Artificial Intelligence Systems Evaluation
Optional Supplemental Exhibits for State Regulators

Background:
The rapid expansion of big data and adoption of Artificial Intelligence and Machine Learning (AI Systems) is significantly transforming insurance practices. These technologies can offer substantial benefits to both insurance companies and consumers by facilitating the development of innovative products, improving customer interface and enhancing service, simplifying and automating processes, and promoting efficiency and accuracy. However, without robust governance and effective controls, the use of AI Systems may lead to Adverse Consumer Outcomes or compromise the financial soundness of an insurance company. Insurers are responsible for managing the risks associated with the development and implementation of AI Systems and must demonstrate to regulators that appropriate risk-based oversight mechanisms are in place and are functioning effectively.

Intent:
The NAIC's Innovation, Cybersecurity and Technology (H) Committee charged the Big Data and AI Working Group (BDAIWG) to create tool(s) that would enable regulators to identify and assess AI Systems' related risks on an on-going basis with a scope that considers both financial and consumer risks evolving specifically from company's use of AI Systems to the extent such risks can be parsed from the comprehensive structure.

This tool is designed to supplement existing market conduct, financial analysis, and financial examination review procedures for reviewing AI Systems. As this tool supplements existing NAIC resources, regulators should continue to consider existing NAIC resources as authoritative but may consider drawing from this tool to assist in understanding and assessing a company's use of AI Systems. Inquiries and information requests performed related to this tool will be coordinated consistent with the guidance provided by the Market Regulation Handbook, Financial Condition Examiners Handbook, and the Financial Analysis Handbook.

These optional exhibits allow regulators to determine the extent of AI Systems usage for a company and whether additional analysis is needed focusing on financial and consumer risk.

Sections of the Tool include:

- **Exhibit A: Quantify Regulated Entity's Use of AI Systems**
- **Exhibit B: AI Systems Governance Risk Assessment Framework (Two Options: Narrative or Checklist)**
- **Exhibit C: High Risk AI Systems Details**
- **Exhibit D: AI Systems Model Data Details**

Instructions:

Information obtained from the Exhibit submission may supplement guidance and tools used during an existing market conduct, certification, financial analysis, and financial examination review, to enhance the regulator's understanding of the AI Systems utilization and assessment of risk across an insurance company in performing the analysis and examination reviews. Effective assessment requires regulators to maintain a fluent understanding and application of the applicable laws including those pertaining to unfair trade practices, unfair claims settlement practices, corporate governance annual disclosures, confidentiality, financial reporting, and rating.

Regulators using the tool may wish to first use Exhibit A and based on the information provided, determine if further inquiry is necessary. It may be possible that company responses indicate that while the company responding is using AI, its use of AI is so limited or low in inherent risk as to not require further inquiry as contemplated by subsequent exhibits.

If information requested through the tool has already been provided to this department or any other state department of insurance, the company's response should so state and the regulators may accept prior submissions if the prior response is still current and applicable.

The tool responses will be considered by regulators when identifying the inherent risks of the insurer. They should also affect the planned examination or inquiry approach, as well as the nature, timing and extent of any further procedures performed.

Materiality and Risk Assessment

Exhibit C of this tool relies on company assessments of the risks and materiality of its AI System(s), including the company's assessment of which AI System(s) are "high risk". As part of evaluating company responses, regulators may request information on how a responding company assesses the concepts of AI risk and materiality to assist in the regulatory review.

Confidentiality

Regulators using any of the tools should cite examination or other authority, as appropriate when requesting information from insurers. Regulators should cite all relevant confidentiality statutes or other specific protections related to documents, materials or other information in the possession or control of regulators that are obtained by or disclosed to the regulators or any other person in the course of a market conduct inquiry and all information reported or provided to the regulator pursuant to cited examination or other authority.

Which Exhibit to Use?

Risk Identification or Assessment	A	B	C	D
Identify Reputational Risk		**X (Checklist)**		
Review Company Practices Related to Consumer Complaints		**X**		
Assess Company Financial Risk – Number of models implemented recently	**X**	**X (Checklist)**		
Identify Adverse Consumer Outcomes – AI Systems and data use by operational area	**X**	**X**	**X**	**X**
Evaluate Actions Taken Against Company's Use of High-Risk AI Systems (as defined by the company)			**X**	
Evaluate Robustness of AI Controls		**X**	**X**	
Determine the types of data used by operational area				**X**

Exhibit A: Quantify Regulated Entity's Use of AI Systems

Purpose: To obtain information pertaining to the number of AI models that are new or updated that will help facilitate risk assessment. Based on the responses from the company, regulators may ask for additional information related to governance (Exhibits B), high-risk models (Exhibit C), and data types (Exhibit D) where there is risk for Adverse Consumer Outcomes or material adverse financial impact.

