December 15, 2023

NAIC Model Bulletin on Use of AI by Insurers

Model Bulletin Includes Principles-Based Governance Standards for Insurers that Use AI

SUMMARY

On December 4, 2023, the National Association of Insurance Commissioners ("NAIC") adopted a model bulletin entitled "Use of Artificial Intelligence Systems by Insurers" (the "Bulletin"),[1] which is part of the NAIC's effort to study, and potentially prescribe regulatory requirements that would apply to, the use of artificial intelligence ("AI") by the U.S. insurance industry. The Bulletin, which is intended to be adopted by individual state insurance departments, sets forth principles-based standards for the practices that insurers that use AI and are licensed in any state that has adopted the Bulletin are expected to adopt, and the information that state insurance regulators may request from an insurer regarding its use of AI during an examination (including a market conduct examination) or an investigation. The Bulletin's requirements are principles-based; they are not intended to prescribe specific practices or specific documentation requirements for insurers that use AI; rather, such insurers are permitted to demonstrate compliance with applicable law in their use of AI through means other than those described in the Bulletin.

The Bulletin is intended to build upon, and not displace or supersede, existing requirements under state insurance laws, such as those relating to unfair trade and claims settlement practices and standards for setting insurance rates. The Bulletin's requirements pertain to policies and procedures, such as governance, risk management and internal controls, that insurers using AI are expected to establish and that would apply to the entire life cycle of both the relevant insurance product(s) and the AI systems being used; the Bulletin does not attempt to prescribe any specific quantitative metrics, parameters or scenarios for testing the outcomes of an insurer's use of AI.

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The requirements set forth in the Bulletin do not automatically become part of the insurance laws of any U.S. state. Instead, state insurance regulatory authorities will need to issue their own guidance. Because the requirements of the Bulletin apply to all insurers licensed (rather than domiciled) in a state that has adopted guidance consistent with the Bulletin, we expect that, in practice, a large proportion of insurance carriers licensed in multiple U.S. states will soon become subject to the requirements of the Bulletin regardless of how many states ultimately adopt such guidance.

Because the Bulletin is intended to apply to licensed insurers only, surplus lines insurers that use AI are not within its scope. Excess and surplus lines market participants should, however, carefully monitor adoption of the Bulletin by the state insurance regulators to determine whether they remain excluded.

BACKGROUND

The NAIC first began exploring the use of AI, machine learning ("ML"), predictive models and "big data" by insurers in 2016, when it established the Big Data (D) Working Group.[2] In 2020, the NAIC adopted "Principles on Artificial Intelligence" (the "AI Principles")[3] intended to serve as guidance for insurance companies and other persons facilitating the business of insurance that play an active role in the AI system life cycle (which the NAIC defines as "AI Actors"). These guiding principles provide that the use of AI in the insurance industry should be fair and ethical; accountable; compliant; transparent; and secure, safe and robust. The AI Principles do not carry the weight of law or impose any legal liability, but are intended to serve as guidance setting general expectations for AI Actors and AI systems.

The NAIC subsequently engaged in a broader effort to research the use of "big data", AI and ML in the U.S. insurance industry and evaluate whether any related revisions to the existing U.S. insurance regulatory framework were warranted. These efforts have included surveys to insurers writing various lines of business to gain insight into the industry's use of AI, ML, predictive models and "big data", and the governance, risk management and controls adopted to manage and mitigate resulting risks.[4] The NAIC is also developing a list of questions that insurance regulators could ask relating to models and data (both internal and third-party) used by insurance companies.[5] Finally, the NAIC and certain state insurance regulators are considering whether an independent data set should be developed for purposes of testing the outcomes of the use of AI by insurers for "unfair bias". Any work on developing such a data set would likely be spearheaded by the NAIC's Center for Insurance Policy and Research (CIPR).

At the individual state level, the Colorado Division of Insurance ("CO DOI") has adopted a regulation setting forth governance and risk management framework requirements for life insurers' use of external consumer data and information sources, as well as algorithms and predictive models that use external consumer data and information sources.[6] While this particular regulation only applies to life insurers licensed in Colorado, the CO DOI intends to develop parallel regulations for other lines of insurance.[7] The standards set forth in the Bulletin, together with the governance and risk management requirements adopted or being developed

by the CO DOI will likely provide a baseline of regulatory expectations in respect of governance standards, risk management protocols and internal controls for U.S. insurers that use AI, ML and/or "big data" in their operations.

