

## **Position Paper**

**of the German Insurance Association**

**ID number 6437280268-55**

**on the „Draft Ethics Guidelines For Trustworthy AI”  
and their applicability to the insurance premiums use case**

### **Executive Summary**

We appreciate the discussion regarding the use of AI. The competition for ideas is an international competition. To keep up the pace, the European Commission came up with a human-centred AI-Strategy. The insurance industry supports this approach: AI must serve the human being. Thus it is of high importance to continue dealing with the questions involved, also from an ethical view.

We believe that the AI ethics guidelines might assist some companies in developing their AI strategies. However, in our view the potential use case “insurance premium” is only partly suitable. The current regulatory framework already adequately covers the relevant ethic principles and not all the stated principles and questions are applicable for an individual insurance company.

For instance, legal provisions such as Solvency II, IDD, PRIIPs or the General Data Protection Regulation (GDPR) already provide a strong framework for consumer protection. This is complemented by national provisions, such as the German General Equal Treatment Act (AGG), which is of course also applicable to the digital world.

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Indeed, our regulatory heat map below illustrates that many of the principles are already covered by multiple legal provisions:

#	Ethics principle	AGG	BDSG	CSA	GenDG	GDPR	IDD	NIS	PLD	PRIPs	SII	VAG	VAIT	VVG	
1	Accountability										✓	✓	✓	✓	
2	Data governance		✓			✓						✓	✓	✓	
3	Design for all	<i>The insurance industry as a whole contributes to broad accessibility to insurance products.</i>													
4	Governing AI autonomy					✓	✓								
5	Non-discrimination	✓			✓										
6	Respect for privacy		✓		✓	✓									
7	Respect for human autonomy		✓		✓	✓	✓			✓					
8	Robustness			✓		✓		✓	✓		✓		✓		
9	Safety								✓						
10	Transparency			✓		✓				✓	✓			✓	

Table 1: Matching of ethics principles against the main regulatory provisions in the insurance sector

## Recommendations

In order to achieve their full potential and maximum support from stakeholders, three critical success factors should be taken into consideration when further developing the AI ethics guidelines:

### 1. Take into account the existing regulatory environment

The insurance industry, as part of the financial services sector, is highly regulated. Our analysis has shown that all high-impact ethical principles are already covered by the existing regulatory framework for the insurance industry. Because legislation is generally technology-neutral, novel technologies or methods such as AI are already captured by the existing regulatory framework and supervisory authorities are continually refining their approaches regarding new technologies.

## **2. Focus on broad principles; re-consider the itemized implementing measures**

Industries and companies need to have flexibility when considering the AI ethics guidelines. This flexibility is crucial since the regulatory framework, industry practices and industry peculiarities can be very different from one industry to another.

Additionally, it should be in the discretion of the company to choose appropriate measures, tools and processes to achieve the desired outcomes. Indeed, companies will have a strong motivation to ensure reliable, fair and sustainable outcomes of their AI applications already by themselves.

Against this backdrop, the itemized implementing measures under each of the ten ethical principles appear too narrow and prescriptive. We believe that the ethics guidelines would be more effective and find broader adoption if they focused on general principles.

## **3. Ensure an innovation-friendly approach**

As the current debate shows, expectations of the potential of AI are sky-high. This concerns both the benefits but also the risks stemming from different AI applications. It is thus only natural that the discussions on the technology, use cases and political and societal consequences tend to be intertwined.

At the current stage, we believe that it is important to not overburden the technology as such with far-reaching requirements, be they voluntary or mandatory. Good practices of regulation and supervision, such as technology-neutrality, proportionality and level playing field should still be followed.

For the insurance sector, we are still mainly in the phase of active experimentation. We believe that this innovative activity should be further encouraged while ensuring high ethical and consumer protection standards by way of the regulatory system.