Company Instructions: Provide the most current counts and use cases of the following, as requested. Note that "AI System" is defined as 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 (supportive, augmented, automated). For purposes of responding to information requests related to this Exhibit, those models that augment or automate decision making related to consumers are considered to have direct consumer impact. "Adverse Consumer Outcome" and "Use Case" are as defined below. Include all companies and lines of business. If the governance differs by entity, line of business, or state, work with your domestic regulator to determine if multiple submissions are needed. See definitions below.

Regulator Instructions: Regulators should customize this tool to limit information requested to more targeted inquiries for use in a limited scope exam.

Company Legal Name and Group Name: _____

NAIC CoCode and Group Codes: _____

Company Contact Name: _____ Email: _____

Describe the Line of Business for Which This Response Applies: _____

Date Form Completed ("as of") Date: _____

Use of AI System in Operations or Program Area	Number of AI System Model(s) Currently in Use	Number of AI System Model(s) with Direct Consumer Impact	Number of AI System Model(s) with Material Financial Impact	Number of AI System Model(s) Implemented in Past 12 Months	AI System Use Case(s)
Marketing					E.g., UC1: Identify potential consumers interested in product.
Premium Quotes & Discounts					
Underwriting/Eligibility					
Ratemaking/Rate Classification/ Schedule Rating/ Premium Audits					
Claims/Adjudication*					
Customer Service					E.g. Consumer facing AI Systems, AI Systems that support customer service functions, etc.
Utilization Management/Utilization Review/Prior Authorization/Level of Care Determination					
Fraud/Waste & Abuse					
Investment/Capital Management					
Legal/Compliance					
Producer Services					E.g. AI Systems that support producers, AI Systems that provide suggestions for products
Reserves/Valuations					
Catastrophe Triage					
Reinsurance					

Use of AI System in Operations or Program Area	Number of AI System Model(s) Currently in Use	Number of AI System Model(s) with Direct Consumer Impact	Number of AI System Model(s) with Material Financial Impact	Number of AI System Model(s) Implemented in Past 12 Months	AI System Use Case(s)
Other Insurance Practices (if applicable)					
**Includes Salvage/Subrogation*					

Exhibit B: (Narrative) AI Systems Governance Risk Assessment Framework

Purpose: To obtain the Company AI Governance Framework, including the risk identification, mitigation, and management framework and internal controls for AI Systems; and the process for acquiring, using, or relying on third-party AI Systems and data. Market and financial regulators should coordinate to gain access to the relevant section of the policies governing the use of AI Systems.

Company Instructions: Provide responses to the questions regarding governance of AI Systems within your company's operations. Include all companies and lines of business. If the governance differs by entity, line of business, or state, work with your domestic regulator to determine if multiple submissions are needed. See definitions below.

Regulator Instructions: Regulators should customize this tool to limit information requested to more targeted inquiries for use in a limited scope exam.

The references to, and questions about, elements of a company's AI Systems Governance Risk Assessments are not intended to be interpreted as creating new requirements for AI Systems Governance Risk Assessments.

Group and Company Legal Name: _____

NAIC Group and Company CoCodes: _____

Company Contact Name: _____ Email: _____

Date Form Completed ("as of") Date: _____

1. Provide the Governance Framework (framework) pertaining to the use of AI Systems. Click or tap here to enter text.
    a. What role maintains the framework? Click or tap here to enter text.
    b. Discuss the governance structure, Board reporting and frequency. Click or tap here to enter text.
    c. Discuss the process by which the framework is integrated throughout the organization, assessed and remediated. Click or tap here to enter text.
    d. Discuss the process by which the effectiveness of the framework and individual models are assessed and modified. Click or tap here to enter text.
    e. Discuss how responsibility for governance within the organization is assigned and how the organization ensures consistency and alignment. Click or tap here to enter text.

f. Discuss the integration of the AI Systems in the Own Risk and Solvency Assessment (ORSA) and Enterprise Risk Management (ERM) assessments. Click or tap here to enter text.
g. Suggested additional question: How does the insurance company assess autonomy, reversibility, and reporting impact risk of AI Systems? Click or tap here to enter text.