KEY PROVISIONS OF THE BULLETIN

The Bulletin's three key themes reflect a consensus reached by state insurance regulators during the NAIC's July 2022 Collaboration Forum on "algorithmic bias". First, the Bulletin contains principles-based guidance, as opposed to prescribing specific practices or documentation requirements. The Bulletin also recognizes that insurers may demonstrate their compliance through various means, including practices that differ from those described in the Bulletin. Second, insurers should establish governance requirements and protocols that rely on external and objective standards. Finally, insurance licensees should be held responsible for conducting appropriate diligence on the activities of third-party data and model vendors, and the Bulletin does not place any direct regulatory requirements on third-party vendors. However, in light of concerns that smaller insurers may not have the requisite market power to force compliance by third-party vendors with applicable requirements, the NAIC recently established the new Third-Party Data and Models (H) Task Force, charged with developing a framework for the regulatory oversight of third-party data and predictive models.

The Bulletin states that the development and use of verification and testing methods to identify errors and bias in predictive models and AI Systems and "potential unfair discrimination" is "encourage[d]", but no longer includes references (which were included in prior iterations of the Bulletin and discussions related thereto) to the practical difficulties and limitations associated with such testing.[8]

Key Definitions Used in the Bulletin. The Bulletin includes a number of defined terms, including definitions of "AI", "AI System", "ML", "Predictive Model", "Algorithm", and "Model Drift",[9] but no longer attempts to define "Bias", which a previous draft of the Bulletin defined as "the differential treatment that results in favored or unfavored treatment of a person, group or attribute". Following objections from certain commenters, who pointed out that such term was not otherwise used in state insurance laws or regulations governing unfair trade practices, the definition of "Bias" was removed from the Bulletin. Nevertheless, the final version retains several references to "bias", which it leaves undefined.

Regulatory Expectations for Licensed Insurers. The Bulletin reminds insurers of the continued applicability of the following existing insurance regulatory requirements in respect of the use of AI in their operations:

- Unfair Trade Practices Laws, which prohibit unfair methods of competition and unfair or deceptive acts and practices in insurance.
- Unfair Claims Settlement Practices Laws, which set forth standards for the investigation and disposition of insurance claims.

- **Property and Casualty ("P&C") Rating Laws**, which provide that P&C rates may not be excessive, inadequate or unfairly discriminatory.

The Bulletin also states that the NAIC AI Principles should continue to guide insurers in their development and use of AI Systems—including with respect to fairness and ethical use of AI; accountability; compliance with state laws and regulations; transparency; and ensuring safe, secure, fair and robust systems.

Governance, Risk Management and Internal Controls Requirements. The Bulletin provides that licensed insurers are expected (rather than, in the first draft Bulletin, "encouraged") to develop, implement and maintain a written program (the "AIS Program") for the responsible use of AI Systems that make or support decisions related to regulated insurance practices.

Objectives of the AIS Program. The AIS Program should be designed to mitigate the risk of decisions by an insurer that adversely impact the consumer in a manner that violates insurance regulatory standards, which the Bulletin defines as "Adverse Consumer Outcomes". More specifically, an insurer's AIS Program should:

- address the use of AI Systems across the entire insurance life cycle—product development and design; marketing; use; underwriting; rating and pricing; case management; claim administration and payment; and fraud detection—and all phases of the life cycle of each AI System;

- include processes and procedures for providing notice to consumers that AI Systems are in use and provide access to appropriate levels of information. (The AIS Program may be based, in whole or in part, on a framework or standards developed by an official third-party standard organization, such as the National Institute of Standards and Technology (NIST) Artificial Intelligence Risk Management Framework, Version 1.0.); and

- be tailored to, and proportionate with, the specific insurer's use and reliance on AI and AI Systems, as well as reflective of, and commensurate with the insurer's assessment of the risk to consumers of the AI Systems it uses.

In assessing the risk posed to consumers, insurers should consider:

- the nature of the decisions being made, informed or supported using AI Systems;

- the severity of adverse economic impact that a consumer might experience as a result of an Adverse Consumer Outcome—which the Bulletin defines as the "Degree of Potential Harm to Consumers";

- the extent to which humans are involved in the final decision-making process;

- the transparency and explainability of outcomes to the impacted consumer; and

- the extent and scope of the insurer's use or reliance on data, Predictive Models and AI Systems from third parties.