## Detailed assessment of the ten ethics principles

### 1. Introduction

We appreciate the possibility to take part in the dialogue process of the HLEG on Artificial Intelligence regarding trustworthy AI. We believe that responsible and trustworthy AI in insurance is already ensured: Insurers are subject to a comprehensive regulatory and supervisory framework providing high standards of consumer protection. This framework naturally covers most of the ethical principles, the HLEG places value on, since it is derived from those ethical values. Ethics constitute the foundation for the development of current legal frameworks.

The German insurance industry is subject to supervision on the European and on the national level (EIOPA and BaFin). Both EIOPA and BaFin have already increased their regulatory efforts in this field, and they have the expertise required for this purpose. Even today the regulations of the analogue world in insurance automatically apply to the digital world as well.

In the current discussion on the regulatory framework regarding FinTech, technology neutrality and the principle of proportionality have been identified as fundamental regulatory principles. The ethical guidelines for trustworthy AI should be consistent with these regulatory principles. Requirements should be proportionate to the risks involved, irrespective of the technology used. We agree that a context-dependent approach is the appropriate way. The adaptation of requirements to concrete use cases is essential. In particular, the very different risks and circumstances of the manifold uses of (weak) AI should consistently be taken into account. It is important that the guidelines provide sufficient scope for interpretation to ensure appropriate solutions for the different use cases.

Regarding the use case “Insurance Premiums” it is crucial that the proposed requirements are adequately interpreted and adapted in order to take the characteristics of insurance products and the prerequisites of effective insurance markets sufficiently into account. In particular, the interpretation of fairness should be based on the principle of risk-based pricing that is fundamental for effective insurance markets, reliable insurance cover for customers and the financial stability of insurers. We therefore encourage the authors of the guidelines to clarify that equal treatment of all human beings does not imply equal prices for all. This is in line with the European Court of Justice, which has consistently held that the principle of equal treatment requires that comparable situations must not be treated differently, and different situations must not be treated in the same way, unless such treatment is objectively justified. In private insurance, every customer pays a premium based on the risk that this person brings into

the pool of insured. Equality and fairness in insurance means, that this principle is applied to all people in the same way. This principle results in different prices for people with different risks and consequently equal prices for people with equal risks. It has to be noted that in different settings, e. g. when assessing fairness of social security systems, other approaches to equality could also be valid. The different approaches to equality and fairness should be addressed by a context-dependent interpretation of these terms. Applying different fairness concepts simultaneously to a certain application in search of solutions that are unambiguously fair for all is not appropriate. Even with new efforts to measure fairness of AI-applications with mathematical formulas, improving the fairness of applications with regard to one concept often leads to poorer results with regard to other fairness-concepts.

When looking at the specifics of the use case “Insurance Premiums” today there could be two major processes for AI: 1. Building the general tariff structure of an insurance product; 2. Individual risk assessment for applicants. For the first process AI would be mainly used to design the products, while with the second process it would decide which conditions can be offered to a potential customer with a specific risk situation. Besides these two major processes there could also be other tasks for AI-systems, e. g. steering the user interface. For all these processes the aforementioned regulation already ensures high standards of consumer protection. Most of the questions concerning fairness and non-discrimination below are already covered by these supervisory rules and special non-discrimination laws.

Currently, the use of AI is at an early stage in the German insurance industry. Risk assessment and risk segmentation using traditional actuarial methods are quite advanced and might already partly fall within the definition of AI. A sophisticated segmentation of policyholders according to risk classes has been common practice in many business lines for many years. Therefore, regarding further risk differentiation by way of novel AI tools, we believe that there will be more of an evolution of current practices than a revolutionary development.

The arguments and positions set out in the introduction are the basis for the further explanations in the following text.

## **2. Accountability**

The management of insurance companies is responsible for every action of their company. This includes all tools and therefore AI-systems as well. That is what supervisory laws ask for.

Insurance companies in Europe fall under the Solvency II regulation which is one of the most advanced and comprehensive supervisory regimes for insurance companies.

