Comments

of the German Insurance Association (GDV)

on the Joint Committee Discussion Paper on the Use of Big Data by Financial Institutions

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Executive summary

In the insurance industry, drawing on extensive data and using highly sophisticated methods of data analytics has been common place for many years. Thus, comprehensive regulatory and self-regulatory safeguards are already in place. The current regulatory framework, centered on activity-based and provider-neutral principles, guarantees a level playing field for established players and new market entrants alike. Further regulation is not necessary. Regulation promoting certain technology or simplifying business only for specific providers should be avoided, as it would impair competition and could negatively affect consumers. Possible innovative regulatory tools should be made available to all market participants.

For the German insurance market in the foreseeable future, there is no indication that with Big Data usage

- more individualised insurance pricing will end the collective principle of insurance or impede access or affordability of insurance cover for certain groups of insureds,
- informational self-determination or the freedom of individual life choices will be jeopardised,
- technologically less savvy customers may be excluded from insurance cover.

The availability of more data often simplifies premium calculations and allows for reduced safety margins. The extent of these changes is hard to predict, but it may be limited in many products, as even today traditional actuarial methods lead to highly sophisticated risk classification systems. The use of Big Data could help to increase the availability and quality of insurance cover by expanding the limits of insurability and by facilitating access to insurance via additional distribution channels / new ways to access insurance cover.

1. Do you agree with the above description of the Big Data phenomenon? If not, please explain why. Please also mention whether you consider that other characteristics are relevant to understanding the use of Big Data.

We mostly agree with the Big Data definition and the description of the phenomenon in the discussion paper. As regards the definition, we suggest expanding it from three Vs (volume, variety, velocity) to five Vs, then including veracity and value, which are highly relevant in the context of financial services. In deciding on what risk level to associate with a product or an activity, an insurer depends on the good quality of the data plugged into its calculations. Volume may be able to make up for some inaccuracies. But without veracity, conclusions and predictions could be based on false assumptions, which could in turn lead to inaccurate underwriting.

Observing the value of Big Data is equally important. A prudent financial services provider will consider the potential costs and benefits before embarking on a Big Data project, including societal acceptance of Big Data usage and potential reputational effects. Thus, a worthwhile value, for example making client relationships more meaningful, should be attached to a Big Data project in order to justify taking the potential costs that come with it.

When it comes to the Big Data phenomenon as such, it indeed marks a new dimension of data usage and brings with it new questions. At the same time, as the paper states, extensive data usage by financial institutions is nothing new. In the insurance industry, drawing on extensive data sets and very sensitive personal information (e.g. regarding health status), as well as using highly sophisticated methods of data analytics, has been common place for many years. This means that comprehensive regulatory and self-regulatory safeguards (e.g. regarding data protection or the quality of the data) are already in place.

In our view, in addition to the factors mentioned in the Discussion Paper, the impact of Big Data on society should be taken into account. For the insurance market, the potential improvements in social risk management via better risk assessment and new ways to reduce risks (e.g. increases in road safety, better flood protection) are of particular importance.

2. Which financial products/activities are (likely to be) the most impacted by the use of Big Data and which type of entities (e. g. large, small, traditional financial institutions, Fintechs, etc.) are making more use of Big Data technologies? In light of ESAs' objective to contribute to the stability and effectiveness of the financial system, to prevent regulatory arbitrage, do you consider that there is a level playing field between financial institutions using Big Data processes and those not using them (e.g. because they do not have access to data or the (IT) resources needed to implement Big Data processes) or between established financial institutions and potential new entrants (e. g. Fintechs) using Big Data processes? Please explain.

Most activities in the value chain of insurance – be it client relations, underwriting or claims management – will be impacted by the use of Big Data as its use steadily increases over the coming years. Which specific innovative uses of data will prove successful and how widespread their adaptation will become in the markets, however, is difficult to say at the moment, as we are still only at the beginning of this process. This will depend on various factors, e.g. the attractiveness of innovative product offerings to consumers, consumers' willingness to provide additional data and the effectiveness of innovative data use (e.g. regarding better risk assessment or cost savings).

Market developments in individual EU countries could well be different, depending, for example, on national consumer preferences or established business practices (e.g. the effectiveness of the current risk assessment system). For example, the German insurance industry has already been using comprehensive data bases and sophisticated methods to analyse these data so that the added value Big Data usage can create remains to be seen.

We expect that eventually most entities will become at least somewhat involved in Big Data, though the level of involvement will differ depending on the individual circumstances and strategic decisions of an insurer. Insurers can engage in Big Data projects themselves or cooperate with others that do. For example, a smaller insurer, without the necessary financial and other resources to develop its own Big Data applications, may buy Big Data services from an external provider. It is also possible that some insurers may decide to forgo (some) Big Data uses. E.g. they could refrain from offering behaviour-based insurance products because they want to market their products as traditionally calculated and with fewer data requirements.

The current regulatory framework is centered on activity-based and provider-neutral principles; thereby guaranteeing a level playing field for established players and new market entrants alike. This is very important to ensure fair competition and encourages market advances in the interest of consumers. In addition, regulation should be technology-neutral. New regulation, that promotes certain technology or simplifies business only for specific providers, should be avoided, as it would impair competition and could negatively affect consumers. Should supervisors want to make available innovative regulatory tools, then it is crucial that they are made available to all market participants. In any case, no insured customer should be left without protection or compensation by an undertaking involved in such a tool.

3. Do you offer/are you considering using Big Data tools as part of your business model? If so, please briefly describe: i) what type of entity you are, e.g., long established, start-up, a product provider, an intermediary; ii) the service you provide; iii) the nature of your clients; iv) your business model; v) whether the Big Data tools/strategy were developed by an external company or internally and whether you have related agreements with other entities (including non-financial entities); vi) what are the types of data used (personal, anonymised, user data, statistical data etc.) sources of data; and vii) the size of your Big Data related activity and/or forecast activity (e.g. to what extent are business decisions already taken on the basis of Big Data analysis; what other business actions could be based on Big Data in the future)?

