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DIGITAL RESPONSIBILITY AND THE ROLE OF ACTUARIES

Check Against Delivery
Seul le texte prononcé fait foi
Es gilt das gesprochene Wort

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Ladies and gentlemen

It's a pleasure to join you today in your conference to talk about digital responsibility and the role of actuaries.

I would have preferred to be with you in person, but thanks to our trust and reliance on digital technology, we can maintain communication in these exceptional circumstances.

We can do this because we live in a digital society.

And nothing has proved this more than the outbreak of COVID-19.

Offices, schools, shops and restaurants have all been forced to close to implement 'social distancing' measures.

And how has society reacted?

People have 'gone digital'. Even the most reluctant have done so either out of curiosity or necessity.

Different apps are essential for keeping in touch. You can hold meetings online, have virtual drinks parties, and chat with you family and friends. Online shopping has never been more popular and instead of eating out, people are ordering take away through apps installed on their mobile phones.

Working from home has also become the new normal for many organisations, including EIOPA. And it is no different for insurance companies and intermediaries. Many of them have closed their physical offices and now communicate with their customers by digital means during the outbreak.

And, of course, the debate about data and digital ethics is very topical during this challenging time.

To stop the spread of COVID-19, public health authorities need to identify, track and isolate those citizens that may have been exposed to the virus. This has led a debate around 'social tracing' and how far governments should go, without becoming a 'Big Brother is watching you' society.

It's true that contact tracing can certainly save lives, but it can also have a direct impact on people's civil rights and privacy. So to protect these rights, this type of information needs to be handled in a responsible manner.

This brings me to the theme of my speech: the importance of digital responsibility in insurance. And today, I will cover three topics:

- The state of play of Big Data analytics in the insurance sector

- EIOPA's work on digital ethics; and

- The role of actuaries in the digital age.

I.   What is going on? The state of play of BDA in the insurance sector

Let's start with looking at where we are with Big Data Analytics in the insurance sector.

First of all, we are seeing an increasing availability of data.

According to the European Commission, the volume of data produced in the world is expected to grow from 33 zettabytes in 2018 to 175 zettabytes in 2025 i.e. it will multiply by 5 during this time. This has a direct impact on the insurance sector, where data processing has always been at the very core of insurance business.

Last year, EIOPA published a thematic review on Big Data Analytics. The review showed how traditional data sources used in insurance such as demographic data or exposure data are increasingly combined – but not replaced – with new internal and external data sources, like online media data or data from connected health devices or cars. This then provides greater granularity and frequency of information about consumer's characteristics, behaviour and lifestyles.

We also have more powerful algorithms and data storage capacity.

The increasing availability of data is combined with the greater computing power, data processing and cloud computing storing capacity offered by new technologies.

This makes for a more frequent and more effective use of machine learning.

Based on the research for our thematic review, we found that 31% of participating European insurance undertakings were using machine learning

and another 24% were at a proof of concept stage. Today, in some jurisdictions the level of adoption in the insurance industry is already 100%, higher even than in the banking sector.

The Big Data Analytics thematic review also showed that the use of machine learning is taking place across the whole insurance value chain – from improved product design and development processes to more accurate underwriting techniques or more efficient claims management and fraud detection procedures.

The developments present both opportunities and challenges.

Our thematic review concluded that there are many opportunities for both the insurance industry and for consumers.

Digital innovation helps reduce operational costs, frictions and bottle necks in the production and delivery of insurance products and services. It increases efficiency and competition in the markets, and broadens access to financial services. Thanks to innovation consumers can also benefit from a wider range and increasingly tailored insurance products and services.

But there are also risks.

They are not necessarily new risks, but their significance is amplified in the context of Big Data Analytics. This is particularly the case regarding ethical issues with the fairness of the use of data as well as regarding the transparency, performance, explainability and auditability of certain Big Data Analytics tools such as artificial intelligence or machine learning in insurance.

II. Role of EIOPA: EIOPA's Expert Group on Digital Ethics in Insurance

EIOPA is working to address these issues.

Through our Consultative Expert Group on Digital Ethics in insurance we aim to provide guidance to the market in the operationalisation of digital ethics principles for insurance.

