

The role of the AF in applying responsible AI

Initial ideas by Gábor Hanák

This document includes high level principles for a discussion during the Paris meeting of the AAE's AI-DS WG in September on eventual changes to the role of the Actuarial Function (AF) encompassing duties in the governance of (high-risk) AI systems in (re-)insurance undertakings. The initiative to this discussion came from EIOPA with openness to changes in legislation to broaden the role of the AF. Governance of (high-risk) AI systems could include wider roles than just those connected to technical provisions - they could encompass not only issues related to S II but also to the IDD or other roles actuaries are tasked under European legislation. The purpose of this document is not to present a firm and crystallised opinion but to start a fruitful discussion on the topic.

Two separate and hugely different scenarios, (A) and (B) below, are considered about the scope. Another two scenarios may be raised about which legal document, (1) and (2) below, to amend. Which of them the WG would like to propose to the AAE leadership as the AAE's position, should be thoroughly discussed at the meeting.

- A. **Limited roles.** The roles would be limited to the existing scope of the AF; i.e. tasks related to the technical provisions (and to some extent to: underwriting, reinsurance, contribution to the risk-management system). Under this scenario, the AF would be responsible for the same overall tasks as currently; however, the AF would explicitly be tasked with the role of applying responsible use of high-risk AI systems related to the technical provisions (and the auxiliary tasks).
- B. **Comprehensive roles.** The roles of the AF would include all tasks for the (re)insurance undertaking to contribute to governance of the responsible use of high-risk AI systems across all facets of the undertaking.
 - 1. Amend the S2 **Directive**. This may be a cleaner approach, but it is more difficult and time consuming and we should not expect that the Directive will be open in the coming few years.
 - 2. Amend the S2 **Delegated Regulation**. An alternative to this could be, although probably legally questionable, that some EIOPA guidelines will include the principles (but that route is not explored here).

While alternatives 1 and 2 are kind of endpoints and either of them could be the longer-term goal, there are possible initial steps leading to either direction or a direction in between these two. One suggestion could be to position the "Limited role" as a pragmatic first step, while leaving open the option to broaden the AF's

role over time as supervisory practice develops. It seems clear that EIOPA has an ear to ideas of expanding the role of the AF. The AAE could thus try to encourage EIOPA into publishing its opinion or even a supervisory statement on the use of the AF in the governance of (high-risk) AI systems. This could lead to initiatives of legislative changes in the longer term.

Note: this paper is, to some extent, stems from the work-in progress and still evolving document of the IAA's AI Task Force titled Artificial Intelligence Governance Framework¹.

What would be considered as 'Responsible AI Principles'?

The key is to apply an appropriate governance framework for all processes of any high-risk AI system. It may include the following elements (to be discussed – not an exhausting list):

- Appropriate roles and responsibilities (these apply only under the Comprehensive scenario)
- Appropriate knowledge (literacy) of AI (for all contributors)
- Appropriate data quality, privacy and security with special attention to collecting and preparing data, using data for training
- Appropriate assumptions and methodology
- Appropriate reliance on external models, if any
- Appropriate model governance
- Appropriate process management (i.e. developing, implementing, using, monitoring, assessing related risks, amending and retiring elements of the AI system)
- Appropriate human oversight ('human in the loop')
- Appropriate internal and external communication
- Transparency and explainability / interpretability of the models
- Fairness (no bias, no discrimination) of the outcome
- Accountability of the contributors
- Appropriate collaboration among the contributors
- Appropriate documentation

Note that although the AF is not responsible for pricing, yet it plays a critical role in the (balance between prices and) benefits for contracts with future discretionary benefits through the coordination of the calculation of technical provisions. The determination of such benefits may use AI approaches and

¹ The paper has been exposed for consultation to IAA member associations; comments have been received and mostly processed. However, the updating process has not yet been completed and the responsible bodies of the IAA have not yet approved the document for publishing as an IAA paper.

therefore would be subject to Responsible AI principles. Also note that, for the insurance business, only the “AI systems intended to be used for risk assessment and pricing in relation to natural persons in the case of life and health insurance” are classified by the AI Act as high-risk AI systems.

Based on the above considerations and recognizing that the EU’s AI Act includes provisions requiring adherence to the above Responsible AI Principles², the AF’s roles can be relatively easily described; see below. These straightforward routes should be challenged and discussed (before or) at the WG meeting.

Roles that could be tasked to the AF for the purpose of applying ‘Responsible AI Principles’ (the messages below try to capture the main principles, and they are not designed to be legally precise)

Scenario (A1) – Limited role; by the Directive

Paragraph 1a is inserted into Article 48 with the following message:

“When carrying out the tasks in paragraph 1, the actuarial function shall be responsible for complying with the provisions of the AI Act that aim at applying the Responsible AI Principles.”

Those parts of the AI Act that are considered relevant for applying the Responsible AI Principles should be clearly identified.

This might be considered superfluous as the AI Act must be complied with at any rate. However, that compliance responsibility would be placed, in the first place, on the AF (although the ultimate responsibility should be borne by the AMSB).

Scenario (A2) – Limited role; by the Regulation

Subparagraph (i) is inserted into Paragraph 1 of Article 272 with the following message (which is not much more than saying that legislation needs to be followed):

“ensure that when carrying out the tasks in subparagraphs (a) to (h), the provisions of the AI Act that aim at applying the Responsible AI Principles shall be complied with.”

² This statement is based on my quick analysis of reviewing the AI Act for each of the above principles.

Scenario (B1) – Comprehensive role; by the Directive

Subparagraph (j) is inserted into Paragraph 1 of Article 48 with the following message (which is substantially stronger than the previous alternative with oversight and control):

“provide oversight and control that the insurance or reinsurance undertaking complies with the provisions of the AI Act that aim at applying the Responsible AI Principles.”

Scenario (B2) – Comprehensive role; by the Regulation

I do not think that introducing a comprehensive role (i.e. the one described in scenario (B) above) for the AF would be possible by the Regulation without amending the Directive. This opinion may be challenged though. Also EIOPA has tools mentioned above that could here (and also in A2 and B1) be the initial steps towards more extensive changes.

Maybe it could also be said that even today there is nothing prohibiting undertakings from using the AF in AI governance. In the meeting Anani talked of his company already acting like this.

Finally: I think one important issue are the fit&proper requirements for the AF holder. If the role of the AF is extended to the governance of high-risk AI systems in (re-)insurance undertakings this clearly adds to what is required from the AF holder in the fitness area. Is the AAE ready to propose an extension of the role which would also mean additional requirements for current AF holders? Can we even commit to the idea that all qualified actuaries are in the future fit even in the area of governance of the use of high-risk AI systems? These are absolutely important, key questions and we, when we discuss the matter at the AI-DS WG, should agree what to propose to the AAE leadership (the ProfC, the Board?); one of the issues is: are we (the AAE) and the AAE Member Associations (and their Qualifying Actuaries) ready for taking on this extended role?