The insurance industry has always relied on data and the conclusions drawn from data. Adequately assessing risks by using data is a core competency of the insurance industry and the foundation of being able to provide reliable insurance cover. Generally, looking at past advances in risk assessment, more and better data as well as knowledge about the factors influencing risks have always increased the possibilities to provide insurance cover. New technologies, such as Big Data tools, therefore hold manifold new possibilities, not only for risk assessment, new products and services but also regarding fraud detection and understanding the customer's needs.

Currently, big data use is at an early stage in the German insurance market. However, many providers are currently considering the (increased) use of Big Data tools. These will be long-established companies as well as more recently founded undertakings with private and company clients in a wide array of insurance services. It is too early to pinpoint to a certain business model in the insurance industry where Big Data will become especially common. It also remains to be seen, whether the German insur-

ers' Big Data projects will predominantly be externally or inhouse-developed. The data used will continue to be all types of personal, pseudonymised, anonymised, statistical, structured and unstructured, supplied by customers or drawn from internal or external (often official) statistics. The use of unstructured data will increase, as will the demand for use of external data providers.

The role of Big Data – as well as that of related technologies such as machine learning, artificial intelligence, and image and speech recognition – will grow. Fully-automated decisions may be possible in some areas in the future. At the same time, the associated challenges, such as transparency regarding very complex algorithm decisions or the risk of failure in data or algorithms, will have to be handled. The speed at which the latter can be achieved will influence how soon business activities imagined possible for the future will be implemented.

4. If you are a consumer or a consumer organisation, do you witness any of the uses of Big Data? In what fields?

Not applicable.

5. Do you consider there are (non-regulatory) barriers preventing you (or which could prevent you in the future) from collecting and processing data? Are there barriers preventing you from offering/developing Big Data tools in the banking, insurance and securities sectors? If so, which barriers?

Restrictive legal requirements for outsourcing (e. g. notification requirements, mandatory contract arrangements) can act as barriers. That is the case because third party services related to the use of data or development of new tools have to follow strict rules. General regulatory facilitations for outsourcing would lead to a more efficient involvement of those service providers.

Non-regulatory barriers such as the lack of adequate technical infrastructure (e.g. high speed internet, high ways suitable for connected cars) should be resolved. Differing standards for data formats or interfaces prevent effective processing of data. The same holds true for processes with media discontinuity. Solutions for technical or IT barriers within entities can best be found by the industry itself. A regulatory framework supportive of this would of course be advantageous.

6. Do you agree with the above short, non-exhaustive, presentation of some of the main applicable requirements? If not, please explain why. Please also mention whether you consider that other legal requirements are essential and should be mentioned.

The Discussion Paper addresses the most important applicable requirements found in EU law. From a data protection perspective we mainly agree with the presented applicable requirements. Notwithstanding the Big Data discussion, longstanding and legitimate data processing procedures in the insurance industry should not become unlawful because of increased digitalisation. It should be ensured that existing documentation can be digitalised to allow for their digital processing (e.g. for claims management).

Nonetheless, it is true that several data protection principles might have an impact on the use of Big Data tools. But possible negative impacts can be eliminated if the controller processes anonymised data. Due to the complexity of possible Big Data applications, consent should not be the only meaningful legal basis for signifying the individuals' agreement. In such cases, and only after in-depth study of the situation, the regulator may decide to establish a legal basis for the data processing in question.

In the chapter on sectoral financial requirements, reporting requirements could be added. To give an example: The Solvency II Directive and subsequent Delegated Regulation (EU) 2015/35 require extensive reporting. This includes quantitative information as well as narrative. Uniform format and structure are specified by law. In case of quantitative reporting, the content of templates which have to be submitted is specified in detail. Even today, companies have to make a special effort to duly fulfil these requirements. If these requirements were amended to reflect the usage of Big Data applications, thus resulting in more or more detailed reporting requirements, fulfilling these – and thereby abiding by the law – may become difficult for some companies.

Attention should also be paid to dependencies stemming from technological progress. Most products in life insurance last many decades, but are originally devised based on the technology and the legal requirements of the time of signature of the contract. For example, whenever today a life insurance product is bundled with external data (e. g. from wearables), insurers have to ensure availability of this data over the entire product's lifespan. This could prove challenging in the light of the fast paced development of new devices and interfaces and a possible lifespan of several decades. Thus legal requirements may with time become at best superfluous or even cause disadvantages for the consumer and/or provider.

National requirements can exist in addition to EU requirements. Requirements set by German law include the obligation to provide proof that the insured has received documents by standard mail[1], the requirement to provide information in accordance with Art. 23 of the Insurance Distribution Directive by default on paper and alternatively on a durable medium or a website, and the requirement in German anti-money laundering law[2] to identify a client by means of their state-issued ID card (including IDs issued electronically) or passport only. (Unfortunately all three stand at odds with an increasingly digitalised society.)

Finally, internal control measures, which can be implemented through global, European or national standards, should also be included in the list of main applicable requirements. Especially principles such as transparency or separation of duties are essential for the legitimate implementation of Big Data projects.

7. Do you consider any of these regulatory requirements as unjustified barriers preventing you from using Big Data technologies? If so, please explain why. Please also explain whether you consider that further regulation (including soft law/guidance, etc. and insofar as it falls within the scope/remit of the ESAs) should be introduced to facilitate the use of Big Data technologies.

Regulatory requirements are necessary to ensure a level playing field but especially consumer protection. Today, the requirements do not prevent German insurers from using Big Data technology. However, in the future there may be more and different use cases which are not compatible with the existing law.

Regulation should not prevent companies from using Big Data. It could be worthy to assess the European Data Protection Regulation to make sure that it does not hinder the use of Big Data. For example, the restrictive rules concerning automatic decision making including profiling (Art. 22) could prevent companies from using Big Data. The same applies to the rules concerning data minimisation and purpose limitation (Art. 5).

