September 10, 2017

Commissioner Ted Nickel, NAIC President
Commissioner Julie Mix McPeak, NAIC President-Elect
Superintendent Eric Cioppa, NAIC Vice President
Director Ray Farmer, NAIC Secretary-Treasurer
Michael Consedine, NAIC CEO
Andy Beal, NAIC COO
Jim Woody, NAIC CFO

Re: **2018 Budget for NAIC Technical Resource to Assist States with Review of Complex Models Used by Insurers for Underwriting, Rating and Claims Settlement**

Dear Commissioners and Messrs. Consedine, Beal and Woody

The Big Data Working Group currently has a charge to propose a mechanism for a NAIC technical resource to assist states in their review of complex models used in underwriting, rating and claims.[1] To date, the Big Data WG has not fulfilled the charge and will not until after the 2018 NAIC budget has been adopted. We have great concern that the slow progress of the Big Data WG – which will not be helped by the departure of the current working group chair – will delay the necessary budgeting for what has become an essential need of NAIC members of the NAIC in an era of insurers' use of Big Data.

We ask the NAIC leadership to include in the 2018 NAIC budget an amount sufficient for and dedicated to the creation of the NAIC technical resource to assist the states in review of complex models. Specifically, we recommend a budget item sufficient for the NAIC to provide technical assistance to states' regarding complex models used by insurers for pricing, fraud detection, claims settlement, marketing and other purposes identified by the states comprised of:

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[1]   Propose a mechanism to provide resources and allow states to share resources to facilitate states' ability to conduct technical analysis of and data collection related to states' review of complex models used by insurers for underwriting, rating and claims. Such mechanism shall respect and in no way limit states' regulatory authority.

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1. An actuary experienced with new and emerging property-casualty pricing models and modeling software;
2. A data scientist experienced with data mining and predictive analytics of large data sets;
3. An economist or statistician experienced with economic and statistical models and testing of data sets and data models ;
4. Data storage and processing capability and computer hardware and software to support the work of the additional staff; and
5. An existing or new NAIC staff member to serve as the primary contact with the states to accept, coordinate and organize the above resources for states' request for technical assistance related to complex models.

NAIC management is in the best position to cost out this technical resource, but we expect the necessary funding will be at least $500,000.

To provide additional context and justification for our recommendation, we offer the following.

The complex model being reviewed by a state might be a personal auto pricing model with assistance sought by the state's filing reviewer or an accelerated life underwriting model or automated claims settlement model with assistance sought by market regulation staff. Activities the NAIC resource / staff may provide in response to a specific request by a state might include:

1. Answering questions and performing research to answer questions about modeling software and models used by insurers;
2. Answering questions and performing research to answer questions about accuracy and completeness of data and data sources used by the insurer;
3. Review of a model's specification for specific issues of concern identified by the requesting state;
4. Receiving a copy of a data set used by the insurer to develop the model and the specifications of the insurer's model and then replicating/verifying the insurer's or company's model and results;
5. Adding variables to the model in item 4 for prohibited factors to evaluate whether any of the variables in the insurer's model are proxies for prohibited factors or to evaluate the impact of removing correlation of proposed model variables and prohibited factors;
6. Analyzing distributional impacts of concern to state, including requests from the state legislature.

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Stated simply, the NAIC resource to assist states in the states' analysis and review of complex models should be modeled after the NAIC resources developed to assist the states' with the implementation and operation of principles-based reserving.

While the variety and scope of states' requests for technical assistance related to complex models may be broad, the following prohibitions should be clearly understood to apply to the NAIC staff designated as this technical resource.

1. NAIC technical resource staff will not accept and will not respond to any request for a regulatory opinion, including, but not limited to requests regarding a model's compliance with state law.

2. NAIC technical resource staff will not initiate contact with or respond to an inquiry from any insurer or company whose model for which a state has asked NAIC staff for assistance. The state is responsible for requesting information from and communicating with an insurer or company.

3. NAIC technical resource staff will provide the results of any review – the answers to the questions posed by a state to the NAIC staff – only to the state requesting the assistance. If a state wants to share information with another state, such disclosure is the state's decision consistent with the state's responsibility to comply with requirements regarding sharing of non-public information with other regulators.

This recommendation is consistent with, and will provide timely resources to operationalize, whatever recommendation is made by the Big Data WG and adopted by the NAIC. Our recommendation also emphasizes important safeguards to ensure the NAIC resources do not infringe upon state regulatory authority. Most important, the proposed NAIC resources will provide badly-needed assistance to states facing a new, complex and resource-intensive challenge of insurers' growing use of Big Data.

As part of our recommendation for 2018 budgeting for NAIC resources to provide technical assistance to states regarding complex models, we suggest that NAIC report to the Big Data Working Group and Executive Committee on the activities of these NAIC resources as frequently as requested but no less frequently than at each national meeting in the two years following creation of the resource. The report of activity regarding NAIC technical assistance to states related to complex models should be prepared in a manner for public disclosure and be presented at public meetings.

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Thank you for your consideration. If we can provide any additional information, please let us know.

Sincerely,

Birny Birnbaum
Director