AIS Program Contents and Requirements.

1. **Governance.**

   a. Senior management accountable to the board of directors or an appropriate committee thereof should be responsible for the development, implementation, monitoring and oversight of the AIS Program and for setting the insurer's strategy for AI Systems.

   b. The governance framework for the oversight of AI Systems should prioritize transparency, fairness and accountability in the design and implementation of the AI Systems, recognizing that proprietary and trade secret information must be protected.

   c. Internal governance structures—newly adopted or pre-existing—should consider addressing the following:

      i. Policies, processes and procedures (including risk management and internal controls) for each stage of the AI System's life cycle (from proposed development to retirement).

      ii. Requirements to document compliance with such policies, processes and procedures, with the goal of ensuring that all relevant documents and information could be provided to state insurance regulators during investigations or examinations.

      iii. The insurer's internal AI System governance accountability structure, such as: (A) forming committees of representatives from appropriate disciplines and units within the insurer (business units; product specialists; actuarial; data science and analytics; underwriting; claims; compliance; legal); (B) scope of responsibility and authority, chain of command, and decisional hierarchies; (C) independence of decision-makers and lines of defense at successive stages of the AI System life cycle; (D) protocols and requirements for monitoring, auditing, escalation and reporting; and (E) development and implementation of ongoing training and supervision of personnel.

      iv. If the insurer uses Predictive Models, processes and procedures for designing, developing, verifying, deploying, using, updating and monitoring Predictive Models, including a description of the methods used to detect and address errors, performance issues, outliers or unfair discrimination.

2. **Risk Management and Internal Controls.** The AIS Program should document the insurer's risk identification, mitigation and management framework and internal controls for AI Systems generally and at each stage of the AI System life cycle, including the following:

   a. Oversight and approval of development, adoption or acquisition of AI Systems, along with identification of constraints and controls on automation and design to align and balance function with risk.

   b. Data practices and accountability procedures, such as data currency, lineage, quality, integrity, bias analysis and minimization, and suitability.

   c. Management and oversight of Predictive Models (including Algorithms used therein), including: (i) inventories and descriptions of Predictive Models, (ii) detailed documentation of development and use of Predictive Models, and (iii) assessments such as interpretability, repeatability, robustness, regular tuning, reproducibility, traceability, Model Drift, and the auditability of these measurements where appropriate.

   d. Validation, testing and retesting as necessary to assess the generalization of AI System outputs upon implementation, including the suitability of the data used to develop, train, validate and audit the model.

      i. Validation may be accomplished via comparing model performance on data previously unseen by the AI model available at the time of the model's development to the

performance observed on data post-implementation; measuring performance against expert review; or other methods.

ii.   The section of the Bulletin pertaining to documents and information that state insurance regulators may request from an insurer during an investigation or examination includes a further requirement that the nature of validation, testing and auditing of Predictive Models and AI Systems, including evaluation of Model Drift to assess the reliability of outputs that influence the decisions made based on Predictive Models, should be "reflective of the underlying components" of the AI System, whether based on Predictive Models or generative AI.

e.   Protection of non-public information (particularly consumer information), including unauthorized access to Predictive Models.

f.   Data and record retention.

g.   For Predictive Models used by the insurer, a narrative description of the Predictive Model's intended goals and objectives and how the Predictive Model is developed and validated to ensure that the AI Systems relying on such Predictive Model correctly and efficiently predict or implement these goals and objectives.

3.   **Standards for Third-Party AI Systems and Data.** The AIS Program should address the insurer's process for acquiring, using or relying on third-party data to develop AI Systems and AI Systems developed by third parties. Standards, policies, procedures and protocols pertaining to third-party AI Systems and data may include the following, as appropriate:

a.   Due diligence and methods employed by the insurer to assess the third party and its data or AI Systems acquired from such third party, to ensure that decisions made by, or with support from, such AI Systems that could lead to Adverse Consumer Outcomes will meet the legal standards to which the insurer is subject.

b.   Where appropriate and available, inclusion of the following contractual terms in agreements with third parties:

i.   Provision permitting the insurer to audit the third party for compliance and/or entitling the insurer to receive audit reports by qualified auditing entities.

ii.   Requirement for the third party to cooperate with the insurer with regard to regulatory inquiries and investigations related to the insurer's use of such third party's products or services.

c.   Performance of audits and/or other activities to confirm the third party's compliance with contractual and any applicable regulatory requirements.

i.   The section of the Bulletin pertaining to documents and information that state insurance regulators may request from an insurer during an investigation or examination provides that one of the categories of information that may be so requested is the insurer's evaluation of the third-party AI System's Model Drift.