Any regulation significantly expanding requirements for documentation and reporting due to the increase in data processing in relation to the use of Big Data applications could lead undertakings to refrain from using Big Data. This would most likely especially affect small and medium-sized undertakings. As a result they could be excluded from the use of Big Data.

[1] See §§ 7, 8, 19 of the German Insurance Contract Code.

[2] See § 4 of the German money laundering act.

In any case, it is crucial to consider materiality and proportionality regarding the conception of any new regulatory requirements. Otherwise the use of Big Data could entail higher costs of regulatory compliance than benefits of using it.

8. Do you consider the potential benefits for consumers and respectively financial institutions to be accurately described? Have you observed any of them in practice? If so, please provide examples. If not, please explain whether you are aware of any barriers that may prevent the above potential benefits from materialising?

In general, we agree with the ESAs on the described potential benefits for consumers and financial institutions. However, we believe that important benefits were not mentioned in the Discussion Paper.

Regarding insurance, apart from cost reductions, consumers could greatly benefit from enhancements in product quality (e.g. additional services) and more choice, including products and services better tailored to their individual situation and needs. For insurers, major potential benefits are more efficient processes, better risk assessment / management and scope for offering innovative products and services, thereby strengthening their market position. Better fraud protection would also be an important benefit, helping both insurers and their customers.

In addition to the direct benefits for consumers and financial institutions, we believe that it is important to also take the benefits for society into account, in particular more effective financial markets, better social risk management and improvements in competition and access to financial products. Taking the insurance markets as an example, there is great potential for societal benefits as innovative data use could substantially contribute to risk prevention and reduction (e.g. increase in road safety, better adjustment to climate change) and expand the limits of insurability when better risk assessment and management becomes possible.

9. Do you agree with the description of the risks identified for consumers and respectively financial institutions? Have you observed any of these risks (including other risks that you are aware of) causing detriment to consumers and respectively financial institutions? If so, in what way? If not, please explain why. Please also mention whether certain risks for consumers and financial institutions have not manifested yet but have the potential of developing in the future and hence need to be closely monitored by Supervisory Authorities.

We largely agree with the description, but we do have some caveats. As any technological progress, the ongoing process of digitalisation and in

particular the increasing usage of Big Data is of course not free from challenges and potential risks. For the German insurance market, so far we do not have any indication that there might be potential detriment to any group of customers or providers. However, in view of the crucial importance of adequate insurance cover for the financial security of consumers, the German Insurance Association is closely monitoring the development in the German insurance market.

For the (German) insurance industry, use of extensive data bases and sophisticated methods of analysing data have long been common place, and comprehensive processes are in place for their further development and regular review. In light of the importance of guaranteeing the reliability of promised insurance benefits and the often very long term contracts in personal insurance, high quality standards in data use are indispensable. As risk assessment and risk segmentation is already quite advanced in insurance, we believe there will be more of an evolution of current practices than a revolutionary development.

Big data could indeed lead to an increase in risk segmentation. However, this does not mean a change in the underlying principle of risk pooling. In private insurance, premiums have always been based on the insured risk (such as smoker or non-smoker). Risk-based premiums are of key importance for the effectiveness of private insurance markets: They enable tailor-made insurance solutions, provide incentives for risk reduction and prevent adverse selection effects with regard to the conclusion of insurance contracts. As a consequence, financial stability of insurers is ensured and customers benefit from reliable insurance cover.

Therefore, more individualised insurance pricing is by no means inconsistent with the collective principle of insurance. Today, most communities of insureds are already composed of different risk classes, while the risks are still pooled across all policyholders and risk classes.

For the German insurance market, we currently do not see the risk that Big Data applications might jeopardise informational self-determination or the freedom of individual life choices. So far, the market share of usage-based insurance products is still very low, and there is no evidence that big-data based products could displace traditional products. We also observe a wide range of consumer preferences.[3]

[3] In a survey commissioned by the GDV from November 2016, 25% of respondents replied that they can imagine taking out an insurance contract based on telematics. 67% of respondents agreed, that careful drivers should pay less or speeding motorists more insurance premium. Additional information can be found

More granular risk segmentation does not necessarily result in less access to insurance cover for customers who want to insure higher risks. It has always been more difficult and/or more expensive to obtain insurance for very high risks, because the likelihood that the insurance benefit must be paid out is so much greater. Big Data may in fact make insurance easier for these cases, as the availability of more data (especially when little to none was available previously) often simplifies premium calculations and allows for reduced safety margins.[4]

Finally, regarding insurance, we believe it is unlikely that consumers may consider targeted or personalised offers or services as advice, when this is not the intention of the provider. Article 17 of the Insurance Distribution Directive (IDD) necessitates that "insurance distributors [must] always act honestly, fairly and professionally in accordance with the best interests of their customers"[5] and that "all information related to the subject of this Directive, including marketing communications, addressed by the insurance distributor to customers or potential customers shall be fair, clear and not misleading. Marketing communications shall always be clearly identifiable as such".[6] Further safeguards exist with regard to cross-selling.[7]

Future risks may emerge with the growing prevalence of artificial intelligence, robots, etc. At this early stage though, the current regulation, for example with regard to liability, is sufficient. Regulators should focus on abuse and malpractice cases for the time being. Lessons drawn from and actual needs defined based on this should guide any future thoughts regarding regulatory reform.

10. Is the regulatory framework adequately addressing the risks mentioned above? Bearing in mind the constant evolution of technologies/IT developments and that some of the above mentioned regulatory requirements are not specific to the financial services sector (e.g. GDPR), do you think further regulation is needed to preserve the rights of consumers of financial services in a Big Data context? Please explain why.

