
 - (2) Earned premium.
 - (3) Any aggregate schedule rating debit/credit to earned premium.
 - (4) Itemized expenses.
 - (5) Paid losses.
 - (6) Loss reserves, including case reserves and reserves for incurred but not reported losses.

This report shall be separately produced for each lender-placed program and presented on both an individual-jurisdiction and countrywide basis.

- G. Except in the case of lender-placed flood insurance, to which this paragraph does not apply, if an insurer experiences an annual loss ratio of less than 35% in any lender-placed program for two consecutive years, it shall submit a rate filing (either

adjusting its rates or supporting their continuance) to the Commissioner no more than 90 days after the submission of the data required in F. above

Drafting Note: The 35% trigger for re-filing rates is not intended to be, nor should be interpreted as, a loss ratio standard for determining whether rates are excessive or inadequate. The loss ratio standard in this section is solely directed to prompt a re-filing of rates by the insurer.

- H. Except as specifically set forth in this Section, rate and form filing requirements shall be subject to the insurance laws of this state.

Section 10. Enforcement

The Commissioner shall have all rights and powers to enforce the provisions of this Act as provided by section(s) [insert section(s) number] of the Insurance Code of this state.

Section 11. Regulatory Authority

The commissioner may, after notice and hearing, promulgate reasonable regulations and orders to carry out and effectuate the provisions of this Act.

Section 12. Judicial Review

- A. A person subject to an order or final determination of the commissioner under Section 8 or Section 13 may obtain a review of the order or final determination by filing in the [insert title] Court of [insert county] County, within [insert number] days from the date of the service of the order, a written petition praying that the order of the commissioner be set aside. A copy of the petition shall be served upon the commissioner, and the commissioner shall certify and file in the court a transcript of the entire record in the proceeding, including all the evidence taken and the report and order or final determination of the commissioner. Upon filing of the petition and transcript, the court shall have jurisdiction of the proceeding; and the questions determined shall determine whether the filing of the petition shall operate as a stay of the order or final determination of the commissioner, and they shall have power to make and enter upon the pleadings, evidence and proceedings set forth in the transcript a decree modifying, affirming or reversing the order or final determination of the commissioner, in whole or in part. The findings of the commissioner as to the facts, if supported by [insert type] evidence, shall be conclusive.

Drafting Note: Insert appropriate language to accommodate to local procedure the effect given the commissioner's determination.

- B. To the extent that the order or final determination of the commissioner is affirmed, the court shall issue its own order commanding obedience to the terms of the order or final determination of the commissioner. If either party applies to the court for leave to adduce additional evidence and shows to the satisfaction of the court that the additional evidence is material and that there were reasonable grounds for the failure to adduce such evidence in the proceeding before the commissioner, the court may order the additional evidence to be taken before the commissioner and be adduced upon the hearing in the manner and upon the terms and conditions the court may deem proper. The commissioner may modify the findings of fact, or make new findings by reason of the additional evidence so taken, and shall file such modified or new findings that are supported by [insert type] evidence with a

recommendation if any, for the modification or setting aside of the original order or final determination, with the return of the additional evidence.

Drafting Note: Insert appropriate language to accommodate to local procedure the effect given the commissioner's determination. In a state where final judgment, order or final determination or decree would not be subject to review by an appellate court, provision should therefore be inserted here.

- C. An order issued by the commissioner under Section 13 shall become final:
 - (1) Upon the expiration of the time allowed for filing a petition for review if no petition has been duly filed within that time except that the commissioner may thereafter modify or set aside the order to the extent provided in Section 13.
 - (2) Upon the final decision of the court if the court directs that the order of the commissioner be affirmed or the petition for review be dismissed.
- D. No order of the commissioner under this Act or order of a court to enforce the same shall relieve or absolve any person affected by the order from liability under any other laws of this state.

Drafting Note: States may delete this section if the substance of it already exists in state law.

Section 13. Penalties

An insurer that violates an order of the commissioner while the order is in effect may, after notice and hearing and upon order of the commissioner, be subject at the discretion of the commissioner to either or both of the following:

- A. Payment of a monetary penalty of not more than \$1,000 for each violation, but not to exceed an aggregate penalty of \$100,000, unless the violation was committed flagrantly in a conscious disregard of this Act, in which case the penalty shall not be more than \$25,000 for each violation, but not to exceed an aggregate penalty of \$250,000.
- B. Suspension or revocation of the insurer's license.

Drafting Note: States may delete or modify this section if the substance of it already exists in state law.

Section 14. Severability Provisions

If any provision of this Act, or the application of the provision to any person or circumstance, is for any reason held to be invalid, the remainder of the Act and the application of such provision to other persons or circumstances shall not be affected thereby.

Section 15. Effective Date

This Act shall take effect [insert effective date].

Casualty Actuarial and Statistical (C) Task Force
Regulatory Review of Predictive Models
White Paper

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I. INTRODUCTION

Insurers' use of predictive analytics along with big data has significant potential benefits to both consumers and insurers. Predictive analytics can reveal insights into the relationship between consumer behavior and the cost of insurance, lower the cost of insurance for many, and provide incentives for consumers to better control and mitigate loss. However, predictive analytic techniques are evolving rapidly and leaving many state insurance regulators, who must review these techniques, without the necessary tools to effectively review insurers' use of predictive models in insurance applications.

When a rate plan is truly innovative, the insurer must anticipate or imagine the reviewers' interests because reviewers will respond with unanticipated questions and have unique educational needs. Insurers can learn from the questions, teach the reviewers, and so forth. When that back-and-forth learning is memorialized and retained, filing requirements and insurer presentations can be routinely organized to meet or exceed reviewers' needs and expectations. Hopefully, this white paper helps bring more consistency to the art of reviewing predictive models within a rate filing and make the review process more efficient.

The Casualty Actuarial and Statistical (C) Task Force has been charged with identifying best practices to serve as a guide to state insurance departments in their review of the predictive models¹ underlying rating plans. There were two charges given to Task Force by the Property and Casualty Insurance (C) Committee at the request of the Big Data (EX) Working Group:

- **Draft and propose changes to the *Product Filing Review Handbook* to include best practices for review of predictive models and analytics filed by insurers to justify rates.**
- **Draft and propose state guidance (e.g., information, data) for rate filings based on complex predictive models.**

This white paper will identify best practices for the review of predictive models and analytics filed by insurers with regulators to justify rates and will provide state guidance for the review of rate filings based on predictive models. Upon adoption of this white paper by the Executive (EX) Committee and Plenary, the Task Force will make a recommendation to incorporate these best practices into the *Product Filing Review Handbook* and will forward that recommendation to the Speed to Market (EX) Working Group.

As discussed further in the body of the white paper, this document is intended as guidance for state insurance regulators as they review predictive models. Nothing in this document is intended to, or could, change the applicable legal and regulatory standards for approval of rating plans. This guidance is intended only to assist state insurance regulators as they review models to determine whether modeled rates are compliant with existing state laws and/or regulations. To the extent these best practices are incorporated into the *Product Filing Review Handbook*, the handbook provides that it is intended to “add uniformity and consistency of regulatory processes, while maintaining the benefits of the application of unique laws and regulations that address the state-specific needs of the nation’s insurance consumers.”

II. WHAT IS A “BEST PRACTICE”?

A best practice is a form of program evaluation in public policy. At its most basic level, a practice is a “tangible and visible behavior... [based on] an idea about how the actions...will solve a problem or achieve a goal.”² Best practices are used to maintain quality as an alternative to mandatory legislated standards and can be based on self-assessment or benchmarking.³ Therefore, a best practice represents an effective method of problem solving. The “problem” regulators want to solve is probably better posed as seeking an answer to this question: How can regulators determine whether predictive models, as used in rate filings, are compliant with state laws and/or regulations?

¹ In this white paper, references to “model” or “predictive model” are the same as “complex predictive model” unless qualified.

² Bardach, E., and Patashnik, E., 2016. *A Practical Guide for Policy Analysis, The Eightfold Path to More Effective Problem Solving*. Thousand Oaks, CA: CQ Press. See Appendix A for an overview of Bardach’s best-practice analysis.

³ Bogan, C.E., and English, M.J., 1994. *Benchmarking for Best Practices: Winning Through Innovative Adaptation*. New York, NY: McGraw-Hill.

Key Regulatory Principles

In this white paper, best practices are based on the following principles that promote a comprehensive and coordinated review of predictive models across the states:

1. State insurance regulators will maintain their current rate regulatory authority and autonomy.
2. State insurance regulators will be able to share information to aid companies in getting insurance products to market more quickly across the states.⁴
3. State insurance regulators will share expertise and discuss technical issues regarding predictive models to make the review process in any state more effective and efficient.
4. State insurance regulators will maintain confidentiality, in accordance with state law, regarding predictive models.

Best practices are presented to state insurance regulators for the review of predictive models and to insurance companies as a consideration in filing rating plans that incorporate predictive models. As a byproduct of identifying these best practices, general and specific information elements were identified that could be useful to a regulator when reviewing a rating plan that is wholly or in part based on a generalized linear model (GLM). For the states that are interested, the information elements are identified in Appendix B, including comments on what might be important about that information and, where appropriate, providing insight as to when the information might identify an issue the regulator needs to be aware of or explore further. Lastly, provided in this white paper are glossary terms (see Appendix C) and references (contained in the footnotes) that can expand a state insurance regulator's knowledge of predictive models (GLMs specifically).

III. SOME ISSUES IN REVIEWING TODAY'S PREDICTIVE MODELS

The term "predictive model" refers to a set of models that use statistics to predict outcomes.⁵ When applied to insurance, the model is chosen to estimate the probability or expected value of an outcome given a set amount of input data; for example, models can predict the frequency of loss, the severity of loss, or the pure premium. The GLM⁶ is a commonly used predictive model in insurance applications, particularly in building an insurance product's rating plan.

Depending on definitional boundaries, predictive modeling can sometimes overlap with the field of machine learning. In this modeling space, predictive modeling is often referred to as predictive analytics.

Before GLMs became vogue, rating plans were built using univariate methods. Univariate methods were considered intuitive and easy to demonstrate the relationship to costs (loss and/or expense). Today, many insurers consider univariate methods too simplistic because they do not take into account the interaction (or dependencies) of the selected input variables.

Today, the majority of predictive models used in personal automobile and home insurance rating plans are GLMs.⁷ According to many in the insurance industry, GLMs introduce significant improvements over univariate-based rating plans by automatically adjusting for correlations among input variables. However, it is not always easy to understand the complex predictive model output's relationship to cost. This creates a problem for the state insurance regulator when model results are difficult to explain to someone (e.g., a consumer) who has little to no expertise in modeling techniques.

⁴ The states can share information if they can maintain confidentiality and legally share such information. Information about a classification plan documented in one state could be shared with another state.

⁵ A more thorough exploration of different predictive models will be found in many books on statistics, including:

- Geisser, S., 2016. *Predictive Inference: An Introduction*, New York, NY: Chapman & Hall.
- James, G., et al., 2017. *An Introduction to Statistical Learning: with Applications in R*, New York, NY: Springer Science+Business Media, pp. 87–90. Accessed online at <http://faculty.marshall.usc.edu/gareth-james/ISL/ISLR%20Seventh%20Printing.pdf>.

⁶ The GLM is a flexible family of models that are unified under a single method. Types of GLMs include logistic regression, Poisson regression, gamma regression, and multinomial regression.

⁷ Goldburd, M., et al., 2016. "Generalized Linear Models for Insurance Rating," CAS Monograph Series, Number 5, Second Edition, pp. 52–58. Accessed online at www.casact.org/pubs/monographs/papers/05-Goldburd-Khare-Tevet.pdf.

Generalized Linear Models

A GLM consists of three elements:⁸

- A target variable, Y , which is a random variable that is independent and is assumed to follow a probability distribution from the exponential family, defined by a selected variance function and dispersion parameter.
- A linear predictor, $\eta = X\beta$.
- A link function g , such that $E(Y) = \mu = g^{-1}(\eta)$.

As can be seen in the description of the three GLM components above, it may take more than a casual introduction to statistics to comprehend the construction of a GLM. As stated earlier, a downside to GLMs is that it is more challenging to interpret a GLM's output than that of a univariate model.

To further complicate the regulatory review of models in the future, modeling methods are evolving rapidly and are not limited just to GLMs. As computing power grows exponentially, it is opening the modeling world to more sophisticated forms of data acquisition and data analysis. Insurance actuaries and data scientists seek increased predictiveness by using even more complex predictive modeling methods. Examples of these methods include predictive models utilizing random forests, decision trees, neural networks, or combinations of available modeling methods (often referred to as "ensembles"). These evolving techniques will make a state insurance regulator's understanding and oversight of filed rating plans that incorporate predictive models even more challenging.

In addition to the growing complexity of predictive models, many state insurance departments do not have in-house actuarial support or have limited resources to contract out for support when reviewing rate filings that include the use of predictive models. The Big Data (EX) Working Group identified the need to provide the states with guidance and assistance when reviewing predictive models underlying filed rating plans.⁹ The Working Group circulated a proposal addressing aid to state insurance regulators in the review of predictive models as used in personal automobile and home insurance rate filings. This proposal was circulated to all Working Group members and interested parties on Dec. 19, 2017, for a public comment period ending Jan. 12, 2018.¹⁰ The Working Group's effort resulted in new charges for the Casualty Actuarial and Statistical (C) Task Force (see Section I—Introduction) to identify best practices that provide guidance to the states in their review of predictive models.

Credibility of GLM Output

If the underlying data is not credible, then no model will improve that credibility, and segmentation methods could make credibility worse. GLM software provides point estimates and allows the modeler to consider standard errors and confidence intervals. GLMs effectively assume that the underlying datasets are 100% credible, no matter their size. If some segments have little data, the resulting uncertainty would not be reflected in the GLM parameter estimates themselves (although it might be reflected in the standard errors, confidence intervals, etc.). Even though the process of selecting relativities often includes adjusting the raw GLM output, the resultant selections are typically not credibility-weighted with any complement of credibility.^{11,12} And, selected relativities based on GLM model output may differ from GLM point estimates. Lack of credibility for particular estimates could be discerned if standard errors are large relative to the point estimates and/or if the confidence intervals are broad.

Because of this presumption in credibility, which may or may not be valid in practice, the modeler—and the state insurance regulator reviewing the model—would need to engage in thoughtful consideration when incorporating GLM output into a rating plan to ensure that model predictiveness is not compromised by any lack of actual credibility. Another consideration is the availability of data, both internal and external, that may result in the selection of predictor variables that have spurious correlation with the target variable. Therefore, to mitigate the risk that model credibility or predictiveness is lacking, a

⁸ Information on model elements can be found in most books on statistics.

⁹ Big Data (EX) Working Group March 24, 2018, minutes (see *NAIC Proceedings – Spring 2018, Innovation and Technology (EX) Task Force, Attachment Two*). Accessed online at https://www.naic.org/prod_serv/PRC-ZS-18-01.pdf.

¹⁰ All comments received by the end of January 2018 were posted to the NAIC website March 12, 2018, for review.

¹¹ Sometimes insurers do review complements of credibility and further weight the GLM output with those complements. While this may not be a standard practice today, new techniques could result in this becoming more standard in the future.

¹² GLMs provide confidence intervals, credibility methods do not. There are techniques such as penalized regression that blend credibility with a GLM and improve a model's ability to generalize.

complete filing for a rating plan that incorporates GLM output should include validation evidence for the rating plan, not just the statistical model.

IV. DO REGULATORS NEED BEST PRACTICES TO REVIEW PREDICTIVE MODELS?

It might be better to revise the question of “Do regulators need best practices to review predictive models?” to “Are best practices in the review of predictive models of value to regulators and insurance companies?” The answer is “yes” to both questions.

Regulatory best practices need to be developed that do not unfairly or inordinately create barriers for insurers, and ultimately consumers, while providing a baseline of analysis for state insurance regulators to review the referenced filings. Best practices will aid regulatory reviewers by raising their level of model understanding. Also, with regard to scorecard models and the model algorithm, there is often not sufficient support for relative weight, parameter values, or scores of each variable. Best practices can potentially aid in addressing this problem.

Best practices are not intended to create standards for filings that include predictive models. Rather, best practices will assist the states in identifying the model elements they should be looking for in a filing that will aid the regulator in understanding why the company believes that the filed predictive model improves the company’s rating plan and, therefore, makes that rating plan fairer to all consumers in the marketplace. To make this work, state insurance regulators and the industry need to recognize that:

- Best practices provide guidance to state insurance regulators in their essential and authoritative role over the rating plans in their respective state.
- Every state may have a need to review predictive models, whether that occurs during the approval process of a rating plan or during a market conduct exam. Best practices help the state insurance regulator identify elements of a model that may influence the regulatory review as to whether modeled rates are appropriately justified, compliant with state laws and/or regulations, and whether to act on that information.
- Best practices provide a framework for the states to share knowledge and resources to facilitate the technical review of predictive models.
- Best practices can lead to improved quality in predictive model reviews across the states, aiding speed to market and competitiveness of the state’s insurance marketplace.
- Best practices aid training of new state insurance regulators and/or regulators new to reviewing predictive models. This is especially useful for those regulators who do not actively participate in NAIC discussions related to the subject of predictive models.
- Each state insurance regulator adopting best practices will be better able to identify the resources needed to assist their state in the review of predictive models.

V. SCOPE

The best practices identified in this white paper were derived from a ground-up study and analysis of how GLMs are used in personal automobile and home insurance rating plans. These three components (GLM, PPA, and HO) were selected as the basis to develop best practices for the regulatory review of predictive models because many state insurance regulators are familiar with, and have expertise in, such filings. In addition, the legal and regulatory constraints (including state variations) are likely to be more evolved, and challenging, for personal automobile and home insurance. It is through a review of these personal lines and the knowledge needed to review GLMs¹³ used in their rate filings that will provide meaningful best practices for state insurance regulators. The identified best practices should be readily transferrable when the review involves other predictive models applied to other lines of business or for an insurance purpose other than rating.

¹³ See Appendix B.

VI. CONFIDENTIALITY

Each state determines the confidentiality of a rate filing and the supplemental material to the filing, when filing information might become public, the procedure to request that filing information be held confidentially, and the procedure by which a public records request is made. Regulatory reviewers are required to protect confidential information in accordance with applicable state law. State insurance regulators should be aware of their state laws on confidentiality when requesting data from insurers that may be proprietary or a trade secret. However, insurers should be aware that a rate filing might become part of the public record. It is incumbent on an insurer to be familiar with each state's laws regarding the confidentiality of information submitted with its rate filing.