Under Solvency II, accountability is ensured through four key functions: the compliance function, actuarial function, risk management function and internal audit function. The goal of these functions is to ensure that an adequate and independent control system is in place within an insurance company. To achieve this goal, Solvency II prescribes that the persons taking on the role of a key function shall be objective and independent from outside influence. The key functions – as an integral part of the governance system – are mandatory.

For these reasons we believe that the governance system as specified under Solvency II is adequate for managing AI and other new technologies. The regulatory governance system should be technology-neutral in any case.

Specifically for the German market, additional requirements for the management body are already in place. For example, the German national supervisory authority BaFin has recently further specified in its “Supervisory Requirements for IT in Insurance Undertakings (VAIT)” circular which necessary IT skills the management team ought to have. The VAIT also contain documentation requirements regarding the IT strategy, work flow descriptions, a target measures catalog, status reports, information security guidelines, an emergency concept, user authorization management, application documentation and a data protection concept.

Concerning the itemized list under the accountability section in the guidelines, we believe that it is already too prescriptive in some parts and additional requirements should be avoided.

For example, more diversity and inclusiveness is certainly desirable and a goal of many companies. However, for many companies it is difficult to achieve when there is an overall skill shortage for IT personnel on the market. In particular, diversity and inclusiveness requirements could put small and mid-sized companies at a disadvantage and hamper their innovation strength. Additionally, there is no guarantee that a diverse team produces less bias or no bias at all.

Thus, it should be the responsibility of the company to find appropriate tools, measures and strategies which address the specific challenges arising from AI. This is in the company's own economic interest.

### **3. Data governance**

For the provision of private insurance cover and calculation of insurance premiums personal data of the customer and their analysis has always been essential to assess the risks associated with an insurance contract. The mathematical mechanisms of creating insurance cover depend crucially on reliable risk measurement which is only possible with high quality data. Even without regulation insurers therefore would have to install data governance processes and systems. Data quality directly relates to the accuracy and the bias of the system. It even touches on areas like reliability and non-discrimination. With bad data quality these other prerequisites cannot be fulfilled.

The risk assessment and rating systems and the information used for them develop dynamically in the competitive process. For example, in the field of motor insurance, a very sophisticated risk differentiation has developed during many years, drawing on a wealth of information, while in other sectors there is less risk differentiation.

To what extent and in what form the customers have to provide data when concluding an insurance contract is already a competitive factor today. Thus, it is increasingly observed that providers emphasize a data-thrifty contract conclusion as a feature.

The legal requirements as to which features may not be used for differentiation can be anchored in the programming of the automated systems without any circumvention. This will ensure that systems under no circumstances use these features for risk assessment purposes.

In addition, the companies already analyze the results of the automated systems on their own merit. This allows them to detect and adapt unwanted behaviours - such as bias - of the systems.

The use of data has been comprehensively regulated for the insurance industry, for instance by the German Insurance Supervision Act, Insurance Contract Act, Data Protection Act, German Genetic Diagnosis Act, civil law and as mentioned before German General Equal Treatment Act. The mentioned laws will apply irrespective of the medium used.

Especially the EU General Data Protection Regulation (GDPR) has increased the obligations of companies. For instance, companies have to

ensure the lawfulness of processing of personal data and also limit the use for the legitimate purpose. This must be ensured by the management of the company, for example, via internal and external control by data protection authorities and internal data protection officers. In addition, the German insurance industry has developed a self-obligating “Code of conduct” to ensure, that processes regarding customer relations are in line with the GDPR. You will find the document attached.

#### **4. Design for all**

The insurance industry as a whole contributes to broad accessibility to insurance products. The main principle of private insurance and a prerequisite for a stable and effective insurance market is treating everybody according to the risk he or she is contributing to the risk pool. Access to products and premiums are steered by this. At the same time, the German insurance industry endeavours to provide adequate insurance solutions for all groups of the population, with a view to the responsibility that its role in social risk management brings and to fully make use of the available business opportunities in the German market. When insurance markets are evolving towards increased risk differentiation, this is usually accompanied by insurance providers extending their product range, with the aim of offering tailor-made insurance cover for higher risks instead of simply offering premium products many potential customers cannot afford.