As of today, if established market participants and new entrants are treated alike with regard to legal obligations, then the regulatory framework is adequate and no further regulation is necessary. If new risks emerge in

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here: http://www.gdv.de/2016/11/jeder-vierte-autofahrer-offen-fuer-telematik-versicherungen.

[4] See also question 11.
[5] See para. 1 of Art. 17 IDD.
[6] See para. 2 of Art. 17 IDD.
[7] See Art. 24 IDD.

the future, then it will be important to carefully weigh the benefits and risks of specific Big Data usage against the goal of consumer protection.

We would nonetheless like to specifically comment on some of the risks mentioned in the Discussion Paper. Paragraph 69 addresses reputational or legal risks associated with the use of Big Data. For example, absence of controls could result in breach of regulatory requirements or data protection requirements. Non-compliance with regulatory or data protection requirements can also lead to supervisory sanctions and expensive lawsuits.

In the insurance industry, the risks described in paragraph 69 are already adequately addressed under the Solvency II regime. To minimise the risk of non-compliance, undertakings have to maintain an internal control system which includes, inter alia, an independent compliance function. Undertakings also have to maintain an internal audit function which evaluates whether the internal control system and other elements of the system of governance are effective and adequately implemented. The internal control system as part of the system of governance is also subject to regular reporting towards supervisory authorities and the public.

The exposure to cybersecurity risks, as described in paragraph 70, is increasing due to the use of Big Data. Cybersecurity risks are considered an operational risk. Under Solvency II, operational risk must be borne by fulfilling quantitative and qualitative requirements, such as capital requirements, risk management and reporting. Furthermore, undertakings have to consider operational risk in their own risk and solvency assessment. Therefore, Solvency II adequately addresses cybersecurity risks for insurance undertakings.

Risks resulting from outsourcing are described in para. 71. Solvency II requires that outsourcing agreements are subject to the insurance undertakings' system of governance. For instance, insurance undertakings remain fully responsible for discharging their obligations under Solvency II, when certain functions or activities are outsourced according to Art. 49 of the Solvency II Directive. Undertakings also have to report on their outsourcing towards supervisory authorities and the public. Therefore, no further regulation is needed for insurance undertakings concerning this matter.

11. Do you agree that Big Data will have implications on the availability and affordability of financial products and services for some consumers? How could regulatory/supervisory authorities assist those consumers having difficulties to access financial services products?

We believe that Big Data will not have overarching negative effects on availability and affordability of financial products and services. In fact, the use of Big Data could help to increase the availability and quality of insurance cover and of insurance penetration in society by expanding the limits of insurability and by facilitating access to insurance via additional distribution channels / new ways to access insurance cover (e.g. via smart phone) and insurance offerings tailored to the individual, that can help overcome biases (e.g. underestimating risks, postponing decision on old-age security).

As we have seen with earlier technological advances, improvements in data availability and actuarial methods usually increase the insurability of risks. For example, the analyses of extensive data sets together with medical progress have made it possible to provide carriers of the HI-virus with life insurance products under certain conditions. In as far as Big Data opens up new insights and permits better risk assessment and risk management strategies (e.g. additional precautionary measures), new insurance solutions could become possible for some risks that are difficult to insure today. Also, with improved risk assessment, the need for safety margins in insurance premiums could be reduced and insurance made more affordable.

In addition, experience shows that better risk assessment often facilitates insurance cover for products or circumstances which used to be difficult to insure at affordable prices. In Germany, this effect can, for example, be clearly observed in term life insurance for persons with serious pre-existing conditions: In the past, a significant percentage of insurance applications in this field had to be refused. Today refusal rates due to increased risk levels have dropped to just 1-2%. A current example is the insurability of people suffering from skin cancer. For a long time, they were not able to obtain mortality or occupational disability cover, while today patients in an early stage of the disease can.

Regarding insurance premiums in general, we expect Big Data usage to lead to adaptations of risk segmentation systems. Some groups of insureds will benefit from more favourable premiums, whereas other policyholders might face higher premium payments. The extent of these changes is hard to predict, but it may be limited in many products. Even today, with traditional actuarial methods, highly sophisticated risk classification systems (e.g. highly individualised premium calculation in motor insur-

ance) as well as mitigating measures (e.g. by considering soft facts/underwriting assessments, self-retentions, and other risk management measures) are in place. Furthermore, risk-based pricing is limited by regulation in circumstances where an individual cannot influence his or her personal exposure (e.g. by the equal treatment directive or national genome testing regulation). Therefore, the added value achievable by Big Data usage remains to be seen.

In addition, as experience shows, innovative risk classifications will only prove successful in the market if they generate customer interest and the respective products are actually chosen by a sufficient number of customers. This holds particularly true for behaviour-based product variants, whose success will strongly depend on the customers' willingness to continuously disclose information on their behaviour in exchange for more attractive premiums.

In market economies, such adaptations to a new pricing system are a commonplace occurrence. A social problem would only arise if pricing adjustments were to jeopardise access to affordable insurance cover for some groups of people. However, for the German insurance market, there are no signs indicating that a stronger individualisation of premium calculation might impede access or affordability of insurance cover for certain groups of insureds.

In any case, the German insurance industry endeavours to provide adequate insurance solutions for all groups of the population, both 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. For instance, in Germany there has been a broadening of disability insurance offerings over the last years. This was triggered by the fact that the traditional top-of-the-range occupational disability products with extensive cover were unaffordable for some risk groups.

We do not share the ESAs' concerns regarding big data use and availability of flood insurance. In Germany, a highly sophisticated system of flood risk classification is in place, yet risk based flood insurance is at all times able to take up the remaining risk for an affordable premium – even in high risk areas – if governmental funded prevention measures are in place (e.g. dikes, retention areas) and homeowners have taken individual prevention measures (e.g. installation of a sewer backflow flap). This is also proven

by a representative survey in 2016 on the German risk based natcat insurance. One conclusion about insurance in high risk areas was: The number of homeowners in flood prone areas who were not able to obtain natural catastrophe insurance is not statistically significant".[8]

In fact: The homeowner, who lives in a flood prone area and therefore transfers more risk, has to pay a corresponding premium (risk based pricing). An insurance system, which does not reflect the actual risk, is an invitation for moral hazard and ultimately has to penalise all policyholders with higher premiums due to moral hazard losses shared between them. However Big Data can identify the vulnerabilities and lay the foundation for successful risk management and advice to the policyholder regarding prevention measures. Without the use of Big Data a successful and financially sustainable adaption to climate change and extreme weather events is nearly impossible to achieve.

