INSURANCE FOR A BETTER WORLD

OECD-OJK Roundtable on Leveraging Technology for Risk Assessment and Risk Reduction in Insurance

Addressing emerging risks from technology adoption

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Regulation of AI in Insurance

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Findings in terms of how regulatory frameworks should (and should not) be adapted to address the adoption of AI in insurance

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Background and objectives

CONTEXT

- **AI's impact and promise**: Artificial Intelligence is starting to transform the insurance industry. It offers the potential to reduce protection gaps, provide personalised services, and improve efficiency. However, the adoption of AI also poses potential risks such as unfair discrimination and bias.

- **Regulatory initiatives and challenges:** Growing attention on AI, particularly with the emergence of tools such as ChatGPT, has led to various regulatory initiatives, some insurance-specific and others cross-sectoral

RESEARCH OBJECTIVES

- Explain how AI is used in insurance – assess the aspects that are novel compared to insurance without AI
- Elaborate on perceived related risks
- Examine how existing insurance regulation addresses those risks
- Map emerging AI regulation
- Highlight the importance of innovation-conducive regulation to policymakers
- Develop recommendations for policymakers who are unfamiliar with insurance

TARGET AUDIENCE

- Policymakers and regulators

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How AI is starting to transform the insurance value chain

Use cases of Artificial Intelligence across the insurance value chain

	Marketing	Product development	Sales & Distribution	Underwriting	Customer service & policy admin	Claims management
Use cases	• Predictive analytics • Automated demand analysis	• Analysis of customer preferences • Product innovation	• Tailored product advice • Sales process automation	• Image analysis • Natural Language Processing (NLP)	• Predictive analytics • Voice recognition • NLP	• Prediction of claim patterns • Image recognition • Anomaly / fraud detection
Benefits	• *New marketing channels* • *Tailored outreach*	• *Accurate pricing* • *Tailored products* • *Rapid product adjustment*	• *Reducing sales costs, thus enhancing affordability*	• *Improved quality/speed of risk analysis, including complex risks*	• *Personalized service* • *Improved customer engagement*	• *Accurate claims assessments* • *Fraud reduction* • *Faster responses*

Source: Geneva Association, 2023 - adapted from Eling, 2019; Accenture, 2018

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Identifying and addressing AI risks and concerns

Addressing AI risks and concerns

	Lack of transparency & explainability	Discrimination, bias & lack of fairness	Unaffordability and exclusion
Risks	• AI algorithms are considered black boxes due to their complexity • Difficulty in explaining causation and the role of each variable used and, therefore, in checking whether algorithms are fair and unbiased	• Bias, errors, or inaccuracies in AI outcomes can lead to unwanted correlations and indirect discrimination • Difficulty in manually assessing numerous rating factors and their combinations in AI-driven insurance • Tension between correlations found and actuarial fairness/acceptability	• AI-enabled granularity of risk assessments leads to a shift away from solidarity-based risk pools towards individualized pricing • Some customers may benefit, while others face higher premiums • In the extreme, certain customers may become uninsurable
Insurer approaches	• *Define use case specific transparency requirements, including on data sources feeding into AI models* • *Implement audit trails for AI models*	• *Develop methodologies to detect and prevent unwanted correlations in AI models* • *Limit the number of rating factors used by AI models*	• *Establish guidelines and policies around high-impact AI systems (such as those making underwriting/pricing decisions)* • *Build specific governance structures to address AI risks and dilemmas* • *Develop AI training programs for employees*

Source: Geneva Association, 2023

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Existing regulations relevant for AI in insurance

Aspect	Regulation/article	Description
Bias, discrimination & fairness	Racial Equality Directive Equality Act Several state level statutes	Prohibits discrimination based on ethnic origin
	Gender Directive Equality Act Several state level statutes	Prohibits gender discrimination
	GDPR Art. 5 UK GDPR Art. 13-21 California Consumer Privacy Act (CCPA)	Ensures lawful, fair, and transparent use and processing of personal data
	IDD Art. 20 NAIC Unfair Trade Practices Act Measures for the Regulation of the Internet Art. 17	Requires insurance products to meet consumer demands and needs
Transparency and data governance	IDD Art. 20	Requires insurers to provide customers with objective product information
	GDPR Art. 5, 13, 14 Personal information Protection Law Art. 5	Mandates openness and transparency in data usage and processing
	GDPR Art. 5 Gramm-Leach Bliley Act; Fair Credit Reporting Act; CCPA	Outlines principles related to data processing, including data adequacy, relevance, and accuracy
	GDPR Art. 30 UK GDPR Art. 35	Requires maintaining records of processing activities
Human oversight	GDPR Art. 22 Personal Information Protection Law Art. 24	Provides the right to object to automated decision-making
	S-II Directive Art. 41 Insurance Law Art. 5	Requires an effective system of governance for sound and prudent management of the business

Source: Geneva Association 2023

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Recommendations

How should regulators and supervisors balance the need for adequate consumer protection while providing an enabling environment conducive to innovation?

- **Focus on customer outcomes:** Strike a balance in data governance, allowing for useful individual rating factors in risk assessment without undermining fairness
- **Definition of AI:** Limit the definition of AI to self-learning applications, such as machine learning, to avoid overregulation of established practices.
- **Leverage existing regulation:** use current technology-neutral laws as a starting point and issue guidance to address AI-specific contexts.
- **Principles-based regulation:** the fast-changing nature of AI requires a framework that is adaptable and can manage AI risks as AI evolves.
- **Specific characteristics of AI in insurance:** Due to the reversibility of decisions and existing tight regulatory frameworks, cross-sectoral regulation, treating AI in insurance as high-risk, is less effective and needed for insurance compared to much less regulated sectors.
- **Causality to correlation shift:** recognize the potential benefits of AI's ability to identify patterns and correlations.

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Thank you for your attention