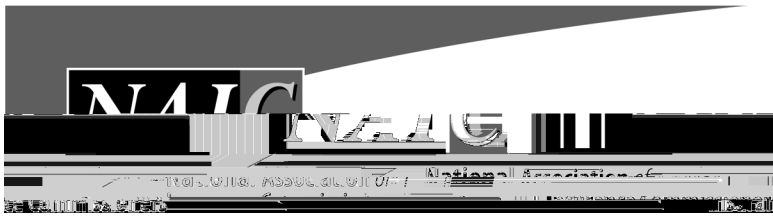


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Purpose

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IMPORTANCE Life insurance companies are increasingly utilizing “big data” factors and automated systems, including artificial intelligence and machine learning, in their underwriting systems. These developments could elevate the risk of unfair discrimination against protected classes because some factors, such as criminal histories and credit scores, may be inaccurate or reflect historical and systemic biases, and because an automated system may substitute certain big data elements for prohibited characteristics. The majority of current regulatory approaches do not address this risk. A governance structure is needed that is based on industry-wide standards, including certification of AI-enabled underwriting systems, and periodic audits of the system’s output.

OBJECTIVES To describe the current regulatory infrastructure relating to unfair discrimination in insurance underwriting, particularly with respect to life insurance, and how it may become strained with the increasing use of “big data” and AI-enabled systems. To propose a governance infrastructure to address the novel data sources, systems, and related risks.

SUMMARY Insurers are increasingly using novel data sources and automated systems for risk classification and underwriting. Automation has improved operational efficiencies in the accuracy and speed of underwriting, but it also raises new considerations relating to unfair discrimination. In this paper, we review the current regulatory structures relating to unfair discrimination and suggest they are insufficient to police the myriad new big data sources available. Moreover, AI-enabled systems increase the risk of unfair discrimination if a facially neutral factor is utilized by an automated system as a proxy for a prohibited characteristic. Furthermore, many insurers rely on

AI-Enabled Underwriting Brings New Challenges for Life Insurance: Policy and Regulatory Considerations

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Abstract

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Section 1. Underwriting Algorithms and AI Change the Landscape in Life Insurance Risk Classification and Underwriting

AI-Enabled Underwriting Brings New Challenges

*Model Regulation of Unfair Discrimination in Life and Health Insurance
on the Basis of Physical or Mental Impairment*

AI-Enabled Underwriting Brings New Challenges

impacts

Section 4. A Proposed Framework for Addressing Risks of Unfair Discrimination

State Insurance Regulation: History, Purpose and Structure
https://www.naic.org/documents/consumer_state_reg_brief.pdf

Journal of Business Ethics, 160

for banks and bank supervisors
<https://www.bis.org/bcbs/publ/d415.htm>

Implications of fintech developments

AI-

AI-Enabled Underwriting Brings New Challenges

Journal of Insurance Regulation

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Cummins, J. David and Richard A. Derrig, eds., 1989. *Financial Models of Insurance Solvency*, Norwell, Mass.: Kluwer Academic Publishers.

Manders, John M., Therese M. Vaughan and Robert H. Myers, Jr., 1994. “Insurance Regulation in the Public Interest: Where Do We Go from Here?” *Journal of Insurance Regulation*, 12: 285.

National Association of Insurance Commissioners, 1992. *An Update of the NAIC Solvency Agenda*, Jan. 7, Kansas City, Mo.: NAIC.

“Spreading Disaster Risk,” 1994.

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