For the foreseeable future we also do not see any danger, that technologically less savvy customers might be excluded from insurance cover. The new Big Data-based solutions broaden product variety (e.g. in motor insurance) and ways of access to insurance. Currently, there is no indication that they might replace traditional product offerings or distribution channels.

However, in order to be able to react quickly to any possible negative effects of digitalisation and Big Data on the communities of insureds, the future market development must be carefully monitored. The insurance industry is aware of its social responsibility in this regard.

12. Do you believe that Big Data processes may enable financial institutions to predict more accurately (and act accordingly) the behavior of consumers (e.g. predicting which consumers are more likely to shop around, or to lodge a complaint or to accept claims settlement offers) and could therefore compromise the overarching obligations of financial institutions to treat their customers in a fair manner? Please explain your response.

While insurers are generally more interested in improvements in the predictability of risk realisation, Big Data usage may indeed come with additional advances in the prediction of behaviour. However, more knowledge on customer behaviour also opens up new ways to better support individual consumers in their insurance decisions and to provide more individualised services.

[8] See here for further information: http://www.gdv.de/2016/09/die-wichtigsten-umfrageergebnisse-zum-naturgefahrenschutz-im-ueberblick/.

It is also in every insurer's best interest to always treat its clients fairly to maintain their trust and to live up to the social responsibility of the insurance industry. This is reflected in the German Insurance Association's consumer approach, a conceptual paper laying out the consumer policy positions of the German insurers.[9] The paper contains eight principles that have fair treatment of consumers at their heart, such as offering needs-based products, reliably providing information and effectively protecting client's data.

13. Do you agree that Big Data increases the exposure of financial institutions to cyber risks? If yes, what type of measures has your institution adopted or is going to adopt to prevent such risks? What could supervisory/regulatory authorities do in this area?

Every new technology needs a thorough risk assessment regarding cyber security. Generally digitalisation, where devices, servers and systems are interconnected, poses new risks, not only risks of data breaches, but also economic risks when data necessary to perform services is compromised or a connection failure occurs. This is true for Big Data as well, especially in cases where live data is involved.

Even with Big Data the net risk does not have to be greater than without it, as long as providers maintain state of the art IT systems and take organisational measures to ensure or improve their safety from cyber risk. Organisational measures especially include appointment of high-ranking staff for information security, data protection and risk management. Moreover, company-wide internal documentation and process guidelines (in addition to adhering to legal requirements) and training on them will distribute a company's risk strategy.

The German insurance industry is highly aware of cyber risk. The sector-specific Situation and Crisis Response Center for IT-Security was founded in 2010 as a complementary measure to the IT security in place in each insurance company. But digitalisation increases the exposure to cyber risks not only of financial institutions, but of any kind of companies.

The GDV, together with the Federal Ministries of Economic Affairs and the Interior, campaigns for a reliable level of cyber security of small and medium-sized enterprises (SME) in all industrial sectors. To this end, the GDV has developed non-binding model clauses (unbinding terms and conditions) for insurance against financial losses caused by information security breaches. This will most likely be released in March/April 2017.

[9] See annex as well as here for further information: http://www.gdv.de/2017/01/verbraucherleitbild-des-gdv/.

Regulatory measures have already been taken, not only regarding cyber security with relation to personal data in the General Data Protection Regulation, but also with respect to cyber security of critical infrastructures in the Network and Information Security Directive. National laws – such as the German Federal IT Security Act – also already contribute to widespread cyber security.

However, although cyber security is of course a prerequisite to proper conduct of business, competences between authorities – such as supervisors and special information security authorities – should not overlap but ensure necessary exchange of information without doubling reporting requirements. Publication of best practices for common cyber security issues as well as the organisation of information sharing and analysis infrastructure would also be a helpful contribution by the regulator.

14. Would you see merit in prohibiting the use of Big Data for certain types of financial products and or services, or certain types of customers, or in any other circumstances?

We do not believe that a ban on specific big data uses would be beneficial. In particular, there is no indication that this would be necessary to ensure access to financial products and services to all consumers, even those who do not wish to supply (more than truly necessary) data or those who do not have a data profile (on the internet etc.). Competition and consumers' decisions will lead to a well-balanced market where some companies will distinguish themselves offering products following good data protection standards. More generally, regulatory authorities should focus on the sufficient current legislation.[10]

15. Do you agree that Big Data may reduce the capacity of consumers to compare between financial products/services? Please explain your response.

On the whole, use of Big Data applications will not decrease comparability or make it more difficult. With Big Data, the availability of products/services, and along with it the quantity of information but also transparency, will likely grow. But this general circumstance – a large number of products/services and lots of information – is not considerably different to today's situation.

It is possible that the use of Big Data by providers may also improve comparability by enabling the provision of customised products and information. New business models and applications assisting the consumer

[10] See also question 9.

may offer additional help. As long as information is provided to the client in the format foreseen by legal obligations, and a standardised offer is presented along with a customised offer, then Big Data use will not negatively affect comparability.

16. How do you believe that Big Data could impact the provision of advice to consumers of financial products? Please explain your response.

Big Data will have a positive effect on the provision of advice to consumers of insurance services. The specification of the demands and needs of a consumer as the basis for a personal recommendation[11] will be simplified, because Big Data can enable the distributor to learn more about the needs and demands. It should therefore make it easier for insurance distributors to offer products that better match these demands and needs. Transparency of financial products will likely also grow.