Information and Documents that May Be Requested by State Insurance Regulators. The Bulletin states that, regardless of the existence or scope of the insurer's AIS Program, state insurance regulators performing an investigation or examination (including a market conduct examination) of the insurer may make inquiries or requests regarding the development, deployment and use by the insurer of AI Systems, or any specific Predictive Model, AI System or application, and its outcomes (including Adverse Consumer Outcomes) from the use of those AI Systems, as well as any other information or documents deemed

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relevant by the regulators; such inquiries may also focus on the insurer's governance framework, risk management and internal controls pertaining to its use of AI. The Bulletin lists a number of examples of specific documents and information that state insurance regulators may request,[10] which are generally aligned with the substantive AIS Program requirements described above.

The Bulletin also provides that elements of the insurer's corporate governance framework that address use of AI Systems should be addressed in the insurer's annual Corporate Governance Annual Disclosure (CGAD) reports.

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ENDNOTES

1   *See* NAIC Model Bulletin: Use of Artificial Intelligence Systems by Insurers, *available at* https://content.naic.org/sites/default/files/inline-files/2023-12-4%20Model%20Bulletin_Adopted_0.pdf.

2   The Big Data (D) Working Group continues its work today as a sub-group of the NAIC Innovation, Cybersecurity, and Technology (H) Committee, and is now known as the Big Data and Artificial Intelligence (H) Working Group.

3   *See* National Association of Insurance Commissioners (NAIC) Principles on Artificial Intelligence (AI) (Aug. 14, 2020), *available at* https://content.naic.org/sites/default/files/inline-files/NAIC%20Principles%20on%20AI.pdf.

4   The survey results have been released by the NAIC, and are available on the Big Data and Artificial Intelligence (H) Working Group's website, at https://content.naic.org/cmte_h_bdwg.htm.

5   *See* Model and Data Regulatory Questions (December 2, 2022), *available at* https://content.naic.org/sites/default/files/inline-files/Model%20Questions%2012.2.22.pdf.

6   *See* 3 CCR 702 Reg. 10-1-1, *available* at https://www.sos.state.co.us/CCR/GenerateRulePdf.do?ruleVersionId=11153&fileName=3%20CCR%20702-10.

7   As part of these efforts, the CO DOI has commenced the stakeholder engagement process pertaining to a regulation that will apply to underwriting practices in private passenger auto insurance.

8   The first draft of the Bulletin expressly stated that "[c]urrent limitations on the availability of reliable demographic data on consumers make it challenging for insurers and regulators to directly test [AI] systems to determine whether the decisions made meet all applicable legal standards".

9   These definitions are as follows:

- "AI": a branch of computer science that uses data processing systems that perform functions normally associated with human intelligence, such as reasoning, learning, and self-improvement, or the capability of a device to perform functions that are normally associated with human intelligence such as reasoning, learning, and self-improvement. ML is included as a subset of AI.

- "AI System": a machine-based system that can, for a given set of objectives, generate outputs such as predictions, recommendations, content (such as text, images, videos, or sounds), or other output influencing decisions made in real or virtual environments; AI Systems are designed to operate with varying levels of autonomy.

- "Algorithm": a clearly specified mathematical process for computation; a set of rules that, if followed, will give a prescribed result.

- "ML": a field within AI that focuses on the ability of computers to learn from provided data without being explicitly programmed.

- "Predictive Model": the mining of historic data using Algorithms and/or ML to identify patterns and predict outcomes that can be used to make or support the making of decisions.

- "Model Drift": the decay of a model's performance over time arising from underlying changes such as the definitions, distributions, and/or statistical properties between the data used to train the model and the data on which it is deployed.

10 Specific examples of documents and information that state insurance regulators may request are listed in Section 4 of the Bulletin, entitled "Regulatory Oversight and Examination Considerations".

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