2. Discuss the uses of AI Systems that:
    a. Generates a material financial transaction. Click or tap here to enter text.
    b. Generates a material consumer impact. Click or tap here to enter text.
    c. Generates or impacts material information reported in financial statements. Click or tap here to enter text.
    d. Generates or impacts risk and or control assessment. Click or tap here to enter text.
    e. *Discuss the development, testing, and implementation of material AI Systems that the Company has implemented. If appropriate, include details regarding where any systems differ from established IT systems and data handling protocols.* Discuss the basis for deviation from established practices. Click or tap here to enter text.

3. Provide the policy for, and discuss the use and oversight of, material AI System vendors, model design and testing:
    a. Discuss the validation and testing procedures performed on internally-developed AI Systems. Click or tap here to enter text.
    b. Discuss the validation and testing procedures performed on third-party vendor-supplied AI Systems. Click or tap here to enter text.
    c. Discuss the testing and verification that has occurred including frequency, scope and methodology. Click or tap here to enter text.

4. Provide the policy for, and discuss the use and oversight of, material AI Systems by professional service providers including actuarial, claim, MGA, audit, and/or other professional services. Click or tap here to enter text.
    a. Discuss the testing and verification that has occurred, frequency, scope, and methodology. Click or tap here to enter text.

5. Discuss additional aspects of the framework design and evaluation pertaining to AI Systems. Click or tap here to enter text.
    a. Discuss the unit(s) responsible for the framework, assessment approach and frequency, and involvement with the program area to the extent it differs from that discussed above. Click or tap here to enter text.

Exhibit B: (Checklist) AI Systems Governance and Risk Assessment Framework

Purpose: To obtain the Company's AI Systems Governance Framework, including the risk identification, mitigation, and management framework and internal controls for AI Systems; and the process for acquiring, using, or relying on third-party AI Systems and data.

Company Instructions: Provide responses to the questions regarding how the governance of AI Systems fits within your company's system of supervision or Enterprise Risk Management program. Include all companies and lines of business. If the governance differs by entity, line of business, or state, work with your domestic regulator to determine if multiple submissions are needed. See definitions below.

Regulator Instructions: Regulators should customize this tool to limit information requested to more targeted inquiries for use in a limited scope exam.

Group and Company Legal Name(s): _____

NAIC Group and Company Code(s): _____

Company Contact Name: _____ Email: _____

Date Form Completed ("as of") Date: _____

Ref	AI Systems Use Questions for Company	Company Response
1	Has the company adopted a written AIS Program? If yes, when was it adopted and what is the frequency of review for updating?	
2	Was the Board of Directors or management involved in the adoption of an AIS Program?	
	2a. What is the role of the Board of Directors or management in the AI Systems Governance Framework?	

Ref	AI Systems Use Questions for Company		Company Response
3	**Reference the processes and procedures of the Company AI Governance Framework that addresses the following:**		
	How the Insurance Company…	Page #	If not specified in governance, provide details below:
	3a. Assesses, mitigates, and evaluates residual AI System risks of unfair trade practices		
	3b. Ensures AI Systems are compliant with applicable state and federal laws and regulations		
	3c. Evaluates the risk of Adverse Consumer Outcomes		
	3d. Considers data privacy and protection of consumer data used in AI Systems		
	3e. Evaluates whether AI Systems are suitable for their intended use and should continue to be used as designed		
	3f. Considers AI System risks within its Enterprise Risk Management (ERM)		
	3g. Considers AI System risks within the Own Risk and Solvency Assessment Report (ORSA), as applicable.		
	3h. Considers AI System risks within the software development lifecycle (SDLC)		
	3i. Considers AI System risk impact on financial reporting		
	3j. Trains employees about AI System use and defines prohibited practices (if any)		
	3k. Quantifies AI System risk levels		
	3l. Provides standards and guidance for procuring and engaging AI System vendors		
	3m. Considers consumer complaints resulting from AI Systems and whether they are identified, tracked, and addressed		
	3n. Promotes consumer awareness of the use of AI Systems through disclosures, policies, and procedures for consumer notification, as appropriate		

Exhibit C: High-Risk AI Systems Details

Purpose: To obtain detailed information on high-risk AI System models, such as models making automated decisions that could cause Adverse Consumer Outcomes, material financial impact, or material financial reporting impact. AI System risk criteria are set by the insurance company. To assist in identifying models for which this information is requested, regulators may request information on the company's risk assessment and a model inventory if such information has not otherwise already been provided.

