

EU-US INSURANCE DIALOGUE PROJECT

INNOVATION AND TECHNOLOGY WORKSTREAM

June 2023 Summary Report

I. Introduction and Background

The EU-US Insurance Dialogue Project's Innovation and Technology Workstream was created to further explore topics relating to big data and artificial intelligence/machine learning (AI/ML) including the appropriate regulatory framework for monitoring an insurance company's governance of complex models using big data and ML and the impact of these practices on historically underrepresented groups. Further, the workstream shared experiences relating to the use of supervisory technology (SupTech) as a regulatory tool for both prudential and market conduct supervision. Lastly, brief high level updates were exchanged to flag other key technology and innovation developments in the US and EU markets as relevant (including cybersecurity developments).

II. Summary of Discussed Topics

A. Big Data/AI/ML

1. Regulatory and supervisory developments

Supervisors in the US and EU recognize big data and AI/ML is shaping the insurance marketplace of today and the future with data driven business models seen throughout all the stages of the insurance value chain. In the discussions at the workstream it was clear that while the use of complex algorithms and AI/ML can provide new opportunities for businesses and consumers across the insurance sector in the US and EU, it also raises new challenges such as consumer privacy and the need to protect against both intended and unintended unfair discrimination that may result from the use of algorithms. Supervisors in the US and EU are working to enable stakeholders to harness the benefits of AI innovation, but also working to ensure that adequate governance and risk management frameworks are in place enabling the use of trustworthy AI systems. The discussions within the workstream illustrated common challenges and opportunities and how these are being addressed from a regulatory perspective in both the US and EU.

In the EU, in April 2021, the European Commission presented its legislative proposal for harmonized rules on AI (commonly referred as the AI Act) and the potential implications for the insurance sector; the proposal, which is under legislative review, to introduce new governance and risk management rules for the use of AI in different sectors of the EU economy

The AI Act also foresees the establishment of dedicated AI sandboxes where stakeholders would be able to test innovative AI solutions in a controlled environment.

In 2022, EIOPA was monitoring the legislative process of the AI Act. More particularly, EIOPA shared its views on the AI Act with the European legislators², where it welcomed the objectives of the legislative proposal but considered that the use of AI in insurance would be better regulated at the sectorial level due to sectorial specificities.

Moreover, in the context of the recently created Digital Finance Academy³, EIOPA has also developed trainings for supervisors on digitalisation matters including AI⁴ discussed with stakeholders AI governance and risk management measures.

Further, the Report from EIOPA's Consultative Expert Group on Digital Ethics in Insurance had developed six AI governance principles to promote ethical and trustworthy use of AI in the European insurance sector. The governance principles are largely in line with the governance and risk management requirements of the AI Act, as well as with the ones developed by other organisations such as the OECD and the NAIC.⁶ The report also includes non-binding guidance on how to apply the governance principles on concrete AI use cases in insurance.

In early 2023, EIOPA launched a digitalisation market monitoring survey⁷, which, among other things, will gather further evidence on the use of AI in the European insurance sector. EIOPA will use the evidence gathered from this survey to develop further supervisory and regulatory tools.

From a national perspective, some EU Member States also have national initiatives relative to AI/ML. For example, in July 2021, BaFin and the Deutsche Bundesbank published a consultation paper entitled "Machine learning in risk models – Characteristics and supervisory priorities."⁸

In the US, the NAIC discussed its ongoing work on assessing the industry's use of big data and AI/ML, what goes

activities and evaluating existing regulatory frameworks for overseeing and monitoring the use of big data and AI. The

B. Suptech as a Regulatory Tool

Suptech is the use of innovative technologies by financial authorities to support their work such as big data, AI/ML and other new technologies in prudential and conduct supervision.

forward, the NAIC plans to continue developing additional dashboards for use in solvency monitoring as well as provide standardized datasets and templates for end users to access in building their own customized dashboards and visualizations.

Federal Reserve Board (Board) representatives discussed the Board's use of machine learning in the supervisory process. ~~Sept~~ is a high priority initiative across the Federal Reserve system. To date, most of the Board's efforts have been focused on bank supervision. For example, a tool that utilizes natural language processing (NLP) to summarize and extract information from unstructured data reported by supervised bank holding companies is routinely used by Federal Reserve examiners. Within insurance, the Board is initially focusing on the potential to use ~~ML~~ to estimate loss reserves. The Board has worked to implement ~~shedi~~ model (DeepTriangle) that uses deep neural networks to estimate loss reserves from publicly available information.