State authority, regulations and/or rules governing confidentiality always apply when a state insurance regulator reviews a model used in rating. When the NAIC or a third party enters the review process, the confidential, proprietary, and trade secret protections of the state on behalf of which a review is being performed will continue to apply.

VII. BEST PRACTICES FOR THE REGULATORY REVIEW OF PREDICTIVE MODELS

Best practices will help the state insurance regulator understand if a predictive model is cost-based, if the predictive model is compliant with state law, and how the model improves a company's rating plan. Best practices can also improve the consistency among the regulatory review processes across the states and improve the efficiency of each regulator's review, thereby helping companies get their products to market faster. With this in mind, the regulator's review of predictive models should:

1. Ensure that the selected rating factors, based on the model or other analysis, produce rates that are not excessive, inadequate, or unfairly discriminatory.
 - a. Review the overall rate level impact of the proposed revisions to rate level indications provided by the filer.
 - b. Determine whether individual input characteristics to a predictive model and their resulting rating factors are related to the expected loss or expense differences in risk.
 - c. Review the premium disruption for individual policyholders and how the disruptions can be explained to individual consumers.
 - d. Review the individual input characteristics to, and output factors from, the predictive model (and its sub-models), as well as associated selected relativities, to ensure they are compatible with practices allowed in the state and do not reflect prohibited characteristics.
2. Obtain a clear understanding of the data used to build and validate the model, and thoroughly review all aspects of the model, including assumptions, adjustments, variables, sub-models used as input, and resulting output.
 - a. Obtain a clear understanding of how the selected predictive model was built.
 - b. Determine whether the data used as input to the predictive model is accurate, including a clear understanding how missing values, erroneous values, and outliers are handled.
 - c. Determine whether any adjustments to the raw data are handled appropriately, including, but not limited to, trending, development, capping, and removal of catastrophes.
 - d. Obtain a clear understanding of how often each risk characteristic used as input to the model is updated and whether the model is periodically refreshed, to help determine whether the model output reflects changes to non-static risk characteristics.
3. Evaluate how the model interacts with and improves the rating plan.
 - a. Obtain a clear understanding of the characteristics that are input to the predictive model (and its sub-models).
 - b. Obtain a clear understanding of how the insurer integrates the model into the rating plan and how it improves the rating plan.
 - c. Obtain a clear understanding of how the model output interacts with non-modeled characteristics/variables used to calculate a risk's premium.

4. Enable competition and innovation to promote the growth, financial stability, and efficiency of the insurance marketplace.
 - a. Enable innovation in the pricing of insurance through the acceptance of predictive models, provided such models are in compliance with state laws and/or regulations, particularly prohibitions on unfair discrimination.
 - b. Protect the confidentiality of filed predictive models and supporting information in accordance with state laws and/or regulations.
 - c. Review predictive models in a timely manner to enable reasonable speed to market.

VIII. PROPOSED CHANGES TO THE *PRODUCT FILING REVIEW HANDBOOK*

The Task Force was charged to propose modifications to the 2016 *Product Filing Review Handbook* to reflect best practices for the regulatory review of GLM predictive analytics. The following are the titled sections in Chapter Three—The Basics of Property and Casualty Rate Regulation.

Product Filing Review Handbook, August 2016

CHAPTER THREE

The Basics of Property and Casualty Rate Regulation

No changes are proposed to the following sections of Chapter Three: **Introduction; Rating Laws; Rate Standards; Rate Justification and Supporting Data; Number of Years of Historical Data; Segregation of Data; Data Adjustments; Premium Adjustments; Losses and LAE (perhaps just DCC) Adjustments; Catastrophe or Large Loss Provisions; Loss Adjustment Expenses; Data Quality; Rate Justification: Overall Rate Level; Contingency Provision; Credibility; Calculation of Overall Rate Level Need: Methods (Pure Premium and Loss Ratio Methods); Rate Justification: Rating Factors; Calculation of Deductible Rating Factors; Calculation of Increased Limit Factors; and Credibility for Rating Factors.**

The following are the proposed changes to the remainder of Chapter Three:

Interaction between Rating Variables (Multivariate Analysis)

If each rating variable is evaluated separately, statistically significant interactions between rating variables may not be identified and, thus, may not be included in the rating plan. Care should be taken to have a multivariate analysis when practical. In some instances, a multivariate analysis is not possible. But, with computing power growing exponentially, insurers believe they have found many ways to improve their operations and competitiveness through use of complex predictive models in all areas of their insurance business.

Approval of Classification Systems

With rate changes, companies sometimes propose revisions to their classification system. Because the changes to classification plans can be significant and have large impacts on the consumers' rates, regulators should focus on these changes.

Some items of proposed classification can sometimes be deemed to be contrary to state laws and/or regulations, such as the use of education or occupation. You should be aware of your state's laws and regulations regarding which rating factors are allowed, and you should require definitions of all data elements that can affect the charged premium. Finding rating or underwriting characteristics that may violate state laws and/or regulations is becoming more difficult for regulators with the increasing and innovative ways insurers use predictive models.

Rating Tiers – (No change is proposed.)

Rate Justification: New Products – (No change is proposed.)

Predictive Modeling

The ability of computers to process massive amounts of data (referred to as “big data”) has led to the expansion of the use of predictive modeling in insurance ratemaking. Predictive models have enabled insurers to build rating, marketing, underwriting, and claim models with significant predictive ability.

Data quality within, and communication about, models are of key importance with predictive modeling. Depending on definitional boundaries, predictive modeling can sometimes overlap with the field of machine-learning. In the modeling space, predictive modeling is often referred to as “predictive analytics.”

Insurers' use of predictive analytics along with big data has significant potential benefits to consumers and insurers. Predictive analytics can reveal insights into the relationship between consumer behavior and the cost of insurance, lower the cost of insurance for many, and provide incentives for consumers to better control and mitigate loss. However, predictive analytic

techniques are evolving rapidly and leaving many state insurance regulators without the necessary tools to effectively review insurers' use of predictive models in insurance applications. To aid the regulator in the review of predictive models, best practices have been developed.

The term "predictive model" refers to a set of models that use statistics to predict outcomes. When applied to insurance, the model is chosen to estimate the probability or expected value of an outcome given a set amount of input data; for example, models can predict the frequency of loss, the severity of loss, or the pure premium.

To further complicate regulatory review of models in the future, modeling technology and methods are evolving rapidly. Generalized linear models (GLMs) are relatively transparent and their output and consequences are much clearer than many other complex models. But as computing power grows exponentially, it is opening the modeling world to more sophisticated forms of data acquisition and data analysis. Insurance actuaries and data scientists seek increased predictiveness by using even more complex predictive modeling methods. Examples of these methods are predictive models utilizing logistic regression, K-nearest neighbor classification, random forests, decision trees, neural networks, or combinations of available modeling methods (often referred to as "ensembles"). These evolving techniques will make the regulators' understanding and oversight of filed rating plans even more challenging.

Generalized Linear Models

The GLM is a commonly used predictive model in insurance applications, particularly in building an insurance product's rating plan. Because of this and the fact most property/casualty regulators are most concerned about personal lines, the NAIC has developed an appendix in its white paper for guidance¹⁴ in reviewing GLMs for personal automobile and home insurance.

What is a "Best Practice"?

A best practice is a form of program evaluation in public policy. At its most basic level, a practice is a "tangible and visible behavior... [based on] an idea about how the actions...will solve a problem or achieve a goal."¹⁵ Best practices can maintain quality as an alternative to mandatory legislated standards and can be based on self-assessment or benchmarking.¹⁶ Therefore, a best practice represents an effective method of problem solving. The "problem" regulators want to solve is probably better posed as seeking an answer to this question: How can regulators determine whether predictive models, as used in rate filings, are compliant with state laws and/or regulations? However, best practices are not intended to create standards for filings that include predictive models.

Best practices are based on the following principles that promote a comprehensive and coordinated review of predictive models across the states:

- State insurance regulators will maintain their current rate regulatory authority and autonomy.
- State insurance regulators will be able to share information to aid companies in getting insurance products to market more quickly across the states.
- State insurance regulators will share expertise and discuss technical issues regarding predictive models to make the review process in any state more effective and efficient.
- State insurance regulators will maintain confidentiality, in accordance with state laws and/or regulations, regarding predictive models.

Best Practices for the Regulatory Review of Predictive Models

Best practices will help the regulator understand if a predictive model is cost-based, if the predictive model is compliant with state laws and/or regulations, and how the model improves the company's rating plan. Best practices can also improve the consistency among the regulatory review processes across the states and improve the efficiency of each regulator's review, thereby assisting companies in getting their products to market faster. With this in mind, the regulator's review of predictive models should:

¹⁴ Refer to Appendix B in the NAIC white paper, *Regulatory Review of Predictive Models*.

¹⁵ Bardach, E., and Patashnik, E., 2016. *A Practical Guide for Policy Analysis, The Eightfold Path to More Effective Problem Solving*. Thousand Oaks, CA: CQ Press. Refer to Appendix A in the NAIC white paper, *Regulatory Review of Predictive Models*, for an overview of Bardach's best-practice analysis.

¹⁶ Bogan, C.E., and English, M.J., 1994. *Benchmarking for Best Practices: Winning Through Innovative Adaptation*. New York, NY: McGraw-Hill.

1. Ensure that the selected rating factors, based on the model or other analysis, produce rates that are not excessive, inadequate, or unfairly discriminatory.
 - a. Review the overall rate level impact of the proposed revisions to rate level indications provided by the filer.
 - b. Determine whether individual input characteristics to a predictive model and their resulting rating factors are related to the expected loss or expense differences in risk.
 - c. Review the premium disruption for individual policyholders and how the disruptions can be explained to individual consumers.
 - d. Review the individual input characteristics to, and output factors from, the predictive model (and its sub-models), as well as associated selected relativities, to ensure they are compatible with practices allowed in the state and do not reflect prohibited characteristics.
2. Obtain a clear understanding of the data used to build and validate the model, and thoroughly review all aspects of the model, including assumptions, adjustments, variables, sub-models used as input, and resulting output.
 - a. Obtain a clear understanding of how the selected predictive model was built.
 - b. Determine whether the data used as input to the predictive model is accurate, including a clear understanding how missing values, erroneous values, and outliers are handled.
 - c. Determine whether any adjustments to the raw data are handled appropriately, including, but not limited to, trending, development, capping, and removal of catastrophes.
 - d. Obtain a clear understanding of how often each risk characteristic, used as input to the model, is updated and whether the model is periodically refreshed, so model output reflects changes to non-static risk characteristics.
3. Evaluate how the model interacts with and improves the rating plan.
 - a. Obtain a clear understanding of the characteristics that are input to a predictive model (and its sub-models).
 - b. Obtain a clear understanding how the insurer integrates the model into the rating plan and how it improves the rating plan.
 - c. Obtain a clear understanding of how model output interacts with non-modeled characteristics/variables used to calculate a risk's premium.
4. Enable competition and innovation to promote the growth, financial stability, and efficiency of the insurance marketplace.
 - a. Enable innovation in the pricing of insurance through acceptance of predictive models, provided such models are in compliance with state laws and/or regulations, particularly prohibitions on unfair discrimination.
 - b. Protect the confidentiality of filed predictive models and supporting information in accordance with state laws and/or regulations.
 - c. Review predictive models in a timely manner to enable reasonable speed to market.

Confidentiality

Each state determines the confidentiality of a rate filing and the supplemental material to the filing, when filing information might become public, the procedure to request that filing information be held confidentially, and the procedure by which a public records request is made. Regulatory reviewers are required to protect confidential information in accordance with applicable state laws and/or regulations. State insurance Regulators should be aware of their state laws and/or regulations on confidentiality when requesting data from insurers that may be proprietary or trade secret. However, insurers should be aware that a rate filing might become part of the public record. It is incumbent on an insurer to be familiar with each state's laws and/or regulations regarding the confidentiality of information submitted with their rate filing.

State authority, regulations and rules governing confidentiality always apply when a regulator reviews a model used in rating. When the NAIC or a third party enters into the review process, the confidential, proprietary, and trade secret protections of the state on behalf of which a review is being performed will continue to apply.

Advisory Organizations – (No change is proposed.)

Workers' Compensation Special Rules – (No change is proposed.)

Premium Selection Decisions – (No change is proposed.)

Installment Plans – (No change is proposed.)

Policy Fees – (No change is proposed.)

Potential Questions to Ask Oneself as a Regulator – (No change is proposed.)

Questions to Ask a Company

If you remain unsatisfied that the company has satisfactorily justified the rate change, then consider asking additional questions of the company. Questions should be asked of the company when it has not satisfied statutory or regulatory requirements in the state or when any current justification is inadequate and could have an impact on the rate change approval or the amount of the approval.

If there are additional items of concern, the company can be notified so it can make appropriate modifications in future filings.

The NAIC white paper, *Regulatory Review of Predictive Models*, documents questions that a state insurance regulator may want to ask when reviewing a model. These questions are listed as “information elements” in Appendix B of the white paper. **Note:** Although Appendix B focuses on GLMs for personal automobile and home insurance, many of the “information elements” and concepts they represent may be transferable to other types of models, other lines of business, and other applications beyond rating.

Additional Ratemaking Information

The Casualty Actuarial Society (CAS) and the Society of Actuaries (SOA) have extensive examination syllabi that contain a significant amount of ratemaking information, on both the basic topics covered in this chapter and on advanced ratemaking topics. The CAS and SOA websites (<https://www.casact.org> and <https://www.soa.org>, respectively) contain links to many of the papers included in the syllabi. Recommended reading is the *Foundations of Casualty Actuarial Science*, which contains chapters on ratemaking, risk classification, and individual risk rating.

Other Reading

Additional background reading is recommended:

- CAS: *Foundations of Casualty Actuarial Science*, Fourth Edition (2001):
 - Chapter 1: Introduction
 - Chapter 3: Ratemaking
 - Chapter 6: Risk Classification
 - Chapter 9: Investment Issues in Property-Liability Insurance
 - Chapter 10: Only the section on Regulating an Insurance Company, pp. 777–787
- CAS: Statements of Principles, especially regarding property/casualty ratemaking.
- CAS: “Basic Ratemaking.”
- American Institute for Chartered Property Casualty Underwriters: “Insurance Operations, Regulation, and Statutory Accounting,” Chapter Eight.

- Association of Insurance Compliance Professionals: “Ratemaking: What the State Filer Needs to Know.”
- Review of filings and approval of insurance company rates.
- NAIC: Casualty Actuarial and Statistical (C) Task Force’s white paper, *Regulatory Review of Predictive Models*.

Summary

Rate regulation for property/casualty lines of business requires significant knowledge of state rating laws, rating standards, actuarial science, statistical modeling, and many data concepts.

- Rating laws vary by state, but the rating laws are usually grouped into prior approval, file and use or use and file (competitive), no file (open competition), and flex rating.
- Rate standards typically included in the state rating laws require that “rates shall not be inadequate, excessive, or unfairly discriminatory.”
- A company will likely determine its indicated rate change by starting with historical years of underwriting data (earned premiums, incurred loss and loss adjustment expenses, and general expenses) and adjusting that data to reflect the anticipated ultimate level of costs for the future time period covered by the policies. Numerous adjustments are made to the data. Common premium adjustments are on-level premium, audit, and trend. Common loss adjustments are trend, loss development, catastrophe/large loss provisions, and an adjusting and other (A&O) loss adjustment expense provision. A profit/contingency provision is also calculated to determine the indicated rate change.
- Once an overall rate level is determined, the rate change gets allocated to the classifications and other rating factors.
- Individual risk rating allows manual rates to be modified by an individual policyholder’s own experience.
- Advisory organizations provide the underlying loss costs for companies to be able to add their own expenses and profit provisions (with loss cost multipliers) to calculate their insurance rates.
- The CAS’ *Statement of Principles Regarding Property and Casualty Insurance Ratemaking* provides guidance and guidelines for the numerous actuarial decisions and standards employed during the development of rates.
- NAIC model laws and regulations include special provisions for workers’ compensation business, penalties for not complying with state laws and/or regulations, and competitive market analysis to determine whether rates should be subject to prior-approval provisions.
- Best practices for reviewing predictive models are provided in the NAIC white paper, *Regulatory Review of Predictive Models*. The best practices and many of the information elements and underlying concepts may be transferrable to other types of models, other lines of insurance, and applications beyond rating.

While this chapter provides an overview of the rate determination/actuarial process and regulatory review, state statutory or administrative rule may require the examiner to employ different standards or guidelines than the ones described.

No additional changes are proposed to the *Product Filing Review Handbook*.

IX. PROPOSED STATE GUIDANCE

This white paper acknowledges that different states will apply the guidance within this white paper differently, based on variations in the legal environment pertaining to insurance regulation in those states, as well as the extent of available resources, including staff members with actuarial and/or statistical expertise, the workloads of those staff members, and the time that can be reasonably allocated to predictive-model reviews. The states with prior-approval authority over personal lines rate filings often already require answers in connection with many of the information elements expressed in this white paper. However, the states—including those with and without prior-approval authority—may also use the guidance in this white paper to choose which model elements to focus on in their reviews and/or to train new reviewers, as well as to gain an enhanced understanding

of how predictive models are developed, supported, and deployed in their markets. Ultimately, the insurance regulators within each state will decide how best to tailor the guidance within this white paper to achieve the most effective and successful implementation, subject to the framework of statutes, regulations, precedents, and/or processes that comprise the insurance regulatory framework in that state.

X. OTHER CONSIDERATIONS

During the development of state guidance for the review of predictive models used in rate filings, important topics that may impact the review arose that were not within the scope of this white paper. The topics are listed below without elaboration and not in any order of importance. **Note:** This not an exhaustive list. These topics may need to be addressed during the regulator's review of a predictive model. It may be that one or more of the following topics will be addressed by an NAIC committee in the future:

- Provide guidance for state insurance regulators to identify when a rating variable or rating plan becomes too granular.
- Provide guidance for state insurance regulators on the importance of causality versus correlation when evaluating a rating variable's relationship to risk, in general and in relation to Actuarial Standard of Practice (ASOP) No. 12, *Risk Classification (for All Practice Areas)*.
- Provide guidance for state insurance regulators on the value and/or concerns of data mining, including how data mining may assist in the model building process, how data dredging may conflict with standard scientific principles, how data dredging may increase "false positives" during the model building process, and how data dredging may result in less accurate models and/or models that are unfairly discriminatory.
- Provide guidance and/or tools for state insurance regulators to determine how a policy premium is calculated and to identify the most important risk characteristics that underlie the calculated premium.
- Provide guidance for state insurance regulators when reviewing consumer-generated data in insurance transactions, including disclosure to the consumer, ownership of data, and verification of data procedures.
- Provide guidance, research tools, and techniques for state insurance regulators to monitor consumer market outcomes resulting from insurers' use of data analytics underlying rating plans.
- Provide guidance for state insurance regulators to expand the best practices and information elements contained in this white paper to non-GLM models and insurance applications other than for personal automobile and home insurance rating plans.
- Provide guidance for state insurance regulators to determine whether individual input characteristics to a model or a sub-model, as well as associated relativities, are not unfairly discriminatory or a "proxy for a protected class."
- Provide guidance for state insurance regulators to identify and minimize unfair discrimination manifested as "disparate impact."
- Provide guidance for state insurance regulators that seek a causal or rational explanation why a rating variable is correlated to expected loss or expense, and why that correlation is consistent with the expected direction of the relationship.