Company Instructions: Fill in the details for each of the AI System model(s) requested. Include all companies and lines of business. If the governance differs by entity, line of business, or state, work with your domestic regulator to determine if multiple submissions are needed. See definitions below. The template below refers to both AI Systems and Models depending on the information being requested. There may be some instances where a company feels information should be provided in relation to the AI System and not the Model or vice-versa. This should be discussed with regulators as part of the submission process to avoid misunderstanding.

Regulator Instructions: Regulators should customize this tool to limit information requested to more targeted inquiries for use in a limited scope exam.

Group and Company Legal Name(s): _____

NAIC Group and Company Code(s): _____

Company Contact Name: _____ Email: _____

Date Form Completed ("as of") Date: _____

Ref	Model / AI System Information Requests	Company Response
1	AI System model name and version number	
2	Model type used in the AI System	
3	Model Implementation Date	
4	Model development (internal or third party – include vendor name)	
5	Model risk classification (high, medium, low, etc.)	
6	Model risk(s) and limitation(s)	
7	AI type (automate, augment, support)	

Ref	Model / AI System Information Requests	Company Response
8	Discuss testing model outputs (e.g. model drift, accuracy, unfair trade practices, unfair discrimination, performance degradation, etc.) and how the model was validated prior to being deployed as well as how its performance is monitored on an ongoing basis.	
9	Last date of model testing	
10	Use cases and purpose of model	
11	Discuss how the model affects the financial statements, risk assessment or controls.	
12	Discuss how the model is reviewed for compliance with applicable state and federal laws, including but not limited to the unfair trade practices act and unfair claims settlement laws.	
13	To the extent permitted by law, discuss if the company has had any actions taken against them for use of this model. Actions may include, but are not limited to, informal agreements, voluntary compliance plans, administrative complaints, ongoing third-party monitoring, cease and desist, remediation, restitution, fines, penalties, investigations, consent orders or other regulatory agency actions.	

Exhibit D: AI Systems Data Details

Purpose: To obtain detailed information of the source(s) and type(s) of data used in AI System(s) to identify risk of adverse consumer impact, unfair trade practices, material financial impact, or material financial reporting impact.

Company Instructions: Provide details below for the data used in AI System model(s). If any of the data elements listed are used in the training or test data as part of the development of AI model(s), provide information on whether the data element is sourced internally or whether the data element is sourced from a third party, in which case provide the name of the third-party vendor. Leave blank if a data source is not used in the development of AI System model(s) for the insurance operation. Include all companies and lines of business. If the governance differs by entity, line of business, or state, work with your domestic regulator to determine if multiple submissions are needed. See definitions below.

Regulator Instructions: Regulators should customize this tool to limit information requested to more targeted inquiries for use in a limited scope exam.

Group and Company Legal Name(s): _____

NAIC Group and Company CoCode(s): _____

Company Contact Name: _____ Email: _____

Describe the Line of Business for Which This Response Applies (complete one for each line of business):

_____

Date Form Completed ("as of") Date: _____

Ref	(1) Type of Data Element Used in AI System (s)	(2) Type of AI System (s) (E.g., Machine Learning vs. Generative AI)	(3) Describe How the Company Uses the Data Throughout Their Insurance Operations (include operational practices by line of insurance)	(4) Internal Data Source	(5) Third Party Data Source / Vendor Name
1	Aerial Imagery				
2	Age, Gender, Ethnicity/Race				
3	Consumer or Other Type of Insurance/Risk Score				
4	Crime Statistics				
5	Criminal Convictions (Exclude Auto-Related Convictions)				
6	Driving Behavior				
7	Education Level (Including school aptitude scores, etc.)				
8	Facial or Body Detection / Recognition / Analysis				
9	Geocoding (including address, city, county, state, ZIP code, lat/long, MSA/CSA, etc.)				
10	Geo-Demographics (including ZIP/county-based demographic characteristics)				
11	Household Composition				
12	Image/video Analysis				
13	Income				
14	Job History				
15	Loss Experience				

Ref	(1) Type of Data Element Used in AI System (s)	(2) Type of AI System (s) (E.g., Machine Learning vs. Generative AI)	(3) Describe How the Company Uses the Data Throughout Their Insurance Operations (include operational practices by line of insurance)	(4) Internal Data Source	(5) Third Party Data Source / Vendor Name
16	Medical, including Biometrics, genetic information, pre-existing conditions, diagnostic data, etc.				
17	Natural Catastrophe Hazard (Fire, Wind, Hail, Earthquake, Severe Convective Storms)				
18	Online social media, including characteristics for targeted advertising				
19	Personal Financial Information				
20	Reasonable Accommodations or Policy Modifications (granted or requested)				
21	Telematics/Usage-based insurance				
22	Vehicle-Specific Data including VIN characteristics				
23	Voice Analysis				
24	Weather				
25	Other: Non-Traditional Data Elements (Please provide examples)				