However, “design for all” in the sense of ensuring that every customer can access any product by each provider at an affordable price is neither workable nor effective. The insurance market is characterised by a broad range of providers with different business models, corporate goals and target groups. With increasing digitalization, we currently observe a further differentiation of providers, e.g. with the market entry of InsurTech start-ups. Many small- and mid-sized insurers aim at specific customer groups only. Effective consumer outcomes and broad access to insurance products result from competition among these manifold providers.

#### **5. Governing AI autonomy**

The supervisory law imposes strict requirements on the governance of insurance companies, in particular the responsibility of the management board. It emphasizes that management cannot automate or outsource its responsibilities, even with regard to new technologies. Regardless of the division of responsibilities, all managers are subject to overall responsibility and the associated due diligence and legal liability regulations. Each manager bears full responsibility for his or her area of responsibility. In addition he/she must always intervene within the framework of overall responsibility at the latest and work to remedy the situation if there are indi-



cations of maladministration in the remit of another manager (principle of mutual monitoring). This includes all tools and therefore AI-systems as well.

Since they have to make sure they know the risk in their risk pools and to react if necessary, insurers will always make sure they govern the AI-systems in all aspects properly. They are forced to do so by insurance techniques and current regulation.

In its “consumer model”<sup>1</sup>, the GDV takes the position that consumers should receive products that meet their needs, their individual circumstances and their preferences. According to the consumer model, products which are clearly not suitable for the living conditions of the customers are, for example, not tailored to suit a market need. The IDD provides for mandatory product oversight and governance processes on the part of the insurers to ensure that any newly developed products take due account of the needs and objectives of the respective target market. As mentioned before, the German insurance market especially is characterized by intensive competition and a wide variety of products. This benefits consumers. To survive in competition, insurance companies have a deep-seated interest in developing attractive products which meet the needs and individual expectations of consumers as much as possible.

In this the customer’s needs are central.

In addition, consumers receive high-quality information which explains their policy in a clear and comprehensible manner. For instance, the IDD has increased the information requirements towards consumers. This information should enable consumers to compare products and make well-informed decisions. Simply providing more and more information would not be helpful. In addition, high consumer protection standards ensure that insurance providers take the interests of their customers sufficiently into account in their product offerings.

Therefore, the questions and demands on governance of AI are already fulfilled by current regulation.

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<sup>1</sup> <https://www.gdv.de/de/ueber-uns/unsere-services/das-verbraucherleitbild-des-gdv-15598> (only German)

## **6. Non-discrimination**

As mentioned in the introduction, insurance premiums are based on the risk a person contributes to the risk pool. If the risk is the same, premiums are basically the same (apart from different charges for different sales channels and the like). If one risk is higher than the other, the premium for the first risk will be higher as well. This is necessary for the mathematical mechanisms of creating insurance cover to work properly. This core principle of private insurance is rooted in European and national law. Additionally German non-discrimination legislation (AGG) safeguards that there is no discrimination.

Of course, every AI-system used for insurance premiums will have to follow these regulations. When insurers use AI-systems in this area they will test these systems to make sure they follow the core principle of private insurance not only because of the laws. If there were systematically different premiums for the same risk or same premiums for different risks, this would endanger the risk sharing mechanism of insurance. So it is in insurance companies' best interest to ensure equal treatment according to risk.

Most of the questions raised in the assessment list are thus already covered by the obligation to follow the laws and the business interest of the insurance companies. Additionally, decades of experience with data analysis created awareness of bias problems and strategies to deal with it in the insurance industry.