APPENDIX A – BEST PRACTICES DEVELOPMENT

The development of best practices is a method for reviewing public policy processes that have been effective in addressing particular issues and could be applied to a current problem. This process relies on the assumptions that top performance is a result of good practices and these practices may be adapted and emulated by others to improve results.¹⁷

The term “best practice” can be a misleading one due to the slippery nature of the word “best.” When proceeding with policy research of this kind, it may be more helpful to frame the project as a way of identifying practices and/or processes that have worked exceptionally well and the underlying reasons for their success. This allows for a mix-and-match approach for making recommendations that might encompass pieces of many good practices.¹⁸

Researchers have found that successful best-practice analysis projects share five common phases:

1. **Define Scope**

The focus of an effective analysis is narrow, precise, and clearly articulated to stakeholders. A project with a broader focus becomes unwieldy and impractical. Furthermore, Bardach urges the importance of realistic expectations in order to avoid improperly attributing results to a best practice without taking into account internal validity problems.

2. **Identify Top Performers**

Identify outstanding performers in this area to partner with and learn from. In this phase, it is key to recall that a best practice is a tangible behavior or process designed to solve a problem or achieve a goal (i.e., reviewing predictive models contributes to insurance rates that are not unfairly discriminatory). Therefore, top performers are those who are particularly effective at solving a specific problem or regularly achieve desired results in the area of focus.

3. **Analyze Best Practices**

Once successful practices are identified, analysts will begin to observe, gather information, and identify the distinctive elements that contribute to their superior performance. Bardach suggests it is important at this stage to distill the successful elements of the process down to their most essential idea. This allows for flexibility once the practice is adapted for a new organization or location.

4. **Adapt**

Analyze and adapt the core elements of the practice for application in a new environment. This may require changing some aspects to account for organizational or environmental differences while retaining the foundational concept or idea. This is also the time to identify potential vulnerabilities of the new practice and build in safeguards to minimize risk.

5. **Implement and Evaluate**

The final step is to implement the new process and carefully monitor the results. It may be necessary to make adjustments, so it is likely prudent to allow time and resources for this. Once implementation is complete, continued evaluation is important to help ensure the practice remains effective.

¹⁷ Ammons, D.N., and Roenigk, D.J., 2014. “Benchmarking and Interorganizational Learning in Local Government,” *Journal of Public Administration Research and Theory*, Volume 25, Issue 1, pp. 309–335. Accessed online at <https://doi.org/10.1093/jopart/muu014>.

¹⁸ Bardach, E., and Patashnik, E., 2016. *A Practical Guide for Policy Analysis: The Eightfold Path to More Effective Problem Solving*. Thousand Oaks, CA: CQ Press.

APPENDIX B – INFORMATION ELEMENTS AND GUIDANCE FOR A REGULATOR TO MEET BEST PRACTICES’ OBJECTIVES (WHEN REVIEWING GLMS)

This appendix identifies the information a state insurance regulator may need to review a predictive model used by an insurer to support a personal automobile or home insurance rating plan. The list is lengthy but not exhaustive. It is not intended to limit the authority of a regulator to request additional information in support of the model or filed rating plan. Nor is every item on the list intended to be a requirement for every filing. However, the items listed should help guide a regulator to sufficient information that helps determine if the rating plan meets state-specific filing and legal requirements.

Documentation of the design and operational details of the model will help ensure the business continuity and transparency of the models used. Documentation should be sufficiently detailed and complete to enable a qualified third party to form a sound judgment on the suitability of the model for the intended purpose. The theory, assumptions, methodologies, software, and empirical bases should be explained, as well as the data used in developing and implementing the model. Relevant testing and ongoing performance testing need to be documented. Key model limitations and overrides need to be pointed out so that stakeholders understand the circumstances under which the model does not work effectively. End-user documentation should be provided and key reports using the model results described. Major changes to the model need to be documented and shared with regulators in a timely and appropriate manner. Information technology (IT) controls should be in place, such as a record of versions, change control, and access to the model.¹⁹

Many information elements listed below are probably confidential, proprietary, or trade secret and should be treated as such, in accordance with state laws and/or regulations. Regulators should be aware of their state laws and/or regulations on confidentiality when requesting data from insurers that may be proprietary or trade secret. For example, some proprietary models may have contractual terms (with the insurer) that prevent disclosure to the public. Without clear necessity, exposing this data to additional dissemination may compromise the model’s protection.²⁰

Although the list of information is long, the insurer should already have internal documentation on the model for more than half of the information listed. The remaining items on the list require either minimal analysis (approximately 25%) or deeper analysis to generate for a regulator (approximately 25%).

The “Level of Importance to the Regulator’s Review” is a ranking of information a regulator may need to review which is based on the following level criteria:

Level 1 – This information is necessary to begin the review of a predictive model. These data elements pertain to basic information about the type and structure of the model, the data and variables used, the assumptions made, and the goodness of fit. Ideally, this information would be included in the filing documentation with the initial submission of a filing made based on a predictive model.

Level 2 – This information is necessary to continue the review of all but the most basic models, such as those based only on the filer’s internal data and only including variables that are in the filed rating plan. These data elements provide more detailed information about the model and address questions arising from review of the information in Level 1. Insurers concerned with speed to market may also want to include this information in the filing documentation.

Level 3 – This information is necessary to continue the review of a model where concerns have been raised and not resolved based on review of the information in Level 1 and Level 2. These data elements address even more detailed aspects of the model. This information does not necessarily need to be included with the initial submission, unless specifically requested by a particular state, as it is typically requested only if the reviewer has concerns that the model may not comply with state laws and/or regulations.

Level 4 – This information is necessary to continue the review of a model where concerns have been raised and not resolved based on the information in Level 1, Level 2, and Level 3. This most granular level of detail is addressing the basic building blocks of the model and does not necessarily need to be included by the filer with the initial submission, unless specifically requested by a particular state. It is typically requested only if the reviewer has serious concerns that the model may produce rates or rating factors that are excessive, inadequate, and/or unfairly discriminatory.

¹⁹ Bourdeau, M., 2016. “Model Risk Management: An Overview,” *The Modeling Platform*, Issue 4, December. Accessed online at <https://www.soa.org/globalassets/assets/library/newsletters/the-modeling-platform/2016/december/mp-2016-iss4.pdf>.

²⁰ There are some models that are made public by the vendor and would not result in a hindrance of the model’s protection.

Lastly, although the best practices presented in this white paper will readily be transferrable to review of other predictive models, the information elements presented here might be useful only with deeper adaptations when starting to review different types of predictive models. If the model is not a GLM, some listed items might not apply; e.g., not all predictive models generate p-values or F tests. Depending on the model type, other considerations might be important but are not listed here. When information elements presented in this appendix are applied to lines of business other than personal automobile and home insurance or other type of models, unique considerations may arise. In particular, data volume and credibility may be lower for other lines of business. Regulators should be aware of the context in which a predictive model is deployed, the uses to which the model is proposed to be put, and the potential consequences the model may have on the insurer, its customers, and its competitors. This white paper does not delve into these possible considerations, but regulators should be prepared to address them as they arise.

A. SELECTING MODEL INPUT

Section	Information Element	Level of Importance to the Regulator's Review	Comments
1. Available Data Sources			
A.1.a	Review the details of sources for both insurance and non-insurance data used as input to the model (only need sources for filed input characteristics included in the filed model).	1	<p>Request details of data sources, whether internal to the company or from external sources. For insurance experience (policy or claim), determine whether data are aggregated by calendar, accident, fiscal, or policy year and when it was last evaluated. For each data source, get a list of all data elements used as input to the model that came from that source. For insurance data, get a list all companies whose data is included in the datasets.</p> <p>Request details of any non-insurance data used (customer-provided or other), whether the data was collected by use of a questionnaire/checklist, whether data was voluntarily reported by the applicant, and whether any of the data is subject to the federal Fair Credit Reporting Act (FCRA). If the data is from an outside source, find out what steps were taken to verify the data was accurate, complete, and unbiased in terms of relevant and representative time frame, representative of potential exposures, and lacking in obvious correlation to protected classes.</p> <p>Note: Reviewing source details should not make a difference when the model is new or refreshed; refreshed models would report the prior version list with the incremental changes due to the refresh.</p>
A.1.b	Reconcile aggregated insurance data underlying the model with available external insurance reports.	4	Accuracy of insurance data should be reviewed. It is assumed that the data in the insurer's data banks is subject to routine internal company audits and reconciliation. "Aggregated data" is straight from the insurer's data banks without further modification (i.e., not scrubbed or transformed for the purposes of modeling). In other words, the data would not have been specifically modified for the purpose of model building. The company should provide some form of reasonability check that the data makes sense when checked against other audited sources.

Section	Information Element	Level of Importance to the Regulator's Review	Comments
A.1.c	Review the geographic scope and geographic exposure distribution of the raw data for relevance to the state where the model is filed.	2	Many models are developed using a countrywide or a regional dataset. The company should explain how the data used to build the model makes sense for a specific state. The regulator should inquire which states were included in the data underlying the model build, testing, and validation. The company should provide an explanation where the data came from geographically and that it is a good representation for a state; i.e., the distribution by state should not introduce a geographic bias. However, there could be a bias by peril or wind-resistant building codes. Evaluate whether the data is relevant to the loss potential for which it is being used. For example, verify that hurricane data is only used where hurricanes can occur.
2. Sub-Models			
A.2.a	Consider the relevance of (i.e., whether there is bias) of overlapping data or variables used in the model and sub-models.	1	Check if the same variables/datasets were used in the model, a sub-model, or as stand-alone rating characteristics. If so, verify the insurance company has processes and procedures in place to assess and address double-counting or redundancy.
A.2.b	Determine if the sub-model was previously approved (or accepted) by the regulatory agency.	1	<p>If the sub-model was previously approved/accepted, that may reduce the extent of the sub-model's review. If approved, obtain the tracking number(s) (e.g., state, SERFF) and verify when and if it was the same model currently under review.</p> <p>Note: A previous approval does not necessarily confer a guarantee of ongoing approval; e.g., when statutes and/or regulations have changed or if a model's indications have been undermined by subsequent empirical experience. However, knowing whether a model has been previously approved can help focus the regulator's efforts and determine whether the prior decision needs to be revisited. In some circumstances, direct dialogue with the vendor could be quicker and more useful.</p>

Section	Information Element	Level of Importance to the Regulator's Review	Comments
A.2.c	Determine if the sub-model output was used as input to the GLM; obtain the vendor name, as well as the name and version of the sub-model.	1	<p>To accelerate the review of the filing, it may be desirable to request (from the company), the name and contact information for a vendor representative. The company should provide the name of the third-party vendor and a contact in the event the regulator has questions. The “contact” can be an intermediary at the insurer (e.g., a filing specialist), who can place the regulator in direct contact with a subject-matter expert (SME) at the vendor.</p> <p>Examples of such sub-models include credit/financial scoring algorithms and household composite score models. Sub-models can be evaluated separately and in the same manner as the primary model under evaluation. A sub-model contact for additional information should be provided. Sub-model SMEs may need to be brought into the conversation with regulators (whether in-house or third-party sub-models are used).</p>
A.2.d	If using catastrophe model output, identify the vendor and the model settings/assumptions used when the model was run.	1	<p>To accelerate the review of the filing, get contact information for the SME that ran the model and an SME from the vendor. The “SME” can be an intermediary at the insurer (e.g., a filing specialist), who can place the regulator in direct contact with the appropriate SMEs at the insurer or model vendor.</p> <p>For example, it is important to know hurricane model settings for storm surge, demand surge, and long-term/short-term views.</p>
A.2.e	Obtain an explanation of how catastrophe models are integrated into the model to ensure no double-counting.	1	<p>If a weather-based sub-model is input to the GLM under review, loss data used to develop the model should not include loss experience associated with the weather-based sub-model. Doing so could cause distortions in the modeled results by double-counting such losses when determining relativities or loss loads in the filed rating plan.</p> <p>For example, redundant losses in the data may occur when non-hurricane wind losses are included in the data while also using a severe convective storm model in the actuarial indication. Such redundancy may also occur with the inclusion of fluvial or pluvial flood losses when using a flood model or inclusion of freeze losses when using a winter storm model.</p>

Section	Information Element	Level of Importance to the Regulator's Review	Comments
A.2.f	If using output of any scoring algorithms, obtain a list of the variables used to determine the score and provide the source of the data used to calculate the score.	1	Any sub-model should be reviewed in the same manner as the primary model that uses the sub-model's output as input. Depending on the result of item A.2.b, the importance of this item may be decreased.
3. Adjustments to Data			
A.3.a	Determine if premium, exposure, loss, or expense data were adjusted (e.g., developed, trended, adjusted for catastrophe experience, or capped). If so, how? Do the adjustments vary for different segments of the data? If so, identify the segments and how the data was adjusted.	2	<p>The rating plan or indications underlying the rating plan may provide special treatment of large losses and non-modeled large loss events. If such treatments exist, the company should provide an explanation how they were handled. These treatments need to be identified and the company/regulator needs to determine whether model data needs to be adjusted.</p> <p>For example, should large bodily injury (BI) liability losses in the case of personal automobile insurance be excluded, or should large non-catastrophe wind/hail claims in home insurance be excluded from the model's training, test and validation data? Look for anomalies in the data that should be addressed. For example, is there an extreme loss event in the data? If other processes were used to load rates for specific loss events, how is the impact of those losses considered?</p> <p>Examples of losses that can contribute to anomalies in the data are large losses or flood, hurricane, or severe convective storm losses for personal automobile comprehensive or home insurance.</p>
A.3.b	Identify adjustments that were made to aggregated data (e.g., transformations, binning and/or categorizations). If any, identify the name of the characteristic/variable and obtain a description of the adjustment.	1	
A.3.c	Ask for aggregated data (one dataset of pre-adjusted/scrubbed data and one dataset of post-adjusted/scrubbed data) that allows the regulator to focus on the univariate distributions and compare raw data to adjusted/binning/transformed/etc. data.	4	<p>This is most relevant for variables that have been "scrubbed" or adjusted.</p> <p>Though most regulators may never ask for aggregated data and do not plan to rebuild any models, a regulator may ask for this aggregated data or subsets of it.</p> <p>It would be useful to the regulator if the percentage of exposures and premium for missing information from the model data by category are provided. This data can be displayed in either graphical or tabular formats.</p>

Section	Information Element	Level of Importance to the Regulator's Review	Comments
A.3.d	Determine how missing data was handled.	1	<p>This is most relevant for variables that have been “scrubbed” or adjusted. The regulator should be aware of assumptions the modeler made in handling missing, null, or “not available” values in the data.</p> <p>For example, it would be helpful to the reviewer if the modeler were to provide a statement as to whether there is any systemic reason for missing data. If adjustments or recoding of values were made, they should be explained. It may also be useful to the regulator if the percentage of exposures and premium for missing information from the model data are provided. This data can be displayed in either graphical or tabular formats.</p>
A.3.e	If duplicate records exist, determine how they were handled.	1	
A.3.f	Determine if there were any material outliers identified and subsequently adjusted during the scrubbing process.	3	<p>Look for a discussion of how outliers were handled. If necessary, the regulator may want to investigate further by getting a list (with description) of the types of outliers and determine what adjustments were made to each type of outlier. To understand the filer’s response, the regulator should ask for the filer’s materiality standard.</p>
4. Data Organization			
A.4.a	Obtain documentation on the methods used to compile and organize data, including procedures to merge data from different sources or filter data based on particular characteristics and a description of any preliminary analyses, data checks, and logical tests performed on the data and the results of those tests.	2	<p>This should explain how data from separate sources was merged and/or how subsets of policies, based on selected characteristics, are filtered to be included in the data underlying the model and the rationale for that filtering.</p>
A.4.b	Obtain documentation on the insurer’s process for reviewing the appropriateness, reasonableness, consistency, and comprehensiveness of the data, including a discussion of the rational relationship the data has to the predicted variable.	2	<p>An example is when by-peril or by-coverage modeling is performed; the documentation should be for each peril/coverage and make rational sense.</p> <p>For example, if “murder” or “theft” data are used to predict the wind peril, the company should provide support and a rational explanation for their use.</p>

Section	Information Element	Level of Importance to the Regulator's Review	Comments
A.4.c	Identify material findings the company had during its data review and obtain an explanation of any potential material limitations, defects, bias, or unresolved concerns found or believed to exist in the data. If issues or limitations in the data influenced modeling analysis and/or results, obtain a description of those concerns and an explanation how modeling analysis was adjusted and/or results were impacted.	1	"None" or "N/A" may be an appropriate response.