DEFINITIONS AND APPENDIX

Where available, for the purposes of this evaluation terms are defined in accordance with the NAIC Model Bulletin on the Use of AI Systems by Insurers (https://content.naic.org/sites/default/files/2023-12-4%252520Model%252520Bulletin_Adopted_0.pdf):

"Adverse Consumer Outcome" refers to an AI System decision (output) by an insurance company that is subject to insurance regulatory standards enforced by the Department that adversely impacts the consumer in a manner that violates those standards.

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

"AI System" is 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.

"Artificial Intelligence (AI)" refers to 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. This definition considers machine learning to be a subset of artificial intelligence.

"Augmentation" refers an AI System that suggests an answer and/or advises a human who is making a decision.

"Automation" refers to an AI System that does not involve human intervention.

"Consumer Impact" refers to a decision by an Insurer that is subject to insurance regulatory standards enforced by the Department.

"Degree of Potential Harm to Consumers" refers to the severity of adverse economic impact that a consumer might experience as a result of an Adverse Consumer Outcome.

"Externally Trained Models" refers to transferred learnings from pre-trained models developed by a third party on external reference datasets.

“Generative Artificial Intelligence (Generative AI)” refers to a class of AI Systems that generate content in the form of data, text, images, sounds, or video, that is similar to, but not a direct copy of, pre-existing data or content.

“Inherent Risk” refers to an assessment of risk that is undertaken before considering risk-mitigation strategies or internal controls.

“Internally Trained Models” refers to models developed from data internally obtained by the company.

“Machine Learning (ML)” refers to a field within artificial intelligence that focuses on the ability of computers to learn from provided data without being explicitly programmed.

“Material Financial Impact” refers to costs or risks that significantly affect, or would reasonably be expected to have significant effect, on the debt and financial obligation limits prescribed by Federal or State laws and regulations.

“Model Drift” refers to 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.

“Neural Network Models” refers to machine learning models that mimic the complex functions of the human brain. These models consist of interconnected nodes or neurons that process data, learn patterns and enable tasks such as pattern recognition and decision-making, including but not limited to: Single/multi-layer perceptrons/fully connected networks (MLPs/FCs), Deep Learning (DL), Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), Long Short-Term Memory Neural Networks (LSTMs), Sequence Models, Large Language Models (LLMs), and Reinforcement Learning Models (RLs).
Alternate definition suggested by CAI: “

“Predictive Model” refers to the mining of historic data using algorithms and/or machine learning to identify patterns and predict outcomes that can be used to make or support the making of decisions.

“Residual Risk” refers to an assessment of risk after considering risk-mitigation strategies or controls.

“Support” refers to an AI System that provides information but does not suggest a decision or action to a human.

“Third Party” for purposes of this Tool means an organization other than the insurance company that provides services, data, or other resources related to AI.

“Validation Method” refers to the source of the reference data used for validation, whether Internal, External, or Both.

“Use Case” refers to a description of a specific function in which a product or service is used.

Operations

Marketing - Examples: market research, target advertising, market/coverage expansion, customer segment target marketing, demand modeling, agent/broker incentive plans, up/cross-selling.

Underwriting - Examples: Policy/coverage acceptance or eligibility, company placement/tiering, schedule rating, decisions based on telematics/UBI, report ordering, retention modeling, inspections, anomaly detection.

Ratemaking/Pricing - Examples: Development of overall/base rates, expense/loss loadings, estimation of trends and loss development, development of manual rating factors, tiering criteria, insurance credit scoring, territory boundary definitions, numeric/categorical level groupings and interactions, individual risk rating, telematics/UBI, price optimization, schedule rating factors.

Claims - Examples: Claim assignment, triage/fast-tracking, individual/bulk claim reserving including loss estimation, imaging/video analysis, fraud detection, litigation, estimation of closure rates, salvage/subrogation, examination/report ordering.

Customer Service - Examples: Agent/broker/internet/customer service interaction (chatbots), online/smart phone apps, loss prevention/risk mitigation advice, payment plans, complaints.

Other: Cyber Security, Strategic Operations, Reserving, Investments, Capital Management, Financial Reporting, Reinsurance, Legal, Legal Exposure, Reputation Risk.