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## AAE NOTE: THE AI ACT SETS OUT THE WAY ARTIFICIAL INTELLIGENCE IS TO BE USED IN THE EU

The publication of the AI Act is welcome news for the actuarial profession. This new horizontal piece of legislation guides the EU forward in the safe use of AI. Moreover, it is expected that, similarly to GDPR, it shall influence practices around the world. Although the tool carries the name of 'AI Act', it will actually be an EU-wide regulation, meaning that it will be directly applicable as EU legislation to all member states.

In April 2021, the EU Commission published the first proposal of the AI Act. Since then, multiple revisions, and discussions took place. The provisional agreement took place on 8th of December 2023. The regulation passed through the final EU Parliament's legislative voting process on the 13th of March. It is expected that the adoption will be one month after, with the necessary time to publish it in the EU Official Journal. The AI Act will be in force 20 days after its publication. There will be an implementation period of 36 months while requirements for AI models will start to apply after one year.

It is noted that there is high interdependence between various regulations concerning AI (e.g., the AI Act, Product Liability Directive, and AI Liability Directive), and this could potentially increase the complexity of management and implementation. This complexity is exacerbated further by the rapid developments and changes in the field of AI (e.g., Generative AI applications).

The aim of the AI Act is to build a risk-based approach guaranteeing that fundamental rights are respected in the use of AI. The regulation lays down a uniform legal framework for the development, placing on the market, and putting into service of artificial intelligence systems.

While the regulation addresses the placing on the market of AI systems, it also aims to support innovation, respect freedom of science, and avoid undermining research and development activity. The regulation does not intend to affect research and development activities on AI systems or models prior to being placed on the market.

In order to navigate the regulations appropriately, the AI Act also introduces different responsibilities assigned to certain roles. On one hand, there is the provider or developer of a system being offered to the market. Some criteria that will apply here involve technical documentation, logging of the AI system's functioning, and registration of the system in the EU's central database. On the other hand, there is the user of an AI system. Within actuarial practices, an entity can create and further use a model with the aim of achieving professional objectives. In such cases, responsibilities will include data governance, logging of the system, continuous monitoring of the system, and ensuring human oversight.

There are certain types of AI systems which will be totally prohibited. These include systems that make use of manipulative or deceptive techniques, exploit vulnerabilities, or perform biometric categorisation and social scoring, leading to detrimental or unfavourable treatment of certain natural persons. Also, real-time remote biometric identification systems are prohibited. Moreover, there will be rules for designing and using general purpose AI systems (think of some applications of Large Language Models) and foundation models.

Some AI applications are considered high-risk systems that will require extra care. Among those, the regulation names some areas that have or can have connections to actuarial practice, i.e., AI systems for:

- risk assessment and pricing in relation to natural persons in the case of life and health insurance,
- biometric categorisation according to sensitive or protected attributes or characteristics, and
- evaluating the creditworthiness of natural persons or for establishing their credit score (excluding detecting financial fraud).

Special requirements for high-risk AI systems include:

- a risk management system as a continuous iterative process planned and maintained throughout the entire lifecycle of the system,
- data governance fulfilling specified quality criteria, which also relates to the fundamental rights assessment as outlined by the EU Charter of Fundamental Rights,
- technical documentation demonstrating that the high-risk AI system complies with the requirements of the regulation,
- automatic recording of events over the duration of the lifetime of the system,
- sufficient transparency to enable deployers to interpret the system's output,
- need for oversight of the system during the period the system is in use, including incident reporting, and
- need to achieve an appropriate level of accuracy, robustness and cybersecurity, and consistent performance through the system's lifecycle.

For the actuarial profession the main message is that a lot of care will be needed when designing AI systems to be utilised in the market. In underwriting and pricing applications actuarial input is central. Especially in life and health insurance, the new regulation necessitates a lot of care and actuarial oversight. Actuaries can also use AI in their practice when it is not directly related to the client interface of the entity. In such areas the requirements of the new AI Act are milder, but to play it safe actuaries should always carefully anonymise or at least pseudonymise the data they are using.

While the risk-based approach is the basis for a proportionate and effective set of binding rules, it is important to recall the "Ethics Guidelines for Trustworthy AI" developed in 2019 by the independent High-Level Expert Group on AI (HLEG) appointed by the Commission. In those Guidelines the HLEG developed seven non-binding ethical principles for AI which should help ensure that AI is trustworthy and ethically sound. The seven principles include: human agency and oversight, technical robustness and safety, privacy and data governance, transparency, diversity,

non-discrimination and fairness, societal and environmental well-being, and accountability. Without prejudice to the legally binding requirements of this Regulation and any other applicable Union law, these guidelines contribute to the design of a coherent, trustworthy, and human-centric Artificial Intelligence system, in line with the Charter and with the values on which the Union is founded.

Especially in life and health insurance the new regulation puts heavy emphasis on governance, documentation, transparency, and interpretation of the output of the AI systems that are utilised. Based on their practice standards, actuaries are required to apply care in their work and the models that they employ, and this was the case even prior to the new AI regulation. Actuaries can, with their experience, play a prominent role in the explainability of the systems and generate prerequisites for the transparency and understandability of AI systems. The actuarial profession is uniquely positioned and perfectly accustomed to playing a central role in the implementation of the new regulation, based on its expertise in bringing Solvency II and IFRS17/9 to life, as well as on its expertise in risk management, compliance, model validation, data governance and quality.

The Commission is also establishing a new institution called the AI Office. This body will be the centre of AI expertise and form the foundation for a single European AI governance system, while aiming to ensure that AI is safe and trustworthy. The AI Office aims to collaborate with wider expert community through dedicated expert groups. The AAE is looking forward to good co-operation with the AI Office, regulators, and supervisors, with the aim of assisting in the sound implementation of the new horizontal regulation within insurance and financial services.

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