B. BUILDING THE MODEL

Section	Information Element	Level of Importance to Regulator's Review	Comments
1. High-Level Narrative for Building the Model			
B.1.a	Identify the type of model underlying the rate filing (e.g., GLM, decision tree, Bayesian GLM, gradient-boosting machine, neural network, etc.). Understand the model's role in the rating system and provide the reasons why that type of model is an appropriate choice for that role.	1	<p>It is important to understand if the model in question is a GLM and, therefore, these information elements are applicable; or if it is some other model type, in which case other reasonable review approaches may be considered. There should be an explanation of why the model (using the variables included in it) is appropriate for the line of business. If by-peril or by-coverage modeling is used, the explanation should be by-peril/by-coverage.</p> <p>Note: If the model is not a GLM, the information elements in this white paper may not apply in their entirety.</p>
B.1.b	Identify the software used for model development. Obtain the name of the software vendor/developer, software product, and a software version reference used in model development.	3	<p>Changes in software from one model version to the next may explain if such changes, over time, contribute to changes in the modeled results. The company should provide the name of the third-party vendor and a "contact" in the event the regulator has questions. The "contact" can be an intermediary at the insurer (e.g., a filing specialist) who can place the regulator in direct contact with the appropriate SME at the vendor.</p> <p>Open-source software/programs used in model development should be identified by name and version the same as if from a vendor.</p>

Section	Information Element	Level of Importance to Regulator's Review	Comments
B.1.c	Obtain a description how the available data was divided between model training, test, and/or validation datasets. The description should include an explanation why the selected approach was deemed most appropriate, whether the company made any further subdivisions of available data, and reasons for the subdivisions (e.g., a portion separated from training data to support testing of components during model building). Determine if the validation data was accessed before model training was completed and, if so, obtain an explanation of why that came to occur. Obtain a discussion of whether the model was rebuilt using all the data or if it was only based on the training data.	1	<p>The reviewer should be aware that modelers may break their data into three or just two datasets. Although the term “training” is used with little ambiguity, “test” and “validation” are terms that are sometimes interchanged, or the word “validation” may not be used at all.</p> <p>It would be unexpected if validation and/or test data were used for any purpose other than validation and/or test, prior to the selection of the final model. However, according to the CAS monograph, “Generalized Linear Models for Insurance Rating”: “Once a final model is chosen, ... we would then go back and rebuild it using all of the data, so that the parameter estimates would be at their most credible.”</p> <p>The reviewer should note whether a company employed cross-validation techniques instead of a training/test/validation dataset approach. If cross-validation techniques were used, the reviewer should request a description of how cross-validation was done and confirm that the final model was not built on any particular subset of the data, but rather the full dataset.</p>
B.1.d	Obtain a brief description of the development process, from initial concept to final model and filed rating plan.	1	The narrative should have the same scope as the filing.
B.1.e	Obtain a narrative on whether loss ratio, pure premium, or frequency/severity analyses were performed and, if separate frequency/severity modeling was performed, how pure premiums were determined.	1	
B.1.f	Identify the model's target variable.	1	A clear description of the target variable is key to understanding the purpose of the model. It may also prove useful to obtain a sample calculation of the target variable in Excel format, starting with the “raw” data for a policy, or a small sample of policies, depending on the complexity of the target variable calculation.
B.1.g	Obtain a description of the variable selection process.	1	<p>The narrative regarding the variable selection process may address matters such as the criteria upon which variables were selected or omitted, identification of the number of preliminary variables considered in developing the model versus the number of variables that remained, and any statutory or regulatory limitations that were taken into account when making the decisions regarding variable selection.</p> <p>The modeler should comment on the use of automated feature selection algorithms to choose predictor variables and explain how potential overfitting that can arise from these techniques was addressed.</p>

Section	Information Element	Level of Importance to Regulator's Review	Comments
B.1.h	In conjunction with variable selection, obtain a narrative on how the company determined the granularity of the rating variables during model development.	3	The narrative should include discussion of how credibility was considered in the process of determining the level of granularity of the variables selected.
B.1.i	Determine if model input data was segmented in any way (e.g., by-coverage, by-peril, or by-form basis). If so, obtain a description of data segmentation and the reasons for data segmentation.	1	The regulator would use this to follow the logic of the modeling process.
B.1.j	If adjustments to the model were made based on credibility considerations, obtain an explanation of the credibility considerations and how the adjustments were applied.	2	Adjustments may be needed, given that models do not explicitly consider the credibility of the input data or the model's resulting output; models take input data at face value and assume 100% credibility when producing modeled output.
2. Medium-Level Narrative for Building the Model			
B.2.a	At crucial points in model development, if selections were made among alternatives regarding model assumptions or techniques, obtain a narrative on the judgment used to make those selections.	3	
B.2.b	If post-model adjustments were made to the data and the model was rerun, obtain an explanation on the details and the rationale for those adjustments.	2	Evaluate the addition or removal of variables and the model fitting. It is not necessary for the company to discuss each iteration of adding and subtracting variables, but the regulator should gain a general understanding of how these adjustments were done, including any statistical improvement measures relied upon.

Section	Information Element	Level of Importance to Regulator's Review	Comments
B.2.c	Obtain a description of the testing that was performed during the model-building process, including an explanation of the decision-making process to determine which interactions were included and which were not.	3	<p>There should be a description of the testing that was performed during the model-building process. Examples of tests that may have been performed include univariate testing and review of a correlation matrix.</p> <p>The number of interaction terms that could potentially be included in a model increases far more quickly than the number of “main effect” variables (i.e., the basic predictor variables that can be interacted together). Analyzing each possible interaction term individually can be unwieldy. It is typical for interaction terms to be excluded from the model by default, and only included where they can be shown to be particularly important. So, as a rule of thumb, the regulator’s emphasis should be on understanding why the insurer included the interaction terms it did, rather than on why other candidate interactions were excluded.</p> <p>In some cases, however, it could be reasonable to inquire about why a particular interaction term was excluded from a model—for example, if that interaction term was ubiquitous in similar filings and was known to be highly predictive, or if the regulator had reason to believe that the interaction term would help differentiate dissimilar risks within an excessively heterogenous rating segment.</p>
B.2.d	For the GLM, identify the link function used. Identify which distribution was used for the model (e.g., Poisson, Gaussian, log-normal, Tweedie). Obtain an explanation of why the link function and distribution were chosen. Obtain the formulas for the distribution and link functions, including specific numerical parameters of the distribution. If changed from the default, obtain a discussion of applicable convergence criterion.	1	Solving the GLM is iterative and the modeler can check to see if fit is improving. At some point, convergence occurs; however, when it occurs can be subjective or based on threshold criteria. If the software’s default convergence criteria were not relied upon, an explanation of any deviation should be provided.
B.2.e	Obtain a narrative on the formula relationship between the data and the model outputs, with a definition of each model input and output. The narrative should include all coefficients necessary to evaluate the predicted pure premium, relativity, or other value, for any real or hypothetical set of inputs.	2	
B.2.f	If there were data situations in which GLM weights were used, obtain an explanation of how and why they were used.	3	Investigate whether identical records were combined to build the model.

Section	Information Element	Level of Importance to Regulator's Review	Comments
3. Predictor Variables			
B.3.a	Obtain a complete data dictionary, including the names, types, definitions, and uses of each predictor variable, offset variable, control variable, proxy variable, geographic variable, geodemographic variable, and all other variables in the model used on their own or as an interaction with other variables (including sub-models and external models).	1	Types of variables might be continuous, discrete, Boolean, etc. Definitions should not use programming language or code. For any variable(s) intended to function as a control or offset, obtain an explanation of its purpose and impact. Also, for any use of interaction between variables, obtain an explanation of its rationale and impact.
B.3.b	Obtain a list of predictor variables considered but not used in the final model, and the rationale for their removal.	4	The purpose of this requirement is to identify variables the company finds to be predictive but ultimately may reject for reasons other than loss-cost considerations (e.g., price optimization). Also, look for variables the company tested and then rejected. This item could help address concerns about data dredging. The reasonableness of including a variable with a given significance level could depend greatly on the other variables the company evaluated for inclusion in the model and the criteria for inclusion or omission. For instance, if the company tested 1,000 similar variables and selected the one with the lowest p-value of 0.001, this would be a far, far weaker case for statistical significance than if that variable was the only one the company evaluated. Note: Context matters.
B.3.c	Obtain a correlation matrix for all predictor variables included in the model and sub-model(s).	3	While GLMs accommodate collinearity, the correlation matrix provides more information about the magnitude of correlation between variables. The company should indicate what statistic was used (e.g., Pearson, Cramer's V). The regulatory reviewer should understand what statistic was used to produce the matrix but should not prescribe the statistic.
B.3.d	Obtain a rational explanation for why an increase in each predictor variable should increase or decrease frequency, severity, loss costs, expenses, or any element or characteristic being predicted.	3	The explanation should go beyond demonstrating correlation. Considering possible causation may be relevant, but proving causation is neither practical nor expected. If no rational explanation can be provided, greater scrutiny may be appropriate. For example, the regulator should look for unfamiliar predictor variables and, if found, the regulator should seek to understand the connection that variable has to increasing or decreasing the target variable.

Section	Information Element	Level of Importance to Regulator's Review	Comments
B.3.e	If the modeler made use of one or more dimensionality reduction techniques, such as a principal component analysis (PCA), obtain a narrative about that process, an explanation why that technique was chosen, and a description of the step-by-step process used to transform observations (usually correlated) into a set of linearly uncorrelated variables. In each instance, obtain a list of the pre-transformation and post-transformation variable names, as well as an explanation of how the results of the dimensionality reduction technique was used within the model.	2	
4. Adjusting Data, Model Validation, and Goodness-of-Fit Measures			
B.4.a	Obtain a description of the methods used to assess the statistical significance/goodness-of-fit of the model to validation data, such as lift charts and statistical tests. Compare the model's projected results to historical actual results and verify that modeled results are reasonably similar to actual results from validation data.	1	For models that are built using multistate data, validation data for some segments of risk is likely to have low credibility in individual states. Nevertheless, some regulators require model validation on state-only data, especially when analysis using state-only data contradicts the countrywide results. State-only data might be more applicable but could also be impacted by low credibility for some segments of risk. Note: It may be useful to consider geographic stability measures for territories within the state.
B.4.b	For all variables (discrete or continuous), review the appropriate parameter values and relevant tests of significance, such as confidence intervals, chi-square tests, p-values, or F tests. Determine if model development data, validation data, test data, or other data was used for these tests.	1	Typical p-values greater than 5% are large and should be questioned. Reasonable business judgment can sometimes provide legitimate support for high p-values. Reasonableness of the p-value threshold could also vary depending on the context of the model; e.g., the threshold might be lower when many candidate variables were evaluated for inclusion in the model. Overall lift charts and/or statistical tests using validation data may not provide enough of the picture. If there is concern about one or more individual variables, the reviewer may obtain, for each discrete variable level, the parameter value, confidence intervals, chi-square tests, p-values, and any other relevant and material tests. For variables that are modeled continuously, it may be sufficient to obtain statistics around the modeled parameters; e.g., confidence intervals around each level of an AOI curve might be more than what is needed.

Section	Information Element	Level of Importance to Regulator's Review	Comments
B.4.c	Identify the threshold for statistical significance and explain why it was selected. Obtain a reasonable and appropriately supported explanation for keeping the variable for each discrete variable level where the p-values were not less than the chosen threshold.	1	<p>The explanation should clearly identify the thresholds for statistical significance used by the modeler. Typical p-values greater than 5% are large and should be questioned. Reasonable business judgment can sometimes provide legitimate support for high p-values. Reasonableness of the p-value threshold could also vary depending on the context of the model; e.g., the threshold might be lower when many candidate variables were evaluated for inclusion in the model.</p> <p>Overall lift charts and/or statistical tests using validation data may not provide enough of the picture. If there is concern about one or more individual variables, the reviewer may obtain, for each discrete variable level, the parameter value, confidence intervals, chi-square tests, p-values, and any other relevant and material tests.</p>
B.4.d	For overall discrete variables, review type 3 chi-square tests, p-values, F tests and any other relevant and material test. Determine if model development data, validation data, test data, or other data was used for these tests.	2	<p>Typical p-values greater than 5% are large and should be questioned. Reasonable business judgment can sometimes provide legitimate support for high p-values. Reasonableness of the p-value threshold could also vary depending on the context of the model; e.g., the threshold might be lower when many candidate variables were evaluated for inclusion in the model.</p> <p>Overall lift charts and/or statistical tests using validation data may not provide enough of the picture. If there is concern about one or more individual variables, the reviewer may obtain, for each discrete variable level, the parameter value, confidence intervals, chi-square tests, p-values, and any other relevant and material tests.</p> <p>For variables that are modeled continuously, it may be sufficient to obtain statistics around the modeled parameters; e.g., confidence intervals around each level of an AOI curve might be more than what is needed.</p>
B.4.e	Obtain evidence that the model fits the training data well, for individual variables, for any relevant combinations of variables, and for the overall model.	2	<p>For a GLM, such evidence may be available using chi-square tests, p-values, F tests and/or other means.</p> <p>The steps taken during modeling to achieve goodness-of-fit are likely to be numerous and laborious to describe, but they contribute much of what is generalized about a GLM.</p> <p>The regulator should not assume to know what the company did and ask, "How?" Instead, the regulator should ask what the company did and be prepared to ask follow-up questions.</p>

Section	Information Element	Level of Importance to Regulator's Review	Comments
B.4.f	For continuous variables, provide confidence intervals, chi-square tests, p-values, and any other relevant and material test. Determine if model development data, validation data, test data, or other data was used for these tests.	2	<p>Typical p-values greater than 5% are large and should be questioned. Reasonable business judgment can sometimes provide legitimate support for high p-values. Reasonableness of the p-value threshold could also vary depending on the context of the model; e.g., the threshold might be lower when many candidate variables were evaluated for inclusion in the model.</p> <p>Overall lift charts and/or statistical tests using validation data may not provide enough of the picture. If there is concern about one or more individual variables, the reviewer may obtain, for each discrete variable level, the parameter value, confidence intervals, chi-square tests, p-values and any other relevant and material tests.</p> <p>For variables that are modeled continuously, it may be sufficient to obtain statistics around the modeled parameters; for example, confidence intervals around each level of an AOI curve might be more than what is needed.</p>
B.4.g	Obtain a description how the model was tested for stability over time.	2	<p>Evaluate the build/test/validation datasets for potential time-sensitive model distortions (e.g., a winter storm in year 3 of 5 can distort the model in both the testing and validation datasets).</p> <p>Obsolescence over time is a model risk (e.g., old data for a variable or a variable itself may no longer be relevant). If a model being introduced now is based on losses from years ago, the reviewer should be interested in knowing whether that model would be predictive in the proposed context. Validation using recent data from the proposed context might be requested. Obsolescence is a risk even for a new model based on recent and relevant loss data.</p> <p>The reviewer may want to inquire as to the following: What steps, if any, were taken during modeling to prevent or delay obsolescence? What controls exist to measure the rate of obsolescence? What is the plan and timeline for updating and ultimately replacing the model?</p> <p>The reviewer should also consider that as newer technologies enter the market (e.g., personal automobile) their impact may change claim activity over time (e.g., lower frequency of loss). So, it is not necessarily a bad thing that the results are not stable over time.</p>
B.4.h	Obtain a narrative on how potential concerns with overfitting were addressed.	2	

Section	Information Element	Level of Importance to Regulator's Review	Comments
B.4.i	Obtain support demonstrating that the GLM assumptions are appropriate.	3	<p>A visual review of plots of actual errors is usually sufficient.</p> <p>The reviewer should look for a conceptual narrative covering these topics: How does this particular GLM work? Why did the rate filer do what it did? Why employ this design instead of alternatives? Why choose this particular distribution function and this particular link function? A company response may be at a fairly high level and reference industry practices.</p> <p>If the reviewer determines that the model makes no assumptions that are considered to be unreasonable, the importance of this item may be reduced.</p>
B.4.j	Obtain 5-10 sample records with corresponding output from the model for those records.	4	
5. "Old Model" Versus "New Model"			
B.5.a	<p>Obtain an explanation of why this model is an improvement to the current rating plan.</p> <p>If it replaces a previous model, find out why it is better than the one it is replacing; determine how the company reached that conclusion and identify metrics relied on in reaching that conclusion. Look for an explanation of any changes in calculations, assumptions, parameters, and data used to build this model from the previous model.</p>	2	<p>The regulator should expect to see improvement in the new class plan's predictive ability or other sufficient reason for the change.</p>
B.5.b	Determine if two Gini coefficients were compared and obtain a narrative on the conclusion drawn from this comparison.	3	<p>This information element requests a comparison of Gini coefficient from the prior model to the Gini coefficient of proposed model. It is expected that there should be improvement in the Gini coefficient. A higher Gini coefficient indicates greater differentiation produced by the model and how well the model fits that data.</p> <p>This is relevant when one model is being updated or replaced. The regulator should expect to see improvement in the new class plan's predictive ability. One example of a comparison might be sufficient.</p> <p>Note: This comparison is not applicable to initial model introduction. Reviewer can look to CAS monograph, "Generalized Linear Models for Insurance Rating."</p>
B.5.c	Determine if double-lift charts were analyzed and obtain a narrative on the conclusion drawn from this analysis.	3	<p>One example of a comparison might be sufficient.</p> <p>Note: "Not applicable" is an acceptable response.</p>

Section	Information Element	Level of Importance to Regulator's Review	Comments
B.5.d	If replacing an existing model, obtain a list of any predictor variables used in the old model that are not used in the new model. Obtain an explanation of why these variables were dropped from the new model. Obtain a list of all new predictor variables in the new model that were not in the prior old model.	2	It is useful to differentiate between old and new variables, so the regulator can prioritize more time on variables not yet reviewed.
6. Modeler Software			
B.6.a	Request access to SMEs (e.g., modelers) who led the project, compiled the data, and/or built the model.	4	The filing should contain a contact that can put the regulator in touch with appropriate SMEs and key contributors to the model development to discuss the model.