17. How do you believe Big Data tools will impact the implementation of product governance requirements? Please explain your response.

Big Data tools will have a growing general impact on the implementation of product governance requirements, especially when it comes to product testing or scenario analysis. Using Big Data will likely increase the complexity of products and business and this should be reflected in relevant processes and controls. A focus should be set on the data quality, as incomplete, inadequate or inaccurate data could lead to wrong decisions. Operational and reputational risks should be considered closely.

Product governance requirements for insurers will be introduced in 2018 following the implementation of IDD. Insurers will have to carry out several analyses during product development and its lifetime and consider which tools fit best for which analysis. At the moment, Big Data tools have no different impact on the implementation of product governance requirements than other analytical tools. However, since the Level 2 work on IDD is not finished, it is too early to draw firm conclusions.

18. How do you believe Big Data tools will impact know-your-customer processes? Please explain your response.

Big Data has the potential to strongly impact and greatly simplify know-your-customer (KYC) processes. According to the provisions of the Anti-money laundering Directive, the obliged insurance companies have to take measures to know their customers. This must include the customer's

[11] As required by Art. 20 para. 1 IDD.

identity but also information on the customer risk factors. Big Data tools can help to gather and process this information as well as identify suspicious activities or patterns.

19. What are key success factors for a Big Data strategy (i.e. the adaptation of the business model/plan towards Big data driven technologies and methods)?

Availability of data is the most important factor. This includes the linking of existing data storages within an undertaking as well as keeping the available data current and accessible (while of course abiding by data protection regulation). Other factors include:

- Client focus (e.g. customer-centric approach revolving around their demands and needs),
- Entrepreneurship (e.g. entrepreneurial spirit and agility),
- Company culture (e.g. adapt overall company strategy),
- Business (e.g. adequate risk and especially cost management),
- Staff (e.g. ensuring support by all staff, especially top management, and hiring staff supporting the Big Data strategy).

20. What are the greatest future challenges in the development and implementation of Big Data strategies?

The greatest future challenges include:

- Competition (e.g. un-level playing field, disadvantages in the market),
- Agility (e.g. (re-)acting swiftly while ensuring customer satisfaction),
- Data (e.g. distinguishing between anonymised and pseudonymised data, finding a responsible way to handle data protection principles such as data minimisation),
- Regulation (e.g. innovation-friendly advancement of regulation),
- Staff and skills (e.g. shift from manual to automated functions, training/hiring staff).

21. This Discussion paper refers to a number of measures and tools meant to ensure compliance with conduct and organisational regulatory requirements as well as data and consumer protection rules in the context of Big Data analytics. Are other measures and tools needed? If so, what are they and what they should cover?

The measures and tools referred to by the Discussion Paper are sufficient.

22. How do you see the development of artificial intelligence or blockchain technology in connection with Big Data processes?

Both artificial intelligence and blockchain technology promise various opportunities but are still in their early explorative phase. A final judgement on their relevance is thus not yet prudent. Artificial intelligence will likely find applications in many parts of the insurance value chain, such as general automatisation of processes, speech recognition or predictive maintenance. Blockchain may eventually be employed in fraud detection or (in a B2B context) for capital market transactions. B3i, a joint industry initiative of 15 international insurers is currently exploring the potential of blockchain with a view to presenting the first results in the summer.[12]

23. Are there any other comments you would like to convey on the topic of use of Big Data by financial institutions? In particular, are there other relevant issues that are not covered by this Discussion Paper?

Overall, we applaud the ESAs for this well-developed paper. Nonetheless, we believe that some issues deserve (more) attention.

- Supervisory use of Big Data: Paragraph 53 describes that "Big Data technologies may address regulatory and compliance requirements and costs more efficiently". In what follows, opportunities for undertakings opened by the use of Big Data are laid out. But the opportunities for supervisory authorities are not considered, even though they should also use Big Data to alleviate the reporting burden and increase efficiency.

  One example is real time feedback: After submission of reports, all validations could be done automatically and feedback could be sent to undertakings immediately. Another example is the elimination of multiple reporting lines: Currently undertakings in Germany have to report to their supervisory authority and their national bank. Both authorities carry out their own validations and give feedback to the undertaking. The undertaking then has to correct its report and resubmit it again to both authorities. The use of Big Data could enable supervisory authorities and national banks to access the same report. Validations could be done once when the undertaking uploads its report. Subsequently both, supervisory authority and national bank, could access the correct report and use it for supervisory and statistical purposes.

[12] See here for further information: http://www.swissre.com/reinsurance/ten_new_members_join_blockchain_initiative_B3i.html

- Scope of the discussion: While the financial, and especially insurance, industry will hold an important role in a future with Big Data use, other sectors – such as car manufacturers or the internet economy – are also significant for developments in financial services provision. Broadening the discussion on Big Data could ensure a more overarching approach.

Berlin, 17 March 2017

Gesamtverband der Deutschen Versicherungswirtschaft e. V.

Consumer Model

Consumer Policy Positions of the German Insurance Association (GDV)

GDV
DIE DEUTSCHEN VERSICHERER

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I. Introduction

Consumer protection has increasingly come into political focus in recent years, on both the European and national levels. The insurance industry supports this development. After all, processes like digitalisation, demographic change and the continuing emergence of different lifestyles, as well as the enduring low-interest environment and the appearance of new risks, e.g. from climate change, have a lasting impact on consumers, businesses and society. While some of these developments put consumers in a stronger position, others make them more vulnerable.

In light of this situation, the insurance industry is formulating a consumer model for the insurance market which takes into account the unique aspects of this market. The insurance industry will align its efforts towards further improving consumer-friendliness with the consumer model. At the same time, this model provides a reference framework for the discussion and assessment of legislative initiatives and other consumer protection measures.