The question concerning complaints communication is not limited to non-discrimination issues. In fact it is part of the overall communication between customer and company on insurance premiums. Since effective communication is the heart of the customer relation companies make sure the customer gets clear information to whom questions can be raised. Legal requirements ensure that the policyholder has the option of contacting the insurer at any time. The procedure depends on the respective internal complaint management. The structure is based on regulatory requirements. So the question is not only a non-discrimination topic but a more general one. Therefore it should be set up in a more general place of the assessment. In case of disagreements which cannot be dispelled bilaterally, the customer in Germany has access to an established Ombudsman system which provides for specialized, neutral and free of charge out-of-court dispute resolution.

## **7. Respect for (& Enhancement of) Human Autonomy**

Insurance undertakings adapt to digitalisation and the associated expectations and offer their customers services that will meet their new expecta-

tions and needs. The benefits for customers, which arise from the utilization of partly or fully automated processes, can already be observed.

For the insurance industry, there is a strong regulatory framework in place (e.g. the IDD) that ensures that the interests of consumers are ensured. For example, in accordance with the IDD any insurance contract concluded must be consistent with the customer's demands and needs. The same applies to any advice given in the process. Insurers are also obliged to provide comprehensive information on their products. In addition, consumers are profiting from a strong competition among insurers, which is even growing due to digitalization. New products such as telematic tariffs extend the market and give consumers additional choices. The Act against Unfair Competition (UWG) and the German General Equal Treatment Act (AGG) are of course also applicable to the digital world and provide consumers with the necessary protection.

Consumers' rights to obtain information are ensured by the EU General Data Protection Regulation (GDPR), which has come into force in 2018. Under the Regulation, the information obligations of companies have increased. For instance, pursuant to Article 13(2)(f) of the GDPR, consumers shall be informed about the use of automated individual decision-making, including meaningful information about the logic involved, as well as the significance and the envisaged consequences of such processing for the data subject. Consumers are also entitled to deny an automated decision (Article 22 of the GDPR).

Customers are thus adequately protected. An information overload does not help the customer. The average consumer can be trusted to choose suitable products - as in the analogue world. The strict distribution regulation, for instance in IDD, is also leading to an appropriate customer protection, even in a world with AI-applications.

## **8. Respect for Privacy**

Of course, the regulatory framework is also binding for the respect for privacy. As mentioned before, the General Data Protection Regulation (GDPR) has created a well-balanced legal framework for the processing of personal data. The protection of data is of key importance to the insurance industry – after all, insurance business is based on the processing of personal data. Reliable data protection is indispensable to ensure the trust of our clients. And it goes without saying that companies in the German insurance industry comply with the legal requirements of the GDPR. In addition, the vast majority of German insurance companies have committed themselves to complying with the Code of Conduct for the handling of per-

sonal data by the German insurance industry, thus demonstrating that they accept data protection in a special way.

German insurance companies only obtain the consent of the persons concerned insofar as this is necessary due to a lack of legal grounds for permission. In order to be effective, these must meet the requirements of Art. 7 GDPR. The associated EEC 42 of the GDPR also requires guarantees that the data subject is comprehensively informed about the content of their consent. As early as 2012, the GDV agreed non-binding samples of consents for the processing of health data with the data protection authorities for the companies of the German insurance industry. These are currently being revised and reconciled.

In addition, persons affected by data processing must be informed of the possibility and consequences of withdrawing consent pursuant to Art. 13 para. 2 lit. c) GDPR and of the possibility of lodging a complaint with a supervisory authority pursuant to Art. 13 para. 2 lit. d), irrespective of whether an AI system is used or not. It goes without saying that companies in the German insurance industry adhere to this as well.

Insurers are supervised by and work continuously with the governmental supervisory authority (Art. 51 GDPR). Due to GDPR each insurer also has to provide a Data Protection Officer.

Besides the insurers and the Federal Financial Supervisory Authority (BaFin), the insurance ombudsman is responsible for consumer complaints.

## **9. Robustness**

The insurance industry as part of the financial services sector is already subject to comprehensive rules and regulations concerning IT security.