C. THE FILED RATING PLAN

Section	Information Element	Level of Importance to Regulator's Review	Comments
1. General Impact of Model on Rating Algorithm			
C.1.a	In the actuarial memorandum or explanatory memorandum, for each model and sub-model (including external models), look for a narrative that explains each model and its role (i.e., how it was used) in the rating system.	1	<p>The “role of the model” relates to how the model integrates into the rating plan as a whole and where the effects of the model are manifested within the various components of the rating plan. This is not intended as an overarching statement of the model’s goal, but rather a description of how specifically the model is used.</p> <p>This item is particularly important, if the role of the model cannot be immediately discerned by the reviewer from a quick review of the rate and/or rule pages. (Importance is dependent on state requirements and ease of identification by the first layer of review and escalation to the appropriate review staff.)</p>
C.1.b	Obtain an explanation of how the model was used to adjust the filed rating algorithm.	1	<p>Models are often used to produce factor-based indications, which are then used as the basis for the selected changes to the rating plan. It is the changes to the rating plan that create impacts.</p> <p>The regulator should consider asking for an explanation of how the model was used to adjust the rating algorithm.</p>
C.1.c	Obtain a complete list of characteristics/variables used in the proposed rating plan, including those used as input to the model (including sub-models and composite variables) and all other characteristics/variables (not input to the model) used to calculate a premium. For each characteristic/variable, determine if it is only input to the model, whether it is only a separate univariate rating characteristic, or whether it is both input to the model and a separate univariate rating characteristic. The list should include transparent descriptions (in plain language) of each listed characteristic/variable.	1	<p>Examples of variables used as inputs to the model and used as separate univariate rating characteristics might be criteria used to determine a rating tier or household composite characteristic.</p>

Section	Information Element	Level of Importance to Regulator's Review	Comments
2. Relevance of Variables and Relationship to Risk of Loss			
C.2.a	Obtain a narrative regarding how the characteristics/rating variables included in the filed rating plan relate to the risk of insurance loss (or expense) for the type of insurance product being priced.	2	<p>The narrative should include a discussion of the relevance each characteristic/rating variable has on consumer behavior that would lead to a difference in risk of loss (or expense). The narrative should include a rational relationship to cost, and model results should be consistent with the expected direction of the relationship.</p> <p>Note: This explanation would not be needed if the connection between variables and risk of loss (or expense) has already been illustrated.</p>
3. Comparison of Model Outputs to Current and Selected Rating Factors			
C.3.a	Compare relativities indicated by the model to both current relativities and the insurer's selected relativities for each risk characteristic/variable in the rating plan.	1	<p>"Significant difference" may vary based on the risk characteristic/variable and context. However, the movement of a selected relativity should be in the direction of the indicated relativity; if not, an explanation is necessary as to why the movement is logical.</p>
C.3.b	Obtain documentation and support for all calculations, judgments, or adjustments that connect the model's indicated values to the selected relativities filed in the rating plan.	1	<p>The documentation should include explanations for the necessity of any such adjustments and each significant difference between the model's indicated values and the selected values. This applies even to models that produce scores, tiers, or ranges of values for which indications can be derived.</p> <p>Note: This information is especially important if differences between model-indicated values and selected values are material and/or impact one consumer population more than another.</p>
C.3.c	For each characteristic/variable used as both input to the model (including sub-models and composite variables) and as a separate univariate rating characteristic, obtain a narrative regarding how each characteristic/variable was tempered or adjusted to account for possible overlap or redundancy in what the characteristic/variable measures.	2	<p>Modeling loss ratios with these characteristics/variables as control variables would account for possible overlap. The insurer should address this possibility or other considerations; e.g., tier placement models often use risk characteristics/variables that are also used elsewhere in the rating plan.</p> <p>One way to do this would be to model the loss ratios resulting from a process that already uses univariate rating variables. Then the model/composite variables would be attempting to explain the residuals.</p>

Section	Information Element	Level of Importance to Regulator's Review	Comments
4. Responses to Data, Credibility, and Granularity Issues			
C.4.a	Determine what, if any, consideration was given to the credibility of the output data.	2	The regulator should determine at what level of granularity credibility is applied. If modeling was by-coverage, by-form, or by-peril, the company should explain how these were handled when there was not enough credible data by coverage, form, or peril to model.
C.4.b	If the rating plan is less granular than the model, obtain an explanation of why.	2	This is applicable if the company had to combine modeled output in order to reduce the granularity of the rating plan.
C.4.c	If the rating plan is more granular than the model, obtain an explanation of why.	2	A more granular rating plan may imply that the company had to extrapolate certain rating treatments, especially at the tails of a distribution of attributes, in a manner not specified by the model indications. It may be necessary to extrapolate due to data availability or other considerations.
5. Definitions of Rating Variables			
C.5.a	Obtain a narrative regarding adjustments made to model output (e.g., transformations, binning and/or categorizations). If adjustments were made, obtain the name of the characteristic/variable and a description of the adjustment.	2	If rating tiers or other intermediate rating categories are created from model output, the rate and/or rule pages should present these rating tiers or categories. The company should provide an explanation of how model output was translated into these rating tiers or intermediate rating categories.
6. Supporting Data			
C.6.a	Obtain aggregated state-specific, book-of-business-specific univariate historical experience data, separately for each year included in the model, consisting of loss ratio or pure premium relativities and the data underlying those calculations for each category of model output(s) proposed to be used within the rating plan. For each data element, obtain an explanation of whether it is raw or adjusted and, if the latter, obtain a detailed explanation for the adjustments.	4	For example, were losses developed/undeveloped, trended/untrended, capped/uncapped, etc.? Univariate indications should not necessarily be used to override more sophisticated multivariate indications. However, they do provide additional context and may serve as a useful reference.

Section	Information Element	Level of Importance to Regulator's Review	Comments
C.6.b	Obtain an explanation of any material (especially directional) differences between model indications and state-specific univariate indications.	4	<p>Multivariate indications may be reasonable as refinements to univariate indications, but possibly not for bringing about significant reversals of those indications.</p> <p>For instance, if the univariate indicated relativity for an attribute is 1.5 and the multivariate indicated relativity is 1.25, this is potentially a plausible application of the multivariate techniques. If, however, the univariate indicated relativity is 0.7 and the multivariate indicated relativity is 1.25, a regulator may question whether the attribute in question is negatively correlated with other determinants of risk.</p> <p>Credibility of state-level data should be considered when state indications differ from modeled results based on a broader dataset. However, the relevance of the broader dataset to the risks being priced should also be considered. Borderline reversals are not of as much concern. If multivariate indications perform well against the state-level data, this should suffice. However, credibility considerations need to be taken into account as state-level segmentation comparisons may not have enough credibility.</p>
7. Consumer Impacts			
C.7.a	Obtain a listing of the top five rating variables that contribute the most to large swings in renewal premium, both as increases and decreases, as well as the top five rating variables with the largest spread of impact for both new and renewal business.	4	These rating variables may represent changes to rating factors, be newly introduced to the rating plan, or have been removed from the rating plan.
C.7.b	Determine if the company performed sensitivity testing to identify significant changes in premium due to small or incremental change in a single risk characteristic. If such testing was performed, obtain a narrative that discusses the testing and provides the results of that testing.	3	One way to see sensitivity is to analyze a graph of each risk characteristic's/variable's possible relativities. Look for significant variation between adjacent relativities and evaluate if such variation is reasonable and credible.
C.7.c	For the proposed filing, obtain the impacts on renewal business and describe the process used by management, if any, to mitigate those impacts.	2	Some mitigation efforts may substantially weaken the connection between premium and expected loss and expense and, hence, may be viewed as unfairly discriminatory by some states.

Section	Information Element	Level of Importance to Regulator's Review	Comments
C.7.d	Obtain a rate disruption/dislocation analysis, demonstrating the distribution of percentage and/or dollar impacts on renewal business (created by rerating the current book of business) and sufficient information to explain the disruptions to individual consumers.	2	<p>The analysis should include the largest dollar and percentage impacts arising from the filing, including the impacts arising specifically from the adoption of the model or changes to the model as they translate into the proposed rating plan.</p> <p>While the default request would typically be for the distribution/dislocation of impacts at the overall filing level, the regulator may need to delve into the more granular variable-specific effects of rate changes if there is concern about particular variables having extreme or disproportionate impacts, or significant impacts that have otherwise yet to be substantiated.</p> <p>See Appendix D for an example of a disruption analysis.</p>
C.7.e	Obtain exposure distributions for the model's output variables and show the effects of rate changes at granular and summary levels, including the overall impact on the book of business.	3	See Appendix D for an example of an exposure distribution.
C.7.f	Identify policy characteristics, used as input to a model or sub-model, that remain "static" over a policy's lifetime versus those that will be updated periodically. Obtain a narrative on how the company handles policy characteristics that are listed as "static," yet change over time.	3	<p>Some examples of "static" policy characteristics are prior carrier tenure, prior carrier type, prior liability limits, claim history over past X years, or lapse of coverage. These are specific policy characteristics usually set at the time new business is written, used to create an insurance score or to place the business in a rating/underwriting tier, and often fixed for the life of the policy.</p> <p>The reviewer should be aware, and possibly concerned, how the company treats an insured over time when the insured's risk profile based on "static" variables changes over time but the rate charged, based on a new business insurance score or tier assignment, no longer reflect the insured's true and current risk profile.</p> <p>A few examples of "non-static" policy characteristics are age of driver, driving record, and credit information (FCRA-related). These are updated automatically by the company on a periodic basis, usually at renewal, with or without the policyholder explicitly informing the company.</p>

Section	Information Element	Level of Importance to Regulator's Review	Comments
C.7.g	Obtain a means to calculate the rate charged a consumer.	3	<p>The filed rating plan should contain enough information for a regulator to be able to validate policy premium. However, for a complex model or rating plan, a score or premium calculator via Excel or similar means would be ideal, but this could be elicited on a case-by-case basis. The ability to calculate the rate charged could allow the regulator to perform sensitivity testing when there are small changes to a risk characteristic/variable. Note: This information may be proprietary.</p> <p>For the rating plan, the rate order of calculation rule may be sufficient. However, it may not be feasible for a regulator to get all the input data necessary to reproduce a model's output. Credit and telematics models are examples of model types where model output would be readily available, but the input data would not be readily available to the regulator.</p>
C.7.h	In the filed rating plan, be aware of any non-insurance data used as input to the model (customer-provided or other). In order to respond to consumer inquiries, it may be necessary to inquire as to how consumers can verify their data and correct errors.	1	<p>If the data is from a third-party source, the company should provide information on the source. Depending on the nature of the data, it may need to be documented with an overview of who owns it.</p> <p>The topic of consumer verification may also need to be addressed, including how consumers can verify their data and correct errors.</p>
8. Accurate Translation of Model into a Rating Plan			
C.8.a	Obtain sufficient information to understand how the model outputs are used within the rating system and to verify that the rating plan's manual, in fact, reflects the model output and any adjustments made to the model output.	1	The regulator can review the rating plan's manual to see that modeled output is properly reflected in the manual's rules, rates, factors, etc.

Section	Information Element	Level of Importance to Regulator's Review	Comments
9. Efficient and Effective Review of Rate Filing			
C.9.a	Establish procedures to efficiently review rate filings and models contained therein.	1	<p>“Speed to market” is an important competitive concept for insurers. Although the regulator needs to understand the rate filing before accepting the rate filing, the regulator should not request information that does not increase his/her understanding of the rate filing.</p> <p>The regulator should review the state’s rate filing review process and procedures to ensure that they are fair and efficient.</p>
C.9.b	Be knowledgeable of state laws and regulations in order to determine if the proposed rating plan (and models) are compliant with state laws and/or regulations.	1	This is a primary duty of state insurance regulators. The regulator should be knowledgeable of state laws and regulations and apply them to a rate filing fairly and efficiently. The regulator should pay special attention to prohibitions of unfair discrimination.
C.9.c	Be knowledgeable of state laws and regulations in order to determine if any information contained in the rate filing (and models) should be treated as confidential.	1	The regulator should be knowledgeable of state laws and regulations regarding confidentiality of rate filing information and apply them to a rate filing fairly and efficiently. Confidentiality of proprietary information is key to innovation and competitive markets.

APPENDIX B (Continued)

Mapping Best Practices to Information Elements and Information Elements to Best Practices

Table 1 maps the best practices to each GLM information element. Table 2 maps the GLM information elements to each best practice. With this mapping, a state insurance regulator interested in how to meet the objective of a best practice can consider the information elements associated with the best practice in the table.

Appendix B: Table 1	
Best Practices Mapped to Information Element	
Information Element	Selected Best Practices Mapped to Information Element
A. Selecting Model Input	
A.1. Available Data Sources	
A.1.a	1.b, 1.d, 2.a, 2.b, 3.a
A.1.b	2.b, 2.c
A.1.c	1.b
A.2. Sub-Models	
A.2.a	1.b, 1.d, 3.a, 3.c
A.2.b	4.c
A.2.c	2.a, 2.d, 3.a, 4.c
A.2.d	2.a, 2.d, 3.a, 4.c
A.2.e	2.c, 1.d, 2.a, 3.a
A.2.f	1.b, 1.d, 2.a, 3.a
A.3. Adjustments to Data	
A.3.a	1.b, 2.a, 2.b, 2.c
A.3.b	2.a, 2.b, 2.c
A.3.c	2.b, 2.c
A.3.d	2.b, 2.c
A.3.e	2.b, 2.c
A.3.f	2.b, 2.c
A.4. Data Organization	
A.4.a	2.a, 2.b, 2.c, 3.a
A.4.b	1.b, 1.d, 2.b, 2.c
A.4.c	1.d, 2.a, 2.b, 2.c
B. Building the Model	
B.1. High-Level Narrative for Building the Model	
B.1.a	2.a
B.1.b	2.a
B.1.c	2.a

Appendix B: Table 1	
Best Practices Mapped to Information Element	
Information Element	Selected Best Practices Mapped to Information Element
B.1.d	2.a, 3.b
B.1.e	2.a
B.1.f	1.b, 2.a
B.1.g	1.b, 1.d, 2.a, 3.a
B.1.h	2.a, 2.b
B.1.i	1.b, 2.a
B.1.j	2.a, 2.c
B.2. Medium-Level Narrative for Building the Model	
B.2.a	2.a
B.2.b	2.a, 2.c
B.2.c	2.a, 3.b
B.2.d	2.a
B.2.e	2.a, 3.a, 3.b
B.2.f	2.a, 2.c
B.3. Predictor Variables	
B.3.a	1.b, 1.d, 2.a, 3.a
B.3.b	2.a
B.3.c	1.d, 2.a, 3.a
B.3.d	1.b, 1.d, 3.a
B.3.e	2.a, 3.a
B.4. Adjusting Data, Model Validation, and Goodness-of-Fit Measures	
B.4.a	2.a, 3.b
B.4.b	2.a, 3.b
B.4.c	1.b, 2.a
B.4.d	1.b, 2.a, 2.b, 3.b
B.4.e	1.b, 2.a
B.4.f	1.b, 2.a, 3.b
B.4.g	2.a, 2.d, 3.b
B.4.h	2.a
B.4.i	1.b, 2.a
B.4.j	1.d, 2.a, 3.c

Appendix B: Table 1	
Best Practices Mapped to Information Element	
Information Element	Selected Best Practices Mapped to Information Element
B.5. “Old Model” Versus “New Model”	
B.5.a	3.b
B.5.b	2.a, 3.b
B.5.c	2.a, 3.b
B.5.d	2.d, 3.a, 3.b
B.6. Modeler Software	
B.6.a	2.a
C. The Filed Rating Plan	
C.1. General Impact of Model on Rating Algorithm	
C.1.a	2.a, 3.b
C.1.b	3.b, 3.c
C.1.c	1.b, 1.d, 3.a, 3.c
C.2. Relevance of Variables and Relationship to Risk of Loss	
C.2.a	1.b, 1.d, 3.a
C.3. Comparison of Model Outputs to Current and Selected Rating Factors	
C.3.a	1.a, 1.c, 3.b
C.3.b	1.a, 1.c, 3.b
C.3.c	3.a, 3.b, 3.c
C.4. Responses to Data, Credibility, and Granularity Issues	
C.4.a	3.b
C.4.b	3.b
C.4.c	3.b
C.5. Definitions of Rating Variables	
C.5.a	2.a, 2.c, 3.b, 3.c
C.6. Supporting Data	
C.6.a	2.b, 2.c
C.6.b	1.b, 3.b
C.7. Consumer Impacts	
C.7.a	1.a, 1.c
C.7.b	1.a, 1.c

Appendix B: Table 1	
Best Practices Mapped to Information Element	
Information Element	Selected Best Practices Mapped to Information Element
C.7.c	1.a, 1.c, 3.b
C.7.d	1.a, 1.c
C.7.e	1.a, 1.c
C.7.f	2.d
C.7.g	1.c, 3.b
C.7.h	1.d, 2.b, 2.d, 3.b
C.8. Accurate Translation of Model into a Rating Plan	
C.8.a	3.b, 3.c
C.9. Efficient and Effective Review of a Rate Filing	
C.9.a	4.a, 4.b, 4.c
C.9.b	4.a, 4.b, 4.c
C.9.c	4.a, 4.b, 4.c

<p align="center">Appendix B: Table 2 Information Element Mapped to Best Practices</p>		
Best Practice	Best Practice Code	Information Element (for GLMs)
<p>1. Ensure that the factors developed based on the model produce rates that are not excessive, inadequate, or unfairly discriminatory.</p>		
a. Review the overall rate level impact of the proposed revisions to rate level indications provided by the filer.	1.a	C.3.a, C.3.b, C.7.a, C.7.b, C.7.c, C.7.d, C.7.e, C.7.d
b. Determine whether individual input characteristics to a predictive model and their resulting rating factors are related to the expected loss or expense differences in risk.	1.b	A.1.a, A.1.c, A.2.a, A.2.f, A.3.a, A.4.b, B.1.f, B.1.g, B.1.i, B.3.a, B.3.d, B.4.c, B.4.d, B.4.e, B.4.f, B.4.i, C.1.c, C.2.a, C.6.b
c. Review the premium disruption for individual policyholders and how the disruptions can be explained to individual consumers.	1.c	C.3.a, C.3.b, C.7.a, C.7.b, C.7.c, C.7.d, C.7.e, C.7.g
d. Review the individual input characteristics to and output factors from the predictive model (and its sub-models), as well as associated selected relativities, to ensure they are compatible with practices allowed in the state and do not reflect prohibited characteristics.	1.d	A.1.a, A.2.a, A.2.e, A.2.f, A.4.b, A.4.c, B.1.g, B.3.a, B.3.c, B.3.d, B.4.j, C.1.c, C.2.a, C.7.h
<p>2. Obtain a clear understanding of the data used to build and validate the model and thoroughly review all aspects of the model, including assumptions, adjustments, variables, sub-models used as input, and resulting output.</p>		
a. Obtain a clear understanding of how the selected predictive model was built.	2.a	A.1.a, A.2.c, A.2.d, A.2.e, A.2.f, A.3.a, A.3.b, A.4.a, A.4.c, B.1.a, B.1.b, B.1.c, B.1.d, B.1.e, B.1.f, B.1.g, B.1.h, B.1.i, B.1.j, B.2.a, B.2.b, B.2.c, B.2.d, B.2.e, B.2.f, B.3.a, B.3.b, B.3.c, B.3.e, B.4.a, B.4.b, B.4.c, B.4.d, B.4.e, B.4.f, B.4.g, B.4.h, B.4.i, B.4.j, B.5.b, B.5.c, B.6.a, C.1.a, C.4.b, C.4.c, C.5.a
b. Determine whether the data used as input to the predictive model is accurate, including a clear understanding how missing values, erroneous values, and outliers are handled.	2.b	A.1.a, A.1.b, A.3.a, A.3.b, A.3.c, A.3.d, A.3.e, A.3.f, A.4.a, A.4.b, A.4.c, B.1.h, B.4.d, C.6.a, C.7.h
c. Determine whether any adjustments to the raw data are handled appropriately, including, but not limited to, trending, development, capping, and removal of catastrophes.	2.c	A.1.b, A.2.e, A.3.a, A.3.b, A.3.c, A.3.d, A.3.e, A.3.f, A.4.a, A.4.b, A.4.c, B.1.j, B.2.b, B.2.f, C.5.a, C.6.a

Appendix B: Table 2		
Information Element Mapped to Best Practices		
Best Practice	Best Practice Code	Information Element (for GLMs)
d. Obtain a clear understanding of how often each risk characteristic used as input to the model is updated and whether the model is periodically refreshed, so model output reflects changes to non-static risk characteristics.	2.d	A.2.c, A.2.d, B.4.g, B.5.d, C.7.f, C.7.h
3. Evaluate how the model interacts with and improves the rating plan.		
a. Obtain a clear understanding of the characteristics that are input to a predictive model (and its sub-models).	3.a	A.1.a, A.2.a, A.2.c, A.2.d, A.2.e, A.2.f, A.4.a, B.1.g, B.2.e, B.3.a, B.3.c, B.3.d, B.3.e, B.5.d, C.1.c, C.2.a, C.3.c, C.7.h
b. Obtain a clear understanding of how the insurer integrates the model into the rating plan and how it improves the rating plan.	3.b	B.1.d, B.2.c, B.2.e, B.4.a, B.4.b, B.4.d, B.4.f, B.4.g, B.5.a, B.5.b, B.5.c, B.5.d, C.1.a, C.1.b, C.3.a, C.3.b, C.3.c, C.4.a, C.4.b, C.4.c, C.5.a, C.6.b, C.7.c, C.7.g, C.7.h, C.8.a
c. Obtain a clear understanding of how the model output interacts with non-modeled characteristics/variables used to calculate a risk's premium.	3.c	A.2.a, B.4.j, C.1.b, C.1.c, C.3.c, C.5.a, C.8.a
4. Enable competition and innovation to promote the growth, financial stability, and efficiency of the insurance marketplace.		
a. Enable innovation in the pricing of insurance through acceptance of predictive models, provided they are in compliance with state laws and/or regulations, particularly prohibitions on unfair discrimination.	4.a	C.9.a, C.9.b, C.9.c
b. Protect the confidentiality of filed predictive models and supporting information in accordance with state laws and/or regulations.	4.b	C.9.a, C.9.b, C.9.c
c. Review predictive models in a timely manner to enable reasonable speed to market.	4.c	A.2.b, A.2.c, A.2.d, C.9.a, C.9.b, C.9.c

APPENDIX C – GLOSSARY OF TERMS

Adjusting Data – Adjusting data refers to any changes made when the modeler makes any to the raw data. For example, capping losses, on-leveling, binning, transformation of the data, etc. This includes scrubbing of the data.