We are not reinventing the wheel, or working in isolation, but rather we are looking at the work done by the Commission on artificial intelligence and other

international standard setting bodies and adapting them to the specificities of the insurance sector.

We have set up three workstreams within the group – all chaired by actuaries, I should add – to address:

- **Fairness and non-discrimination** – these are issues such as data bias and other fairness issues / grey areas / dilemmas that arise with the use of digital technologies in insurance.

- **Transparency and explainability** – preventing "black-boxes" and ensuring accountability by being clear on what data is be used, how and for what purposes

- **Governance** – ensuring adequate levels of human oversight, security and resilience of machine learning models

Given the principle of proportionality, it is important to follow a risk-based approach and adapt the governance requirements like the level of 'human oversight' or 'explainability of algorithms' to concrete use cases and to specific stakeholders, for example supervisors, consumers and auditors.

This is because the explainability requirements for pricing and underwriting models do not necessarily need to be the same as for those processes automating back office operations. And again the information that needs to be provided to consumers is different to what is relevant for supervisors or auditors.

Any resulting framework should therefore take into account the new realities of the big data landscape. It should also be forward-looking and flexible so it can adapt to an ever-changing environment.

This last point is particularly important. The COVID-19 outbreak is showing just how attitudes change. While track and trace apps might once have seemed both unimaginable and unacceptable in Europe, perceptions are changing as our circumstances change.

But data ethics and data privacy are complex topics and the right answer is not always clear. Our group on digital ethics is working on how to find the right balance between enabling financial innovation and safeguarding consumer

protection and financial stability. Consumer outcomes should always come first. But it is a balance and we should also be willing to take some risk by means of acknowledging the positive aspects of innovation.

III. Role of Actuaries in the digital age

So what is the role of actuaries in all this?

Well, actuaries have always played an important part in ensuring effective systems of governance.

And in fact, the role of actuaries becomes even more important than ever in the digital age.

Today, the insurance companies have to deal with huge amounts of data and ever changing data analytics techniques.

Actuaries have deep expertise in data quality and data analytics and can therefore provide a measure of quality assurance through expert technical actuarial advice at a time when this is needed more than ever.

Furthermore, because of their strong analytics capabilities, actuaries can play an important role in new digital ecosystems, providing expertise on predictive-modeling and optimization to support quicker and smarter business risk decisions across all industries.

These are challenges that directly affect the actuarial profession.

What this means is that actuaries will need to adapt their skills through continuous training and learning processes and also learn to collaborate with new professionals starting to work in the insurance business.

Newly graduated actuaries might well have already acquired many of the skills related to new technologies at university, but they too will have to be ready to continue to learn. Because technology evolves and circumstances change. We are seeing now that those who can adapt are better able to cope in these difficult and uncertain times.

Look at how we are adapting to online conferences!

So I would say that for actuaries, new and experienced, it's important to remain flexible and be ready to learn new skills so that you can always play a

valued and important role in ensuring quality standards in the insurance sector and beyond.

IV.   In conclusion

Let me conclude by saying that COVID-19 is underlining what we already knew as we entered this crisis: Digital technology is here to stay and it is a great enabler. In this context, COVID-19 is likely to act as a trigger of acceleration of these significant trends.

The risks associated with digital responsibility remain and we must be sensitive to them. When we harness the power of big data, we must be sure that it is not at the detriment of consumers.

Earlier I talked about sharing our personal data to facilitate track and tracing in the fight against COVID-19. I am convinced that we will all be more tolerant to sharing our data if we know that it is treated responsibly.

So that should be our goal: to ensure that as we adopt and adapt technology, we do so responsibly.

The actuarial profession can play an important role in this. The enormous explosion in data availability in the digital economy can be an enabler to better assess risk and provide insurance solutions. Actuaries can combine data scientist skills with insurance business risk knowledge leveraging traditional concepts like mutualisation and fairness.

And in this way, you will be helping to make sure that citizens continue to have trust and confidence in the insurance sector and the insurance sector continues to serve the best interests of its customers and policyholders.

With Covid-19 the world has changed. The actuarial profession must also change.

Thank you.