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use of a chat tool to respond to frequently requested information from insurance intermediaries and applicants. Finally, the NAIC touched on NIPR's Attachment Warehouse, which is a tool used by US state insurance regulators to electronically receive, store, and share licensing related documents. The Attachment Warehouse eliminates the need for applicants to email or fax documents to insurance regulators.

While a long term project, the NAIC referenced the development of recommendations for the incorporation of AI in the NAIC Market Information Systems. These recommendations focus on reviewing the collection of existing data, employing more rigorous statistical techniques to assess predictive accuracy of current analytical tools, assessing the ways AI could improve analysis, and exploring the potential collection of additional data suitable for AI techniques.

In the area of market conduct EIOPA explained that in the past it had experimented with an NLP tool to monitor the sentiment of comments about insurance made by consumers in social media. While the tool provided some interesting results and was used to support its supervisory work,¹⁵ EIOPA eventually decided to stop using it given that it had some accuracy issues, for instance regarding the accuracy of the translations of different languages spoken in the EU, or to detect the irony of certain comments made in social media platforms.

Currently, EIOPA is developing a tool to supervise the unlinked life insurance market by analyzing the key information documents (KID) of unlinked life insurance products sold in the EU. In collaboration with a third party provider, EIOPA will use a web scraping tool to create a database / repository of KIDs which insurance undertakings are required to publish on their websites. Subsequently, the information from these standardized information documents will be processed and analyzed with the help of NLP tools.

It is worth noting that, once established, the upcoming European Single Access Point (ESAP) is expected to facilitate access to the KID since it will provide a centralized access to publicly available information of relevance to financial services, capital markets and sustainability.

C. Cybersecurity

While not outlined as a specific area for focused depth discussion for the Workstream, brief high-level updates relating to cybersecurity were also exchanged by workstream members. The NAIC highlighted the creation of the Cybersecurity Working Group which will, among other things, focus on creating a Cybersecurity Incident Response Plan to assist US regulators in addressing cybersecurity incidents affecting licensed insurance entities. EIOPA noted its publication in September 2022 of a request for comments on a potential federal insurance response to catastrophic cyber incidents.¹⁷

2023 of the National Cybersecurity Strategy, one of the strategic objectives of which is to explore a potential federal insurance response to catastrophic cyber incidents to US critical infrastructure.¹⁸

EIOPA highlighted the 2020 Guidelines on ICT security and governance¹⁹ applicable as of July 2021. EIOPA indicated its cooperation with Member States, the European Commission, and other stakeholders on the preparation for the adoption of the Digital Operational Resilience Act (DORA)²⁰ introducing new ICT security and governance requirements in the EU financial services sector

III. Conclusion and Next Steps

A common theme emerging in both the US and the EU is the implementation of a risk-supervisory approach over insurers' use of AI/ML, which will allow for the growth of insurers' use of AI/ML while providing the appropriate level of consumer protection. Further, US and EU supervisors agreed on the importance of further discussing other relevant innovative developments taking place in the insurance sector. Workstream members therefore agreed to the following during 2023/2024:

- Discussing ongoing regulatory developments affecting insurers' use of big data AI/ML and the importance of developing adequate governance, risk management, and controls by insurers
- Discussing regulatory and supervisory initiatives to enhance the digital operational and cyber resilience of insurers;
- Discussing developments in the area of open insurance, both private led and public led initiatives; and
- To the extent time permits and new developments emerge, continuing to exchange on other initiatives developed by supervisory authorities in the EU and the US area of innovation and digital finance, as applicable.

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¹⁸ White House, Fact Sheet: Biden-Harris Administration Announces National Cybersecurity Strategy, news release (March 2, 2023), <https://www.whitehouse.gov/briefing-room/statements-releases/2023/03/02/fact-sheet-biden-harris-administration-announces-national-cybersecurity-strategy/>.
¹⁹ https://ec.europa.eu/finance/press_corner/2020/06/2020_guidelines_on_ict_security_and_governance_en.
²⁰ https://ec.europa.eu/finance/press_corner/2023/03/2023_dora_en.