Aggregated Data – Data summarized or compiled in a manner that is meaningful to the intended user of the data. Aggregation involves segmenting and combining individual data entries into categories based on common features within the data. For example, aggregated raw data requested for a predictive model would be categorized in the same manner as the categories of variables which receive specific treatments within the model outputs.

Big Data – “Big data” refers to extremely large datasets analyzed computationally to infer laws (regressions, nonlinear relationships, and causal effects) to reveal relationships and dependencies or to perform predictions of outcomes and behaviors.

Composite Characteristic – A composite characteristic is the combination of two or more individual risk characteristics. Composite characteristics are used to create composite variables.

Composite Score – A composite score is a number derived by combining multiple variables by means of a sequence of mathematical steps; e.g., a credit-based insurance scoring model.

Composite Variable – A composite variable is a variable created by incorporating two or more individual risk characteristics of the insured into a single variable.

Continuous Variable – A continuous variable is a numeric variable that represents a measurement on a continuous scale. Examples include age, amount of insurance (in dollars), and population density.²¹

Control Variable – Control variables are variables whose relativities are not used in the final rating algorithm but are included when building the model. They are included in the model so that other correlated variables do not pick up their signal. For example, state and year are frequently included in countrywide models as control variables so that the different experiences and distributions between the states and across time do not influence the rating factors used in the final rating algorithm.²²

Correlation Matrix – A correlation matrix is a table showing correlation coefficients between sets of variables. Each random variable (X_i) in the table is correlated with each of the other variables in the table (X_j). Using the correlation matrix, one can determine which pairs of variables have the highest correlation. Below is a sample correlation matrix showing correlation coefficients for combinations of five variables (B1:B5). The table shows that variables B2 and B4 have the highest correlation coefficient (0.96) in this example. The diagonal of the table is always set to one, because the correlation coefficient between a variable and itself is always 1. The upper-right triangle would be a mirror image of the lower-left triangle (because correlation between B1 and B2 is the same as between B2 and B1). In other words, a correlation matrix is also a symmetric matrix.²³

	B1	B2	B3	B4	B5
B1	1				
B2	0.53	1			
B3	0.73	0.44	1		
B4	0.87	0.96	0.41	1	
B5	0.43	0.71	0.72	0.56	1

Data Dredging – Data dredging is also referred to as data fishing, data snooping, data butchery, and p-hacking. It is the misuse of data analysis to find patterns in data that can be presented as statistically significant when, in fact, there is no real underlying effect. Data dredging is done by performing many statistical tests on the data and focusing only on those that produce significant results. Data dredging is in conflict with hypothesis testing, which entails performing at most a handful of tests to determine the validity of the hypothesis about an underlying effect.²⁴

²¹ Goldburd, M., et al., 2016. “Generalized Linear Models for Insurance Rating,” CAS Monograph Series, Number 5, Second Edition. Accessed online at <https://www.casact.org/pubs/monographs/papers/05-Goldburd-Khare-Tevet.pdf>.

²² Closter, D., and Carmean, C., 2019. “Predictive Models: A Practical Guide for Practitioners and Regulators,” CAS Ratemaking Committee. Accessed online at www.casact.org/cms/pdf/Practical_Guide_for_Evaluating_Predictive_Models_Closter_Carmean.pdf.

²³ <https://www.statisticshowto.datasciencecentral.com/correlation-matrix>.

²⁴ Davey Smith, G., and Ebrahim, S., 2002. “Data Dredging, Bias, or Confounding.” *BMJ*. 325 (7378): 1437–1438. doi:10.1136/bmj.325.7378.1437. PMC 1124898. PMID 12493654.

Data Mining – Data mining is a process used to extract usable data from a larger set of any raw data. It implies analyzing data patterns in large batches of data using one or more software programs. As an application of data mining, businesses can learn more about their customers and develop strategies related to various business functions. One application of data mining for insurance companies is analyzing large datasets to charge different groups of insureds different amounts of premium corresponding to their level of risk. Data mining involves substantial data collection and warehousing, as well as computer processing. For segmenting the data and evaluating the probability of future events, data mining uses sophisticated mathematical algorithms.²⁵

Data Source – A data source is the original repository of the information used to build the model. For example, information from internal insurance data, an application, a vendor, credit bureaus, government websites, a sub-model, verbal information provided to agents, external sources, consumer information databases, etc.

Discrete Variable – A discrete variable is a variable that can only take on a countable number of values/categories. Examples include number of claims, marital status, and gender.

Discrete Variable Level – Discrete variables are generally referred to as “factors” (not to be confused with rating factors), with values that each factor can take being referred to as “levels.”²⁶ For example, “one driver” and “more than one driver” may be levels within a “number of drivers” rating variable.

Double-Lift Chart – Double-lift charts are similar to simple quantile plots, but rather than sorting based on the predicted loss cost of each model, the double-lift chart sorts based on the ratio of the two models’ predicted loss costs. Double-lift charts directly compare the results of two models.²⁷

Exponential Family – The exponential family is a class of distributions that share the same general density form and have certain properties that are used in fitting GLMs. It includes many well-known distributions, such as the Normal, Poisson, Gamma, Tweedie, and Binomial, to name a few.²⁸

Fair Credit Reporting Act – The federal Fair Credit Reporting Act (FCRA), 15 U.S.C. § 1681 (FCRA) is U.S. federal government legislation enacted to promote the accuracy, fairness, and privacy of consumer information contained in the files of consumer reporting agencies. It was intended to protect consumers from the willful and/or negligent inclusion of inaccurate information in consumers’ credit reports. To that end, the FCRA regulates the collection, dissemination, and use of consumer information, including consumer credit information.²⁹ Together with the federal Fair Debt Collection Practices Act (FDCPA), the FCRA forms the foundation of consumer rights law in the U.S. Originally enacted in 1970, the FCRA is enforced by the Federal Trade Commission, the Consumer Financial Protection Bureau, and private litigants.

²⁵ <https://economictimes.indiatimes.com/definition/data-mining>.

²⁶ <https://www.casact.org/pubs/dpp/dpp04/04dpp1.pdf>.

²⁷ Trevet, D., 2013. “Exploring Model Lift: Is Your Model Worth Implementing?,” *Actuarial Review*, Volume 40, Number 2, May. Accessed online at <https://www.casact.org/newsletter/index.cfm?fa=viewart&id=6540>.

²⁸ Goldburd, M., et al., 2016. “Generalized Linear Models for Insurance Rating,” CAS Monograph Series, Number 5, Second Edition. Accessed online at www.casact.org/pubs/monographs/papers/05-Goldburd-Khare-Tevet.pdf.

²⁹ Dlabay, L.R., Burrow, J.L., and Brad, B., 2009. *Intro to Business*. Mason, Ohio: South-Western Cengage Learning, p. 471, ISBN 978-0-538-44561-0.

Generalized Linear Model – Generalized linear models (GLMs) are a means of modeling the relationship between a variable whose outcome we wish to predict and one or more explanatory variables. The predicted variable is called the target variable and is denoted y . In property/casualty insurance ratemaking applications, the target variable is typically one of the following:

- Claim count (or claims per exposure).
- Claim severity (i.e., dollars of loss per claim or occurrence).
- Pure premium (i.e., dollars of loss per exposure).
- Loss ratio (i.e., dollars of loss per dollar of premium).

For quantitative target variables such as those above, the GLM will produce an estimate of the expected value of the outcome. For other applications, the target variable may be the occurrence or non-occurrence of a certain event. Examples include:

- Whether a policyholder will renew his/her policy.
- Whether a submitted claim contains fraud.

For such variables, a GLM can be applied to estimate the probability that the event will occur.

The explanatory variables, or predictors, are denoted $x_1 \dots x_p$, where p is the number of predictors in the model. Potential predictors are typically any policy term or policyholder characteristic that an insurer may wish to include in a rating plan.

Some examples are:

- Type of vehicle, age, or marital status for personal auto insurance.
- Construction type, building age, or amount of insurance (AOI) for home insurance.³⁰

Geodemographic – Geodemographics is the study of the population and its characteristics, divided according to regions on a geographical basis. This involves application of clustering techniques to group statistically similar neighborhoods and areas with the assumption that the differences within any group should be less than the difference between groups. While the main source of data for a geodemographic study is U.S. Census Bureau data, the use of other sources of relevant data is also prevalent. Geodemographic segmentation is based on two principles:

1. People who live in the same neighborhood are more likely to have similar characteristics than are two people chosen at random.
2. Neighborhoods can be categorized in terms of the characteristics of the population that they contain. Any two neighborhoods can be placed in the same category; i.e., they contain similar types of people, even though they are widely separated.

Granularity of Data – Granularity of data is the level of segmentation at which the data is grouped or summarized. It reflects the level of detail used to slice and dice the data.³¹

For example, a postal address can be recorded, with coarse granularity, as:

- Country

Or, with finer granularity, as multiple fields:

- Country
- State

Or, with much finer granularity, as multiple fields:

- Country
- State
- County
- ZIP code
- Property geo code

³⁰ Goldburd, M., et al., 2016. “Generalized Linear Models for Insurance Rating,” CAS Monograph Series, Number 5, Second Edition. Accessed online at www.casact.org/pubs/monographs/papers/05-Goldburd-Khare-Tevet.pdf.

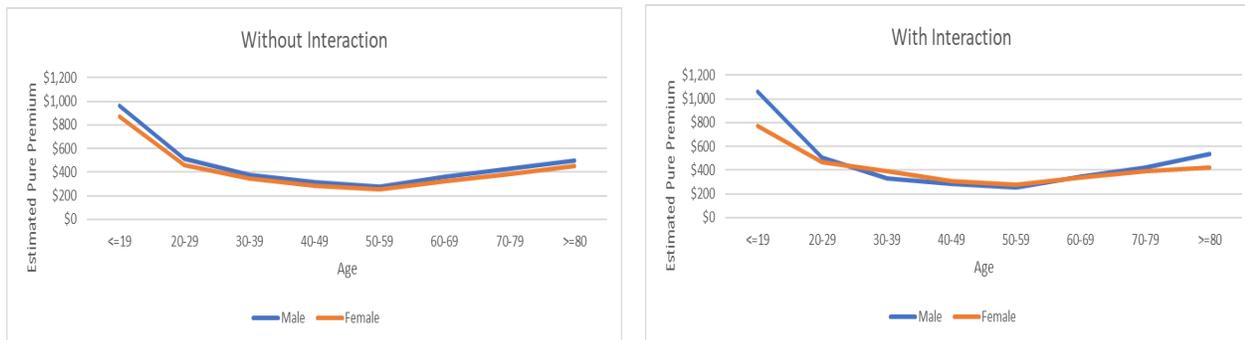
³¹ <https://en.wikipedia.org/wiki/Granularity>.

Home Insurance – Home insurance may cover, depending on the specific product, damage to the property, contents, and outstanding structures of a residential dwelling, as well as loss of use, liability, and medical coverage. The perils covered, the amount of insurance provided, and other policy characteristics are detailed in the policy contract.³² Common examples of home insurance policy forms are homeowners insurance (HO3 or HO5), renter’s insurance (HO4), and condominium insurance (HO6).

Insurance Data – Data collected by the insurance company directly from the consumer or through direct interactions with the consumer (e.g., claims). This is often referred to as “internal data.” For example, data obtained from the consumer through communications with an agent or on an insurance application would be “insurance data.” However, data obtained from a credit bureau or census would not be considered “insurance data” but would be considered “non-insurance data” instead.

Interaction Term – Two predictor variables are said to interact if the effect of one of the predictors on the target variable depends on the level of the other. Suppose that predictor variables X_1 and X_2 interact. A GLM modeler could account for this interaction by including an interaction term of the form X_1X_2 in the formula for the linear predictor. For instance, rather than defining the linear predictor as $\eta = \beta_0 + \beta_1X_1 + \beta_2X_2$, they could set $\eta = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_1X_2$.³³

The following two plots of modeled personal auto bodily injury pure premium by age and gender illustrate this effect. The plots are based on two otherwise identical log-link GLMs, built using the same fictional dataset, with the only difference between the two being that the second model includes the age*gender interaction term, while the first does not. Notice that the male curve in the first plot is a constant multiple of the female curve, while in the second plot the ratios of the male to female values differ from age to age.



Lift Chart – See definition of “quantile plot.”

Linear Predictor – A linear predictor is the linear combination of explanatory variables (X_1, X_2, \dots, X_k) in the model; e.g., $\beta_0 + \beta_1X_1 + \beta_2X_2$.³⁴

Link Function – The link function, η or $g(\mu)$, specifies how the expected value of the response relates to the linear predictor of explanatory variables; e.g., $\eta = g(E(Y_i)) = E(Y_i)$ for linear regression, or $\eta = \text{logit}(\pi)$ for logistic regression.³⁵

Missing data – Missing data occurs when some records contain blanks or “Not Available” or “Null” where variable values would normally be available.

Non-Insurance Data – Non-insurance data is any data not defined as “insurance data.” Non-insurance data includes data provided by another party other than the insurance company and is often referred to as “external data.” For example, data obtained from a credit bureau or census would be considered “non-insurance data.” However, data obtained from the consumer through communications with an agent or on an insurance application would not be considered “non-insurance data” but would be “insurance data” instead.

³² Werner, G., and Modlin, C., 2016. “Basic Ratemaking, Fifth Edition,” CAS. Accessed online at www.casact.org/library/studynotes/Werner_Modlin_Ratemaking.pdf.

³³ To see that this second definition accounts for the interaction, note that it is equivalent to $\eta = \beta_0 + \beta_1'X_1 + \beta_2X_2$ and to $\eta = \beta_0 + \beta_1X_1 + \beta_2'X_2$, with $\beta_1' = \beta_1 + \beta_3X_2$ and $\beta_2' = \beta_2 + \beta_3X_1$. Since β_1' is a function of X_2 and β_2' is a function of X_1 , these two equivalences say that the effect of X_1 depends on the level of X_2 and vice versa.

³⁴ Goldburd, M., et al., 2016. “Generalized Linear Models for Insurance Rating,” CAS Monograph Series, Number 5, Second Edition. Accessed online at www.casact.org/pubs/monographs/papers/05-Goldburd-Khare-Tevet.pdf.

³⁵ <https://online.stat.psu.edu/stat504/node/216>.

Offset Variable – Offset variables (or factors) are model variables with a known or pre-specified coefficient. Their relativities are included in the model and the final rating algorithm, but they are generated from other studies outside the multivariate analysis and are fixed (not allowed to change) in the model when it is run. The model does not estimate any coefficients for the offset variables, and they are included in the model, so that the estimated coefficients for other variables in the model would be optimal in their presence. Examples of offset variables include limit and deductible relativities that are more appropriately derived via loss elimination analysis. The resulting relativities are then included in the multivariate model as offsets. Another example is using an offset factor to account for the exposure in the records; this does not get included in the final rating algorithm.³⁶

Overfitting – Overfitting is the production of an analysis that corresponds too closely or exactly to a particular set of data and may, therefore, fail to fit additional data or predict future observations reliably.³⁷

PCA Approach (Principal Component Analysis) – The PCA method creates multiple new variables from correlated groups of predictors. Those new variables exhibit little or no correlation between them, thereby making them potentially more useful in a GLM. A PCA in a filing can be described as “a GLM within a GLM.” One of the more common applications of PCA is geodemographic analysis, where many attributes are used to modify territorial differentials on, for example, a census block level.

Personal Automobile Insurance – Personal automobile insurance is insurance for privately owned motor vehicles and trailers for use on public roads not owned or used for commercial purposes. This includes personal auto combinations of private passenger auto, motorcycle, financial responsibility bonds, recreational vehicles and/or other personal auto. Policies include any combination of coverage such as the following: auto liability; personal injury protection (PIP); medical payments (MP); uninsured/underinsured motorist (UM/UIM); specified causes of loss; comprehensive; and collision.³⁸

Post-Model Adjustment – Post-model adjustment is any adjustment made to the output of the model, including, but not limited to, adjusting rating factors or removal of variables.

Probability Distribution – A probability distribution is a statistical function that describes all the possible values and likelihoods that a random variable can take within a given range. The chosen probability distribution is supposed to best represent the likely outcomes.