The EU Network and Information Security (NIS) directive (EU 2016/1148) came into force in May 2018. At the core of the NIS directive are Operators of Essential Services (OES), which are deemed significant for the functioning of the economy and therefore have to fulfil strict IT security requirements. The financial services sector is one of the sectors where OES have to be identified by member states.

The NIS directive specifies that:

*“security of network and information systems’ means the ability of network and information systems to resist, at a given level of confidence, any action that compromises the availability, authenticity, in-*

*tegrity or confidentiality of stored or transmitted or processed data or the related services offered by, or accessible via, those network and information systems;“*

OES are required to:

*“1. Member States shall ensure that operators of essential services take appropriate and proportionate technical and organisational measures to manage the risks posed to the security of network and information systems which they use in their operations. Having regard to the state of the art, those measures shall ensure a level of security of network and information systems appropriate to the risk posed.”*

*“2. Member States shall ensure that operators of essential services take appropriate measures to prevent and minimise the impact of incidents affecting the security of the network and information systems used for the provision of such essential services, with a view to ensuring the continuity of those services.”*

*“3. Member States shall ensure that operators of essential services notify, without undue delay, the competent authority or the CSIRT of incidents having a significant impact on the continuity of the essential services they provide. Notifications shall include information enabling the competent authority or the CSIRT to determine any cross-border impact of the incident. Notification shall not make the notifying party subject to increased liability.”*

In summary, the NIS directive requires OES to ensure that strong IT security measures are in place, including adequate preventive measures and appropriate tools to report possible breaches to the national authorities for information security.

Solvency II sets out requirements for the operational risk management of insurance undertakings. As part of this requirement companies also have to systematically analyse, assess and manage the risk stemming from their IT systems.

Complementing the above are specific national regulations. For example, in Germany the financial supervisory authority “BaFin” recently circulated new requirements concerning the organization and governance of the IT function in insurance companies (“Supervisory Requirements for IT in Insurance Undertakings VAIT” ”: see also 1).

Additionally, in financial services, companies have a natural interest in securing their IT systems, since the integrity, operability and security of these systems is a prerequisite for conducting the business activities.

Many companies chose to certify the high standards of their IT systems by means of an independent certification procedure. Examples for such standards are ISO2700x and specifically for the German market the "IT-Grundschutz" of the German national office for information security (BSI).

Against this backdrop we believe that for the EU in general and for Germany in particular, the level of protection for the IT in the insurance sector is more than adequate. No additional measures are required for the financial services sector.

The questions raised under the topic 'Reliability and Reproducibility' are not AI-specific. They describe prudent business behaviour. Insurers act of course prudent; in their own best interest and also because of regulation. Reproducibility is essential for a critical part of business like insurance premiums. Otherwise a process would not be appropriate for bulk business like insurance.

The questions concerning accuracy are essential for any useful AI-system in general. A non-accurate system could endanger not only ethical values but also the economic viability of an insurer. Therefore supervisory laws cover all of this.

In the case of insurance premiums AI-systems failing means losing customers and/or money. Therefore insurance companies will make sure the systems are tested and prepared for their task and for appropriate fall-back options. Economic requirements and regulations make sure of this.

## **10. Safety**

The safety principle generally describes measures taken to avoid or reduce physical damages that could be caused by the machine to its operator or other human beings.

In our view this principle is not applicable to the use case of insurance premiums. It is highly unlikely that an algorithm deployed for the calculation of insurance premiums could immediately affect a consumer's "physical integrity" when malfunctioning. After all, the insurance policy is an intangible product.

Thus, use cases outside the insurance industry, particularly where the algorithm is paired with a physical device or machine, seem to be more fitting. Robotics or autonomous driving are prime examples for this.