II. Consumer Model

The insurance industry sees its customers as mature citizens who make their decisions independently and on their own responsibility. But at the same time, it recognises that people differ based on their individual life situations, preferences, needs and abilities. As a result, the model under which consumers are competent to make all purchase decisions equally, provided they have sufficient information, is not accurate based on practical experience.

Thus, there is no such thing as one "ideal consumer." Recent research also supports a more differentiated view of the consumer and the Grand Coalition adopted such a view in its 2013 coalition agreement. The insurance industry orients itself on this **differentiated consumer model.** In other words, the industry envisions a broad range of consumers, extending from **highly competent to vulnerable**.

But this does not mean that consumers should not be allowed to make their own decisions, or that they should not be responsible for their actions. Rather, consumer protection measures must be directed towards enabling consumers to participate in the insurance market independently.

It should also be kept in mind that insurance companies balance out risks collectively. Accordingly, consumer protection should focus not just on the interests of individual consumers, but on achieving a reasonable balance between individual consumer interests and the interests of the community of insured persons.

This differentiated consumer model and the unique aspects of the insurance product create challenges both for the industry itself and with regard to shaping future conditions for consumer policy. The positions stated below and the principles which are developed from those positions are meant to provide a framework for the necessary discussion about consumer protection in today's insurance market. These principles are consistent with voluntary industry initiatives like the code of conduct for distribution, the "well-advised" training initiative and the code of conduct for data protection.

III. Consumer Policy Positions and Associated Principles

■ Offering products which meet consumers' needs

The German insurance market especially is characterised 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. This is the only way to keep customers (and, therefore, consumers) satisfied permanently.

For these reasons, insurers need effective internal product management and distribution strategies which adequately take into account consumer interests. However, regulatory rules to this effect must give insurers enough flexibility to design individualised and innovative products and avoid unnecessary bureaucracy. In particular, new regulatory measures must not result in price controls or detailed requirements for product design. Pricing and product design must continue to be determined by competition, as this is the only way to ensure that the insurance markets will remain innovative and efficient.

Principle:

Consumers should be offered need-based products which suit their individual circumstances and insurance preferences. Products which clearly do not fit the customer's situation are not need-based products.

■ Providing reliable and transparent information

Consumers should be able to make informed decisions on their own without anyone deciding on their behalf. To do so, they need high-quality information, presented in a clear and transparent manner. Therefore, information about products and services should be formulated in a manner commensurate with the consumer's knowledge and needs. At the same time, consumers will have to process this information when making their insurance decisions. They have a wide variety of consultation options available to help them do so.

Merely seeking to provide more and more information would not address consumers' needs. Many consumers are already struggling to deal with the flood of information which has been unleashed by the ongoing regulation of the market. Still more regulatory measures, such as the EU Regulation on key information documents for packaged retail investment products, are already being implemented. In light of previous experience with disclosure requirements, it is necessary to have an open debate as to what information consumers really want and need.

Principle:

Consumers should receive high-quality information which explains their policy in a clear and comprehensible manner.

This information should enable consumers to compare products and make well-informed decisions. Simply providing more and more information would not be helpful.

Strengthening financial education for consumers

Another key foundation of freedom of choice for insurance coverage is consumers' access to basic financial education. It is therefore necessary to focus more on teaching key skills, as well as adapting the teaching material to new requirements. In light of this situation, it is a welcome development that some Federal States are laying greater emphasis on consumer financial education in their curriculums. It would be desirable for other States to follow their example.

In addition to information about their specific insurance policy, consumers should also have a general understanding and knowledge concerning possible gaps in their planning and coverage. The insurance industry also has an obligation in this regard. For this reason, insurers have called e.g. for the introduction of consumer-friendly pension information across all pillars of the system so as to enable consumers to plan more confidently for retirement (keyword: "online platform"). In addition, the insurance industry is conducting campaigns in cooperation with certain Federal States in order to educate consumers about natural disaster insurance coverage. It is necessary to ensure that consumers have enough information when it comes to protecting themselves against natural disaster risks, given that many homeowners and renters continue to underestimate this risk.

Principle:

Efforts to educate consumers about risks and gaps in their coverage should be reinforced. A key aspect of this effort is providing consumers with financial education through government agencies.

Freedom of choice in access to insurance coverage

The contract with the customer is the keystone of the insurance business. Protecting oneself against risks is a fundamental aspect of our society as well as our economy. It is often difficult for consumers to make insurance decisions, as these often involve sensitive issues and complex matters that extend far into the future. In the interest of avoiding gaps in coverage, it is therefore necessary to provide consumers with various means of concluding insurance contracts, from direct purchase online to intensive consultations with intermediaries. Depending on their situation, consumers increasingly want to take advantage of both digital product and informational offerings and personal consultations.

Consumers must therefore be able to choose among different ways of accessing insurance coverage. Will they contact an insurer directly? Do they prefer to seek advice from an intermediary working on a commission basis? Or will they instead hire an independent advisor who charges a fee for his or her services? This freedom

of choice must be preserved. It is consistent with the diversity of consumers, each of whom has different expectations, interests and personal abilities, as well as different financial situations.

Principle:

Insurance is a matter of trust for consumers. Accordingly, the consumer's needs and desires are at the centre of each consultation.

Consumers should be free to choose whether to contact an insurer directly, seek advice from an intermediary working on a commission basis or hire an insurance advisor who charges a fee.

Justifying trust in the service

In the event of a claim, consumers expect to be compensated by their insurers quickly and without complications, in the amount stipulated in their policy. This also applies to third-party victims with a statutory liability claim. At the same time, when benefits are paid out improperly, the entire community of insured persons pays the price. As a result, consumers have a vital interest in ensuring that insurers only settle claims which are contractually owed, and in the amount specified in the policy. To ensure that this is the case, it is necessary to examine the benefit claim as part of the adjustment process. Insurers must be able to find the best possible balance between these two sets of interests.