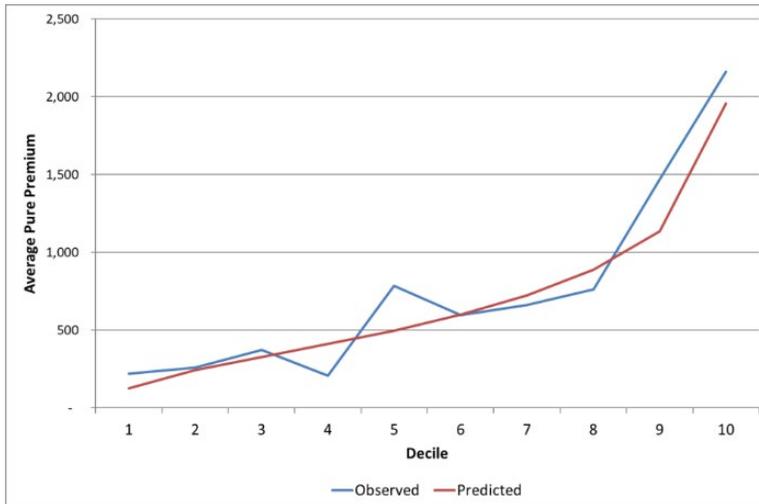
Proxy Variable – A proxy variable is any variable that indirectly captures the characteristics of another variable, regardless of whether that other variable is used in the insurer’s rating plan.

³⁶ Closter, D., and Carmean, C., 2019. “Predictive Models: A Practical Guide for Practitioners and Regulators,” CAS Ratemaking Committee. Accessed online at www.casact.org/cms/pdf/Practical_Guide_for_Evaluating_Predictive_Models_Closter_Carmean.pdf.

³⁷ <https://en.wikipedia.org/wiki/Overfitting>.

³⁸ https://content.naic.org/cipr_topics/topic_auto_insurance.htm.

Quantile Plot – A quantile plot is a visual representation of a model’s ability to accurately differentiate between the best and the worst risks. Data is sorted by predicted value from smallest to largest, and the data is then bucketed into quantiles with the same volume of exposures. Within each bucket, the average predicted value and the average actual value are calculated; and, for each quantile, the actual and predicted values are plotted. The first quantile contains the risks that the model predicts have the best experience and the last quantile contains the risks predicted to have the worst experience. The plot shows two things: 1) how well the model predicts actual values by quantile; and 2) the lift of the model (i.e., the difference between the first and last quantile), which is a reflection of the model’s ability to distinguish between the best and worst risks. By definition, the average predicted values would be monotonically increasing, but the average actual values may show reversals.³⁹ An example follows:



Rating Algorithm – A rating algorithm is the mathematical or computational component of the rating plan used to calculate an insured’s premium.

Rating Category – A rating category is the same as a rating characteristic and can be quantitative or qualitative.

Rating Characteristic – A rating characteristic is a specific risk criterion of the insured used to define the level of the rating variable that applies to the insured; e.g., rating variable = driver age; rating characteristic = age 42.

Rating Factor – A rating factor is the numerical component included in the rate pages of the rating plan’s manual. Rating factors are used together with the rating algorithm to calculate the insured’s premium.

Rating Plan – The rating plan describes in detail how to combine the various components in the rules and rate pages to calculate the overall premium charged for any risk. The rating plan is specific and includes explicit instructions, such as:

- The order in which rating variables should be considered.
- How the effect of rating variables is applied in the calculation of premium (e.g., multiplicative, additive, or some unique mathematical expression).
- The existence of maximum and minimum premiums (or, in some cases, the maximum discount or surcharge that can be applied).
- Specifics associated with any rounding that takes place.

If the insurance product contains multiple coverages, then separate rating plans by coverage may apply.⁴⁰

Rating System – The rating system is the insurance company’s information technology (IT) infrastructure that produces the rates derived from the rating algorithm.

Rating Tier – A rating tier is rating based on a combination of rating characteristics rather than a single rating characteristic, resulting in a separation of groups of insureds into different rate levels within the same or separate companies. Often, rating tiers are used to differentiate quality of risk; e.g., substandard, standard, or preferred.

³⁹ Goldburd, M., et al., 2016. “Generalized Linear Models for Insurance Rating,” CAS Monograph Series, Number 5, Second Edition. Accessed online at <https://www.casact.org/pubs/monographs/papers/05-Goldburd-Khare-Tevet.pdf>.

⁴⁰ Werner, G., and Modlin, C., 2016. “Basic Ratemaking, Fifth Edition,” CAS. Accessed online at https://www.casact.org/library/studynotes/Werner_Modlin_Ratemaking.pdf.

Rating Treatment – Rating treatment is the manner in which an aspect of the rating affects an insured’s premium.

Rating Variable – A rating variable is a risk criterion of the insured used to modify the base rate in a rating algorithm.⁴¹

Rational Explanation – A “rational explanation” refers to a plausible narrative connecting the variable and/or treatment in question with real-world circumstances or behaviors that contribute to the risk of insurance loss in a manner that is readily understandable to a consumer or other educated layperson. A “rational explanation” does not require strict proof of causality but should establish a sufficient degree of confidence that the variable and/or treatment selected are not obscure, irrelevant, or arbitrary.

A “rational explanation” can assist the regulator in explaining an approved rating treatment if challenged by a consumer, legislator, or the media. Furthermore, a “rational explanation” can increase the regulator’s confidence that a statistical correlation identified by the insurer is not spurious, temporary, or limited to the specific datasets analyzed by the insurer.

Raw Data – Data originating straight from the insurer’s data banks without modification (e.g., not scrubbed or transformed). Raw data may occur with or without aggregation. Aggregated raw datasets are those summarized or compiled prior to data selection and model building.

Sample Record – A sample record is one line of data from a data source including all variables. For example:

Record	ZIP	Garage Type	Lot Size	Roof	Square Feet	Replacement Cost	Heating	Living Area Sqft	Num Stories	Style	Num Bedrooms
1	04254	garage, basement	25700	asphalt shingle	1680	213000	FORCED HOT WATER	1680	1	Ranch	3

Scrubbed Data – Scrubbed data is data reviewed for errors, where “N/A” has been replaced with a value, and where most transformations have been performed. Data that has been “scrubbed” is now in a useable format to begin building the model.

Scrubbing Data – Scrubbing is the process of editing, amending, or removing data in a dataset that is incorrect, incomplete, improperly formatted, or duplicated.

SME – Subject-matter expert.

Sub-Model – A sub-model is any model that provides input into another model.

Variable Transformation – A variable transformation is a change to a variable by taking a function of that variable, for example, when age’s value is replaced by the value (age)^2. The result is called a **transformation variable**.

Voluntarily Reported Data – Voluntarily reported data is data directly obtained by a company from a consumer. Examples would be data taken directly from an application for insurance or obtained verbally by a company representative.

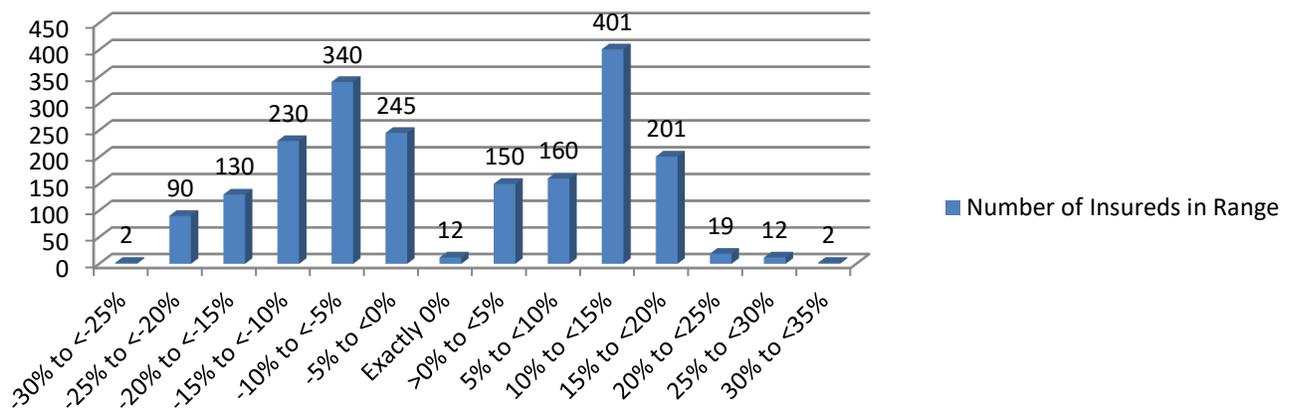
Univariate Model – A univariate model is a model that only has one independent variable.

⁴¹ Ibid.

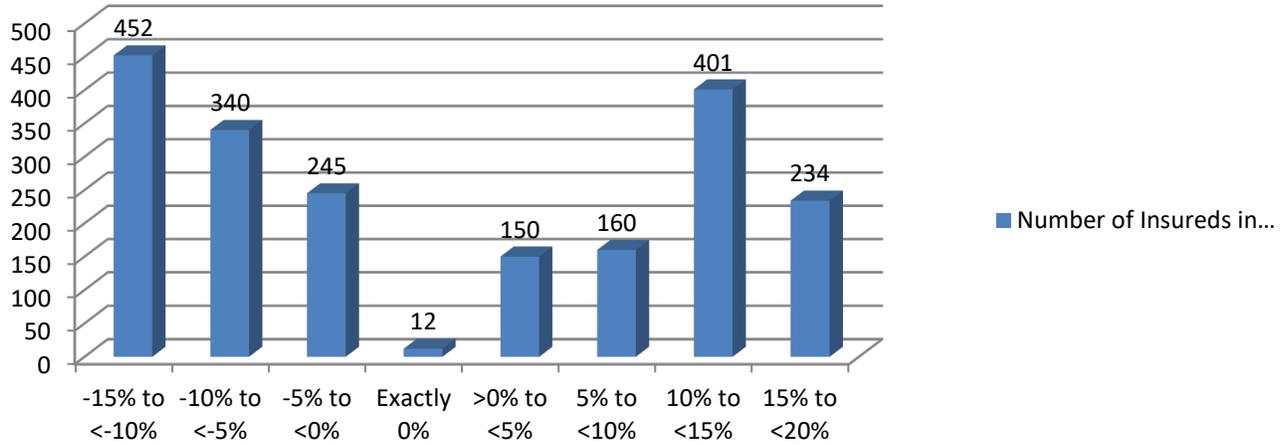
APPENDIX D – SAMPLE RATE-DISRUPTION TEMPLATE

State Division of Insurance - EXAMPLE for Rate Disruption		<i>Template Updated October 2018</i>	
<ul style="list-style-type: none"> ● First, fill in the boxes for minimum and maximum individual impacts, shaded in light blue. Default values in the cells are examples only. ● The appropriate percent-change ranges will then be generated based on the maximum/minimum changes. ● For every box shaded in light green, replace "ENTER VALUE" with the number of affected insureds within the corresponding change range. ● Once all values are filled in, use the "Charts" feature in Excel to generate a histogram to visually display the spread of impacts. 			
NOTE: Values of Minimum % Change, Maximum % Change, and Total Number of Insureds must reconcile to the Rate/Rule Schedule in SERFF.			
	<u>Uncapped</u>		<u>Capped (If Applicable)</u>
Minimum % Change	-30.000%	Minimum % Change	-15.000%
Maximum % Change	30.000%	Maximum % Change	15.000%
Total Number of Insureds (Auto-Calculated)	1994	Total Number of Insureds (Auto-Calculated)	1994
	<u>Uncapped Rate Disruption</u>		<u>Capped Rate Disruption (If Applicable)</u>
Percent-Change Range	Number of Insureds in Range	Percent-Change Range	Number of Insureds in Range
-30% to <-25%	2	-15% to <-10%	452
-25% to <-20%	90	-10% to <-5%	340
-20% to <-15%	130	-5% to <0%	245
-15% to <-10%	230	Exactly 0%	12
-10% to <-5%	340	>0% to <5%	150
-5% to <0%	245	5% to <10%	160
Exactly 0%	12	10% to <15%	401
>0% to <5%	150	15% to <20%	234
5% to <10%	160		
10% to <15%	401		
15% to <20%	201		
20% to <25%	19		
25% to <30%	12		
30% to <35%	2		

EXAMPLE Uncapped Rate Disruption



EXAMPLE Capped Rate Disruption



State Division of Insurance - EXAMPLE for Largest Percentage Increase Template Updated October 2018

• Fill in fields highlighted in light green. Fields highlighted in red are imported from the Template for Rate Disruption.

<u>Largest Percentage Increase</u>		<u>Corresponding Dollar Increase (for Insured Receiving Largest Percentage Increase)</u>			
Uncapped Change	30.00%	Uncapped Dollar Change	\$165.00	Current Premium	\$550.00
Capped Change (If Applicable)	15.00%	Capped \$ Change (If Applicable)	\$82.50	Proposed Premium	\$632.50

Characteristics of Policy (Fill in Below)

- **For Auto Insurance:** At minimum, identify the age and gender of each named insured, limits by coverage, territory, make / model of vehicle(s), prior accident / violation history, and any other key attributes whose treatments are affected by this filing.
- **For Home Insurance:** At minimum, identify age and gender of each named insured, amount of insurance, territory, construction type, protection class, any prior loss history, and any other key attributes whose treatments are affected by this filing.

Automobile policy: Three insureds - Male (Age 54), Female (Age 49), and Male (Age 25). **Territory:** Las Vegas, ZIP Code 89105.

Vehicle:	BI Limits:	PD Limits:	UM/UIM Limits:	MED Limits:	COMP Deductible:	COLL Deductible:
2009 Ford Focus	\$50,000 / \$100,000	\$25,000	\$50,000 / \$100,000	\$5,000	\$500	\$1,000
2003 Honda Accord	\$25,000 / \$50,000	\$10,000	\$25,000 / \$50,000	\$1,000	\$500	\$1,000

No prior accidents, 1 prior speeding conviction for 25-year-old male. Policy receives EFT discount and loyalty discount.

Primary impacts are the increases to the relativities for the age of insured, ZIP Code 89105, COLL Deductible of \$1,000, and symbol for 2003 Honda Accord.

Most Significant Impacts to This Policy (Identify attributes - e.g., base-rate change or changes to individual rating variables)

NOTE: If capping is proposed to apply for this policy, include the impact of capping at the end, after displaying uncapped impacts by attribute. Add rows as needed. Total percent and dollar impacts should reconcile to the values presented above in this exhibit.

Attribute	% Impact (Uncapped)	Dollar Impact (Uncapped)	What lengths of policy terms does the insurer offer in this book of business?
Insured Age (M/25)	12.00%	\$66.00	Check all options that apply below. <input type="checkbox"/> 12-Month Policies <input checked="" type="checkbox"/> 6-Month Policies <input type="checkbox"/> 3-Month Policies <input type="checkbox"/> Other (SPECIFY)
COLL Deductible (\$1,000)	10.00%	\$61.60	
Territory (89105)	4.00%	\$27.10	
Vehicle Symbol (2003 Honda Accord)	1.46%	\$10.29	
Effect of Capping	-11.54%	-\$82.50	
TOTAL	15.00%	\$82.50	

State Division of Insurance - EXAMPLE for Largest Dollar Increase				<i>Template Updated October 2018</i>			
• Fill in fields highlighted in light green.							
<u>Largest Dollar Increase</u>				<u>Corresponding Percentage Increase (for Insured Receiving Largest Dollar Increase)</u>			
Uncapped Change	\$306.60	Current Premium	\$2,555.00	Uncapped Percent Change	12.00%		
Capped Change (If Applicable)	\$306.60	Proposed Premium	\$2,861.60	Capped % Change (If Applicable)	12.00%		
Characteristics of Policy (Fill in Below)							
<ul style="list-style-type: none"> • For Auto Insurance: At minimum, identify the age and gender of each named insured, limits by coverage, territory, make / model of vehicle(s), prior accident / violation history, and any other key attributes whose treatments are affected by this filing. • For Home Insurance: At minimum, identify age and gender of each named insured, amount of insurance, territory, construction type, protection class, any prior loss history, and any other key attributes whose treatments are affected by this filing. 							
Automobile policy: Two insureds - Male (Age 33), Female (Age 32). Territory: Reno, ZIP Code 89504.							
Vehicle:	BI Limits:	PD Limits:	UM/UIM Limits:	MED Limits:	COMP Deductible:	COLL Deductible:	
2016 Tesla Model S	\$200,000 / \$600,000	\$50,000	\$200,000 / \$600,000	\$10,000	\$2,500	\$2,500	
2015 Mercedes-Benz C-Class (W205)	\$200,000 / \$600,000	\$50,000	\$200,000 / \$600,000	\$10,000	\$2,500	\$2,500	
1 prior at-fault accident for 32-year-old female. Policy receives EFT discount and loyalty discount.							
Primary impacts are the increases to the relativities for the age of insured, symbol for 2015 Mercedes-Benz C-Class, and increased-limit factors for Property Damage and Medical Payments coverages.							
Most Significant Impacts to This Policy (Identify attributes - e.g., base-rate change or changes to individual rating variables)							
NOTE: If capping is proposed to apply for this policy, include the impact of capping at the end, after displaying uncapped impacts by attribute. Add rows as needed. Total percent and dollar impacts should reconcile to the values presented above in this exhibit.							
Attribute	% Impact (Uncapped)	Dollar Impact (Uncapped)					
Insured Age (M/33)	3.15%	\$80.48					
Insured Age (F/32)	3.23%	\$85.13					
Vehicle Symbol (2015 Mercedes-Benz C-Class)	2.45%	\$66.65					
Increased-Limit Factor for PD	1.55%	\$43.20					
Increased-Limit Factor for MED	1.10%	\$31.14					
TOTAL	12.00%	\$306.60					

Draft: 11/3/20

Adopted by the Executive (EX) Committee and Plenary, TBD

Adopted by the Property and Casualty Insurance (C) Committee, TBD

2021 Proposed Charges

PROPERTY AND CASUALTY INSURANCE (C) COMMITTEE

The mission of the Property and Casualty Insurance (C) Committee is to: 1) monitor and respond to problems associated with the products, delivery and cost in the property/casualty (P/C) insurance market and the surplus lines market as they operate with respect to individual persons and businesses; 2) monitor and respond to problems associated with financial reporting matters for P/C insurers that are of interest to regulatory actuaries and analysts; and 3) monitor and respond to problems associated with the financial aspects of the surplus lines market.