For the insurance industry, the highly specific use case of motor insurance telematics comes to mind. However, a closer look reveals that telematics does not trigger any safety concerns either. The way such products work is that they capture and analyse the driving style, oftentimes via a smartphone app that the driver has to install him/herself. For the insurance product it is not possible to directly control the vehicle itself. Additionally, the insurance product is not providing real-time information on how to drive either. Instead, the driver receives a summary report which indicates to them how their driving style was evaluated. No attempt is made to influence the driving behaviour in real-time.

Another subject which is related to AI and robotics is product liability. In our view, the existing legal liability framework, especially for manufacturers' liability under the Product Liability Directive 85/374/EEC, is fully adequate to address the risks posed by emerging digital technologies. Insurance solutions are readily available to cover the liability of owners, operators and manufacturers. Introducing additional compulsory insurance requirements or compensation funds is unnecessary and counterproductive. Scientific and technical research into emerging digital technologies should be encouraged. Specifically, developing rules and industry standards on product safety and product security should be prioritised.

AI and algorithms are by their very nature at the heart software code. For that reason, any discussion on the safety of these systems ought to also cover the complementing (IT) security dimension. For the insurance industry, we already provided in chapter 8 a comprehensive assessment of the measures that are already in place for our sector.

## **11. Transparency**

KI offers a lot of potential for increasing transparency about available product alternatives and their prices. It is expected that, for example, comparison portals or brokers will make use of BDAI to filter products with a good price-performance ratio for the specific circumstances of individual customers. With new and simplified access routes to insurance protection, customers can also directly access various alternative offers, for example, via apps from insurers or intermediaries with whom they already have a customer relationship, an integrated insurance offer as part of their online banking or via thematic Internet portals, such as around the car, the house or the journey.

Concerning traceability insurers of course need to understand the tools they are using. No matter if it is an AI-system or a mortality table. Again own best interest and supervisory laws make sure of this.

Concerning communication to customers or third parties on the systems approach and technology appropriate ways are already available but also developing further. However, detailed comprehensible explanations of every step leading to an insurance premium is neither practicable nor in the interest of the consumer. Moreover, an AI-System that determines suitable prices for insurance cover is no product on its own. It is a process used to determine the individual premium for an insurance product. Customers have to deal with a lot of information already to understand the insurance product they are about to buy. There is a wide range of national and European regulation in place concerning counselling and information and requirements to customers (e.g. Insurance Contract Act, IDD, PRIIPs). Customers have to get well informed about risk covers (purpose of product), premiums and costs. Additional information requirements to customer should be avoided. It could be an overload of information if customers also had to be informed about every detail of the price-building mechanics. With regard to automated-decision making the *Research Service of the German Bundestag* has come to the conclusion, that a disclosure of the algorithm would not motivate the average consumer to understand the result<sup>2</sup>.

We agree that it should be possible for third parties – such as the BaFin – to audit AI-systems. However, auditing the system by a thorough analysis of its behavior seems to be a more promising approach. It is common ground among experts that it is easier to understand complex systems by varying the input and watch for changes in the output than by looking exclusively at source code and training or testing data.

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<sup>2</sup> Cf. <https://www.bundestag.de/blob/529616/bbe3de30880170a7b710e5c8732b7c06/wd-10-048-17-pdf-data.pdf>, p.11 (only available in German)



## Appendix I

Abbreviation	Regulation	Level
AGG	General Equal Treatment Act	National
BDSG	Federal Data Protection Act	National
CSA	Cybersecurity Act	EU
GenDG	Genetic Diagnosis Act	National
GDPR	General Data Protection Regulation	EU
IDD	Insurance Distribution Directive	EU
NIS	Network and Information Security directive	EU
PLD	Product Liability Directive	EU
PRIIPs	Packaged Retail Investment and Insurance-based Products	EU
SII	Solvency II	EU
VAG	German Insurance Supervision Act	National
VAIT	Supervisory Requirements for IT in Insurance Undertakings	National
VVG	Insurance Contract Act	National

**Table 2: List of abbreviations**

Berlin, 28.01.2019