When they file a claim, consumers must be told in a comprehensible manner which information they will need to provide for the processing of the claim. They also need to be informed in a transparent fashion about the status of processing and the further course of the procedure. This is all the more important given that consumers in this situation are often in an emotionally exceptionally circumstances (e.g. following an accident, burglary or natural disaster). Accordingly, claims adjustment decisions should be made as quickly as possible and be comprehensible. With the steady advancement of business and claims adjustment processes, the needs of consumers will be accommodated even more in the future.

Principle:

Consumers need to be able to rely on insurers providing contractually stipulated benefits in every case. Claims should be processed as quickly and transparently as possible.

■ Protecting data effectively

Insurance companies need to be able to collect and use personal data in order to assess and insure risks.

The insurance industry is conscious of its responsibility with regard to data protection. It was the first industry in Germany to develop a code of conduct for data protection which has been approved by all the German data protection authorities. The code of conduct raises the level of protection by imposing strict requirements with regard to data security, notification and the documentation of data processing. Robust protection of its electronic IT systems has long been a top priority for the insurance industry. In order to protect against cyber attacks, the industry created the basic structures necessary to provide early warning with a crisis response centre a few years ago and thus improved security.

New digital technologies for data collection and use offer considerable potential for process and product innovations. Consumers benefit from new forms of communication, customised insurance coverage and better support with reduced risks.

In order to ensure that the insurance market will be able to adapt to consumer needs in the future, it is necessary to intensify the social dialogue concerning the impact of digitalisation on insurance products and the associated challenges for data and consumer protection. The insurance industry will contribute actively to this discussion.

Principle:

The security and protection of personal data is a top priority for insurance companies. The insurance industry's code of conduct for the handling of personal data ensures a high level of data protection from first contact with consumers all the way to settlement.

Enabling consumers to make independent decisions about their insurance coverage

Consumer policy has to be based on how people act in real life. Idealised conceptions of how consumers should be are not helpful.
At the same time, the freedom of consumers to make decisions about their coverage merits protection. This means that consumers are also responsible for their decisions. The ability of consumers to make individual decisions is a prerequisite for the development of need-based insurance products and the optimisation of those products in a consumer-oriented manner in competition. As a result, consumer policy measures should be designed so that they do not limit the ability of consumers to make their own decisions, but rather to help them do so.

The goal must be to enable to consumers to act independently and choose products freely. On the other hand, consumer protection should not mean that consumers are relieved of their responsibility for their decisions by blindly trusting authority.

Principle:

Consumers should be able to make decisions freely and independently, based on their individual goals and considerations. At the same time, the insurance industry is aware of its responsibility, also towards vulnerable consumer groups.

Ensuring effective consumer protection architecture with a clear division of labour

The insurance industry supports an effective consumer protection architecture, such as currently exists on the national and European levels. But it is important to have clearly defined tasks and powers: as an insurance regulator with a strong mandate, BaFin is responsible for overall consumer protection and protects all consumers. Protecting the interests of individual consumers is the task of the arbitration bodies (i.e. the insurance ombudsman) and the courts. The market observers operated by the Federation of German Consumer Organisations can and should point out disruptions in the market so that early action can be taken to avert potential damage to consumers. It is important for the market observers to be subject to a transparent quality assurance regime and that they have a realistic understanding of the market.

The industry has contributed constructively to political measures intended to further strengthen consumer rights. However, in order to ensure that such measures will in fact accomplish their intended objective, a comprehensive and transparent impact assessment including all stakeholders should be made in advance. The negative impact of such measures, such as excessive bureaucracy, could affect consumers

and businesses alike. Moreover, it must be ensured that such measures do not hinder sensible innovations.

If possible, government regulators should only intervene in cases where the market's self-regulation mechanisms are ineffective. The insurance industry has taken appropriate voluntary measures with the creation of the insurance ombudsman, the code of conduct for distribution and the code of conduct for data protection. Another positive example is the "well-advised" training initiative which already in 2014 implemented requirements that were not imposed by the European legislators until the adoption of the EU Insurance Distribution Directive (IDD) in 2016: constant training for all those engaged in selling insurance.

Principle:

The insurance industry supports an effective consumer protection architecture with clearly specified tasks for the various institutions. Self-regulatory measures should also play a key role within this architecture in the future.

IV. Consumer Policy Principles at a Glance

1. Offering products which meet consumers' needs

Consumers should be offered need-based products which suit their individual circumstances and insurance preferences. Products which clearly do not fit the customer's situation are not need-based products.

2. Providing reliable and transparent information

Consumers should receive high-quality information which explains their policy in a clear and comprehensible manner.

This information should enable consumers to compare products and make well-informed decisions. Simply providing more and more information would not be helpful.

3. Strengthening financial education for consumers

Efforts to educate consumers about risks and gaps in their coverage should be reinforced. A key aspect of this effort is providing consumers with financial education through government agencies.

4. Freedom of choice in access to insurance coverage

Insurance is a matter of trust for consumers. Accordingly, the consumer's needs and desires are at the centre of each consultation.

Consumers should be free to choose whether to contact an insurer directly, seek advice from an intermediary working on a commission basis or hire an insurance advisor who charges a fee.

5. Justifying trust in the service

Consumers need to be able to rely on insurers providing contractually stipulated benefits in every case. Claims should be processed as quickly and transparently as possible.

6. Protecting data effectively

The security and protection of personal data is a top priority for insurance companies. The insurance industry's code of conduct for the handling of personal data ensures a high level of data protection from first contact with consumers all the way to settlement.

7. Enabling consumers to make independent decisions about their insurance coverage

Consumers should be able to make decisions freely and independently, based on their individual goals and considerations. At the same time, the insurance industry is aware of its responsibility, also towards vulnerable consumer groups.

8. Ensuring effective consumer protection architecture with a clear division of labour

The insurance industry supports an effective consumer protection architecture with clearly specified tasks for the various institutions. Self-regulatory measures should also play a key role within this architecture in the future.

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