Ongoing Support of NAIC Programs, Products or Services

1. The **Property and Casualty Insurance (C) Committee** will:
 - A. Discuss issues arising and make recommendations with respect to advisory organization and insurer filings for personal and commercial lines, as needed. Report yearly.
 - B. Monitor the activities of the Casualty Actuarial and Statistical (C) Task Force.
 - C. Monitor the activities of the Surplus Lines (C) Task Force.
 - D. Monitor the activities of the Title Insurance (C) Task Force.
 - E. Monitor the activities of the Workers' Compensation (C) Task Force.
 - F. Provide an impartial forum for considering appeals of adverse decisions involving alien insurers delisted or rejected for listing to the *Quarterly Listing of Alien Insurers*. Appeal procedures are described in the International Insurers Department (IID) Plan of Operation.
 - G. Monitor and review developments in case law and rehabilitation proceedings related to risk-retention groups (RRGs). If warranted, make appropriate changes to the *Risk Retention and Purchasing Group Handbook*.
 - H. Monitor the activities of the Federal Crop Insurance Corporation (FCIC) that affect state insurance regulators:
 1. Serve as a forum for discussing issues related to the interaction of federal crop insurance programs with state insurance regulation.
 2. Review law changes and court decisions and, if warranted, make appropriate changes to the *Federal Crop Insurance Program Handbook: A Guide for Insurance Regulators*.
 3. Monitor the regulatory information exchanges between the FCIC and state insurance regulators, as well as the FCIC and the NAIC, and make recommendations for improvement or revisions, as needed.
 - I. Report on the cyber insurance market including data reported within the Cybersecurity Insurance and Identity Theft Coverage Supplement.
 - J. Monitor and discuss regulatory issues that arise with the development of autonomous vehicles. Study and, if necessary, develop recommendations for changes needed to the state-based insurance regulatory framework.
2. The **Cannabis Insurance (C) Working Group** will:
 - A. Assess and periodically report on the status of federal legislation that would protect financial institutions from liability associated with providing services to cannabis businesses operating legally under state law.
 - B. Encourage admitted insurers to ensure coverage adequacy in states where cannabis, including hemp, is legal.
 - C. Provide insurance resources to stakeholders and keep up with new products and innovative ideas that may shape insurance in this space.
 - D. Collect aggregated insurance availability and coverage gap information, as well as other cannabis and hemp insurance-related data, to then share in a publicly released report by the end of 2021.
3. The **Catastrophe Insurance (C) Working Group** will:
 - A. Monitor and recommend measures to improve the availability and affordability of insurance and reinsurance related to catastrophe perils for personal and commercial lines.
 - B. Evaluate potential state, regional and national programs to increase capacity for insurance and reinsurance related to catastrophe perils.
 - C. Monitor and assess proposals that address disaster insurance issues at the federal and state levels. Assess concentration-of-risk issues and whether a regulatory solution is needed.

- D. Provide a forum for discussing issues and recommending solutions related to insuring for catastrophe risk, including terrorism, war and natural disasters.
 - E. Provide a forum for discussing various issues related to catastrophe modeling, and monitor issues that will result in changes to the *Catastrophe Computer Modeling Handbook*.
 - F. Investigate and recommend ways the NAIC can assist states in responding to disasters, while building a central repository of timely resources for state insurance regulators to better prepare for disasters.
 - G. Continue to monitor the growth of the private flood insurance market and assess the actions taken by individual states to facilitate growth. Update the Considerations for Private Flood Insurance appendix to include new ways states are growing the private flood insurance market.
 - H. Study, in coordination with other NAIC task forces and working groups, earthquake matters of concern to state insurance regulators. Consider various innovative earthquake insurance coverage options aimed at improving take-up rates.
4. The **Pet Insurance (C) Working Group** will:
- A. Complete the development of a model law to establish appropriate regulatory standards for the pet insurance industry.
5. The **Terrorism Insurance Implementation (C) Working Group** will:
- A. Coordinate the NAIC's efforts to address insurance coverage for acts of terrorism. Work with the U.S. Department of the Treasury's Terrorism Risk Insurance Program (TRIP) Office on matters of mutual concern. Discuss long-term solutions to address the risk of loss from acts of terrorism.
 - B. Review and report on data collection related to insurance coverage for acts of terrorism.
6. The **Transparency and Readability of Consumer Information (C) Working Group** will:
- A. Study and evaluate actions that will improve the capacity of consumers to comparison shop based on differences in coverage provided by different insurance carriers offering personal lines products.
 - B. Facilitate consumers' capacity to understand the content of insurance policies and assess differences in insurers' policy forms.
 - C. Assist other groups with drafting language included within consumer-facing documents.
 - D. Consider drafting regulatory best practices that serve to inform consumers of the reasons for significant premium increases related to property/casualty (P/C) insurance products.
 - E. Update and develop webpage and mobile content for *A Shopping Tool for Homeowners Insurance* and *A Shopping Tool for Automobile Insurance*.
 - F. Consider the possibility of disclosures or consumer education information regarding the fact that homeowners policies do not cover losses from flood, earthquake or other specified disasters

NAIC Support Staff: Aaron Brandenburg/Jennifer Gardner

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Draft: 9/15/20

Adopted by the Executive (EX) Committee and Plenary, TBD

Adopted by the Property and Casualty Insurance (C) Committee, TBD

Adopted by the Casualty Actuarial and Statistical (C) Task Force, 9/15/20

2021 Proposed Charges

CASUALTY ACTUARIAL AND STATISTICAL (C) TASK FORCE

The mission of the Casualty Actuarial and Statistical (C) Task Force is to identify, investigate, and develop solutions to actuarial problems and statistical issues in the property/casualty (P/C) insurance industry. The Task Force's goals are to assist state insurance regulators with maintaining the financial health of P/C insurers; ensuring that P/C insurance rates are not excessive, inadequate or unfairly discriminatory; and ensuring that appropriate data regarding P/C insurance markets are available.

Ongoing Support of NAIC Programs, Products, or Services

1. The **Casualty Actuarial and Statistical (C) Task Force** will:
 - A. Provide reserving, pricing, ratemaking, statistical, and other actuarial support to NAIC committees, task forces and/or working groups. Propose changes to the appropriate work products (with the most common work products noted below) and present comments on proposals submitted by others relating to casualty actuarial and statistical matters. Monitor the activities, including the development of financial services regulations and statistical (including disaster) reporting, regarding casualty actuarial issues.
 1. Property and Casualty Insurance (C) Committee – ratemaking, reserving or data issues.
 2. Blanks (E) Working Group – P/C annual financial statement, including Schedule P; P/C quarterly financial statement; P/C quarterly and annual financial statement instructions, including Statement of Actuarial Opinion (SAO) and Actuarial Opinion Summary Supplement.
 3. Capital Adequacy (E) Task Force – P/C risk-based capital (RBC) report.
 4. Group Solvency Issues (E) Working Group and ORSA Implementation (E) Subgroup – Own Risk and Solvency Assessment (ORSA).
 5. Statutory Accounting Principles (E) Working Group – *Accounting Practices and Procedures Manual* (AP&P Manual), and review and provide comments on statutory accounting issues being considered under *SSAP No. 65—Property and Casualty Contracts*.
 6. Speed to Market (EX) Working Group – P/C actuarial sections of the *Product Filing Review Handbook*.
 - B. Monitor national casualty actuarial developments and consider regulatory implications.
 1. Casualty Actuarial Society (CAS) – Statements of Principles and *Syllabus of Basic Education*.
 2. American Academy of Actuaries (Academy) – Standards of Practices, Council on Professionalism, and Casualty Practice Council.
 3. Society of Actuaries (SOA) – general insurance track's basic education.
 4. Federal legislation.
 - C. Facilitate discussion among state insurance regulators regarding rate filing issues of common interest across the states through the scheduling of regulator-only conference calls.
 - D. Work with the CAS and SOA to identify: 1) what types of learning P/C Appointed Actuaries are using to meet CE requirements for "Specific Qualification Standards" today and 2) whether more specificity should be added to the P/C Appointed Actuaries' CE requirements to ensure that CE is aligned with the educational needs for a P/C Appointed Actuary.
 - E. Facilitate training and the sharing of expertise through predictive analytics webinars (Book Club).
2. The **Actuarial Opinion (C) Working Group** will:
 - A. Propose revisions to the following, as needed, especially to improve actuarial opinions, actuarial opinion summaries, and actuarial reports, as well as the regulatory analysis of these actuarial documents and loss and premium reserves:
 1. *Financial Analysis Handbook*.
 2. *Financial Condition Examiners Handbook*.
 3. *Annual Statement Instructions—Property/Casualty*.
 4. Regulatory guidance to appointed actuaries and companies.
 5. Other financial blanks and instructions, as needed.

3. The **Statistical Data (C) Working Group** will:
- A. Consider updates and changes to the *Statistical Handbook of Data Available to Insurance Regulators*.
 - B. Consider updates and developments, provide technical assistance, and oversee the production of the following reports and databases. Periodically evaluate the demand and utility versus the costs of production of each product.
 - 1. *Dwelling Fire, Homeowners Owner-Occupied, and Homeowners Tenant and Condominium/Cooperative Unit Owner's Insurance*.
 - 2. *Auto Insurance Database*.
 - 3. *Competition Database Report*.
 - 4. *Report on Profitability by Line by State*.

NAIC Support Staff: Kris DeFrain/Jennifer Gardner/Libby Crews

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Draft: 7/20/20

Adopted by the Property and Casualty Insurance (C) Committee — TBD

Adopted by the Surplus Lines (C) Task Force — 8/5/2020

2021 Proposed Charges

SURPLUS LINES (C) TASK FORCE

The mission of the Surplus Lines (C) Task Force is to monitor the surplus lines market and regulation, including the activity and financial condition of U.S. and alien surplus lines insurers by providing a forum for discussion of issues and to develop or amend relevant NAIC model laws, regulations and/or guidelines.

Ongoing Support of NAIC Programs, Products or Services

1. The **Surplus Lines (C) Task Force** will:
 - A. Provide a forum for discussion of current and emerging surplus lines-related issues and topics of public policy and determine appropriate regulatory response and action.
 - B. Review and analyze quantitative and qualitative data on U.S. domestic and alien surplus lines industry results and trends.
 - C. Monitor federal legislation related to the surplus lines market and ensure all interested parties remain apprised.
 - D. Develop or amend relevant NAIC model laws, regulations and/or guidelines.
 - E. Oversee the activities of the Surplus Lines (C) Working Group.

2. The **Surplus Lines (C) Working Group** will:
 - A. Operate in regulator-to-regulator session pursuant to paragraph 3 (specific companies, entities or individuals) of the NAIC Policy Statement on Open Meetings and operate in open session when discussing surplus lines topics and policy issues, such as amendments to the International Insurers Department (IID) Plan of Operation.
 - B. Maintain and draft new guidance within the IID Plan of Operation regarding standards for admittance and continued inclusion on the NAIC *Quarterly Listing of Alien Insurers*.
 - C. Review and consider appropriate decisions regarding applications for admittance to the NAIC *Quarterly Listing of Alien Insurers*.
 - D. Analyze renewal applications of alien surplus lines insurers on the NAIC *Quarterly Listing of Alien Insurers* and ensure solvency and compliance per the IID Plan of Operation guidelines for continued listing.
 - E. Provide a forum for surplus lines-related discussion among jurisdictions.

NAIC Support Staff: Andy Daleo/Robert Schump

Draft: 11/5/20

Adopted by the Executive (EX) Committee and Plenary, Nov. __, 2020

Adopted by the Property and Casualty Insurance (C) Committee, Nov. __, 2020

Adopted by the Title Insurance (C) Task Force, Oct. 21, 2020

2021 Proposed Charges

TITLE INSURANCE (C) TASK FORCE

The mission of the Title Insurance (C) Task Force is to study issues related to title insurers and title insurance producers.

Ongoing Support of NAIC Programs, Products or Services

1. The **Title Insurance (C) Task Force** will:
 - A. Monitor issues and developments occurring in the title insurance industry, and provide support and expertise to other NAIC committees, task forces and/or working groups, or outside entities, as appropriate.
 - B. Review and assist various regulatory bodies in combating fraudulent and/or unfair real estate settlement activities. Such efforts could include working with the Antifraud (D) Task Force and other NAIC committees, task forces and/or working groups to combat mortgage fraud and mitigating title agent defalcations through the promotion of closing protection letters (CPLs) and other remedies. Report results at each national meeting.
 - C. Consult with the Consumer Financial Protection Bureau (CFPB) and other agencies responsible for information; education; and disclosure for mortgage lending, closing and settlement services about the role of title insurance in the real estate transaction process.
 - D. Consider the effectiveness of changes in financial reporting by title insurance companies, and identify further improvements and clarifications to blanks, instructions, Statement of Statutory Accounting Principles (SSAPs), solvency tools, and other matters, as necessary. Coordinate efforts with the Statutory Accounting Principles (E) Working Group.
 - E. Revise the Title Insurance Consumer Shopping Tool Template to include questions and answers about title insurance-related fraud topics, including but not limited to, CPLs and wire fraud.
 - F. Evaluate the effectiveness of CPLs, including but not limited to, intent, state regulation and requirements, consumer protections offered and excluded, and potential alternatives for coverage.
 - G. Explore short-term and long-term issues and solutions from the pandemic.

NAIC Support Staff: Anne Obersteadt

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Draft: 10/13/20

Adopted by the Executive (EX) Committee and Plenary, TBD

Adopted by the Property and Casualty Insurance (C) Committee, TBD

Adopted by the Workers' Compensation (C) Task Force, 10/26/20

2021 Proposed Charges

WORKERS' COMPENSATION (C) TASK FORCE

The mission of the Workers' Compensation (C) Task Force is to study the nature and effectiveness of state approaches to workers' compensation and related issues, including, but not limited to: assigned risk plans; safety in the workplace; treatment of investment income in rating; occupational disease; cost containment; and the relevance of adopted NAIC model laws, regulations and/or guidelines pertaining to workers' compensation.

Ongoing Support of NAIC Programs, Products or Services

1. The **Workers' Compensation (C) Task Force** will:
 - A. Oversee the activities of the NAIC/International Association of Industrial Accident Boards and Commissions (IAIABC) Joint (C) Working Group.
 - B. Discuss issues with respect to advisory organizations, rating organizations, statistical agents and insurance companies in the workers' compensation arena.
 - C. Monitor the movement of business from the standard markets to the assigned risk pools. Alert state insurance department representatives if the growth of assigned risk pools changes dramatically.
 - D. Follow workers' compensation issues regarding cannabis in coordination with the Cannabis Insurance (C) Working Group.
 - E. Discuss workers' compensation issues related to COVID-19.
2. The **NAIC/IAIABC Joint (C) Working Group** will:
 - A. Study issues of mutual concern to state insurance regulators and the IAIABC. Review relevant IAIABC model laws and white papers and consider possible charges in light of the Working Group's recommendations.

NAIC Support Staff: Sara Robben/Aaron Brandenburg

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REQUEST FOR NAIC MODEL LAW DEVELOPMENT

This form is intended to gather information to support the development of a new model law or amendment to an existing model law. Prior to development of a new or amended model law, approval of the respective Parent Committee and the NAIC's Executive Committee is required. The NAIC's Executive Committee will consider whether the request fits the criteria for model law development. Please complete all questions and provide as much detail as necessary to help in this determination.

Please check whether this is: New Model Law or Amendment to Existing Model

1. Name of group to be responsible for drafting the model:

Surplus Lines (C) Task Force

2. NAIC staff support contact information:

Andy Daleo, Senior Financial Analysis Manager (adaleo@naic.org)

Dan Schelp, Chief Counsel, Regulatory Affairs (dschelp@naic.org)

3. Please provide a brief description of the proposed new model or the amendment(s) to the existing model. If you are proposing a new model, please also provide a proposed title. If an existing model law, please provide the title, attach a current version to this form and reference the section(s) proposed to be amended.

Nonadmitted Insurance Model Act (#870) – See Attached

On August 5, 2020, the Surplus Lines (C) Task Force discussed revisions to Model #870, and directed NAIC staff to form an informal Drafting Group composed of regulators from Louisiana, Oklahoma and Washington to produce a summary document that outlines the significant updates to modernize Model #870 and present a recommendation to the Task Force at a future national meeting. The attached Model #870 contains the Drafting Group's recommendations with respect to modification of Model #870.

4. Does the model law meet the Model Law Criteria? Yes or No (Check one)

(If answering no to any of these questions, please reevaluate charge and proceed accordingly to address issues).

a. Does the subject of the model law necessitate a national standard and require uniformity amongst all states? Yes or No (Check one)

If yes, please explain why

The *Nonadmitted Insurance Model Act* (#870) has been adopted in 31 states, with other states adopting older versions of the NAIC model, statutes or regulations addressing the same subject matter, or other administrative guidance such as bulletins and notices. Every state, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands have surplus lines guidance in place.

The *Nonadmitted and Reinsurance Reform Act* (NRRA) was adopted July 21, 2011, and is contained within the *Dodd-Frank Wall Street Reform and Consumer Protection Act* (Act). The NRRA requirements and the mandate of the federal Act create uniformity for the collection of surplus lines tax payments through the implementation of the "Home State" requirement. All states comply with the NRRA's home state tax approach.

Model 870 was not modified because of the implementation of the NRRA. However, on October 11, 2011, a *Nonadmitted Insurance Reform Sample Bulletin* (copy attached) was adopted by Executive/Plenary and subsequently distributed to the state insurance departments. It is important to provide guidance for uniformity among the states in order to ensure compliance with the NRRA.

- b. Does Committee believe NAIC members should devote significant regulator and Association resources to educate, communicate and support this model law?

Yes or No (Check one)

5. What is the likelihood that your Committee will be able to draft and adopt the model law within one year from the date of Executive Committee approval?

1 2 3 4 5 (Check one)

High Likelihood

Low Likelihood

Explanation, if necessary: Due to the previous adoption of the *Nonadmitted Insurance Reform Sample Bulletin* by the NAIC, there is already uniformity of intent with respect to key areas addressed by the NRRA. The Surplus Lines (C) Task Force should be able to leverage that agreement to quickly and efficiently finish revisions to Model #870.

6. What is the likelihood that a minimum two-thirds majority of NAIC members would ultimately vote to adopt the proposed model law?

1 2 3 4 5 (Check one)

High Likelihood

Low Likelihood

Explanation, if necessary: Surplus Lines is an important industry in every state and U.S. Territory, and it is important to provide uniform guidance to the NAIC members to ensure compliance with the federal NRRA.

7. What is the likelihood that state legislatures will adopt the model law in a uniform manner within three years of adoption by the NAIC?

1 2 3 4 5 (Check one)

High Likelihood

Low Likelihood

Explanation, if necessary: Model #870 is not an accreditation requirement, but as previously stated it is important to provide uniform guidance to the states to ensure compliance with the NRRA.

8. Is this model law referenced in the NAIC Accreditation Standards? If so, does the standard require the model law to be adopted in a substantially similar manner?

No

9. Is this model law in response to or impacted by federal laws or regulations? If yes, please explain.

Yes, the proposed revisions to Model #870 are in direct response to the federal NRRA, which would preempt inconsistent state law.