Paragraph	Comments
1	As mentioned in the IAIS Issues Paper on Increasing Digitalisation in Insurance and its Potential Impact on Consumer Outcomes (the previous IP), the use of digital technology can both give rise to risks, and be a solution in ensuring consumer protection and the fair treatment of customers. Also, as emphasised in the previous IP, we propose expressly stating that "supervisors will need to balance the risks of new innovations against the benefits for policyholders". This IP focuses on topics such as affordability and how opacity in the use of algorithms could have an effect on consumer protection. At the same time, consistency with frameworks in each jurisdiction (e.g. how mandatory insurance works within them) and existing supervisory requirements on premium ratings should also be taken into account. In Japan, to ensure consumer protection, during the advance product approval processes for personal lines, the basic principles of reasonableness, adequacy, and not being unfairly discriminatory are considered, along with regular risk category reviews. Algorithms are also required to be explained within the processes. Considering the complexity of algorithms, it is unrealistic for supervisors to thoroughly monitor them. We think that instead of checking the details of insurers' algorithms themselves, focusing on how insurers ensure the appropriateness and rationality of outcomes is a more realistic way. Although the issues identified in this IP focus on the use of big data analysis by insurers (and intermediaries), non-insurance companies such as tech companies and start-ups that run insurance-like businesses should also be subject to supervision and regulation equivalent to that of insurers. This should be clearly stated in this IP.

16	Customers generally compare several insurance products by considering points such as coverage and premium. The 'opacity of algorithms' alone does not necessarily lead to decreased comparability of products. Therefore, we believe the following sentence in the IP should be deleted: "The opacity of algorithms may lead to decreased comparability of products, especially if customers are only able to see or access product offerings that are individually tailored".
22	The purposes of data usage do not necessarily apply to the description in the table. Therefore, we propose deleting the "Use" column from the table and revising the first sentence as follows: "The insurance sector is heavily reliant on various types of data, which is used for many purposes, such as risk selection, marketing, and claims management, and is drawn from multiple sources". Regarding the second sentence, other examples not currently included in the table could also exist. As such, we also propose revising the sentence as follows: "Although not an exhaustive list, some examples are given in the following table".
24	Regarding the collection of data through telematic devices, we believe that insurers generally obtain consent from their customers, and that many jurisdictions seek prior consent from the viewpoint of personal information protection. Japan has a law on the protection of personal information and the GIAJ provides personal information protection guidelines to secure personal information protection by its member insurers. Therefore, we propose adding a comment indicating that such laws and guidelines could reduce the possibility of collecting/using customers' data without the customers' consent.
34	As we mentioned in our comments on paragraph 1, algorithms are required to be explained within the product approval processes in Japan. We believe that any lack of transparency and asymmetry of understanding could be reduced in that case. We think it would be effective to disclose it to customers in a manner that contributes to customer understanding of, for example, what kind of data is used in insurance and how behaviour affects insurance premiums. Obtaining accurate understanding from supervisors through explanations of algorithms while providing customers with easily comprehensible information could help insurance companies protect their intellectual assets and encourage them to innovate more effectively.

37	As mentioned in our comments on paragraph 1, in order to secure product authorization, explaining algorithms to supervisors is a necessity in Japan. Therefore, the risks mentioned in this paragraph could be reduced.
44	Even if there are large data sources, insurance premiums may not necessarily be reduced when the costs associated with its analysis are high. Also, services associated with insurance, such as roadside assistance, are related to product design and might not be directly related to BDA.
45	Although we agree that “access to large data sets can also allow insurers to design customer-specific products more easily”, such products are not necessarily complex. Also, if analysis could prove that risks would be lower-than-expected by utilizing acquired data, premiums would naturally be lower. However, it is not always the case that acquiring large amounts of data results in reduced costs. For example, we can assume it would be expensive for insurers to secure additional human resources with knowledge and experience of analysis of data sets and data science.
46	While this paragraph only refers to UBI, there seems to be a misunderstanding that this paragraph also describes “on-demand insurance”. Therefore, we believe that this paragraph should be completely revised. In particular, the sentences below seem to deal with “on-demand insurance”: “cover for only short periods of time when they require it”, “UBI may also be useful for cover during periods of travel or when engaging in certain sporting activities”, “However, such products potentially create risks if customers forget to activate or deactivate their cover as and when necessary”. In addition, even if the sentences above refer to on-demand insurance, simply writing "cheaper" would be misleading because covering risks for a certain period concentrates risks. Also, it is also not necessarily the case that the purchase of insurance on-demand makes customers more conscious of the need to avoid or mitigate risky behaviour.
47 example	The Dutch and German examples concern ”pricing and underwriting”. Therefore, we believe they should be moved to 3.2. We are of the opinion that the way readers comprehend these examples varies according to jurisdiction, because each one has its own legal regulations that set requirements on available data. The data stated as examples in this IP might have already been used in statistical methods to calculate rates.

	If these examples are moved to the ”pricing and underwriting” section, a description should be provided as to why they are dealt with there, what the new points are, and what we need to take note of.
52	The risk of consumers purchasing more insurance than necessary is not limited to targeted products. In Japan, in order to help ensure that consumers’ needs are met, insurers always confirm consumer intention. At the same time, it is important that consumers improve their financial literacy, so that they acquire accurate knowledge about insurance and understand the level of protection they need.
61	In paragraphs 75 to 77, the effect of improving customers' behaviour by providing information on ways to reduce their risks is stated. These initiatives also contribute to solving affordability-related issues. Therefore, this point should also be mentioned.
62	Regarding mandatory insurance, there is a need for a policy discussion concerning exactly what such insurance should cover, and how premiums should be determined in the light of affordability and inclusiveness of insurance products. For example, Japan has two types of automobile insurance; mandatory (compulsory automobile liability insurance) and voluntary. While the premiums for the former are determined across the board, voluntary premiums are risk-based. In jurisdictions like Japan, customers are not immediately excluded, leaving no effect on affordability. Therefore, it should also be stated that some jurisdictions manage insurance systems giving regard to the balance of these issues. Also, the method to provide insurance to extremely high-risk and vulnerable groups, which private insurance companies cannot undertake, has been a long-standing issue regardless of BDA. Such issues should be subject to comprehensive policy discussions, including the possible involvement of government protection instead of private insurance.
72	In paragraphs 75 to 77, the effect of improving customers' behaviour by providing information on ways to reduce their risks is stated. These initiatives also contribute to solving affordability-related issues. Therefore, this point should also be mentioned. Also, the method to provide insurance to extremely high-risk and vulnerable groups, which private insurance companies cannot undertake, has been a long-standing issue regardless of BDA. Such issues should be subject to comprehensive policy discussions, including the possible involvement of government protection instead of private insurance. For example, as we commented on paragraph 62, Japan has two types of automobile insurance; mandatory (compulsory automobile liability insurance) and voluntary. While the premiums for the former are determined across the board, voluntary premiums are risk-based.

81	While the risks described in this paragraph are understandable, stating that they "could lead to financial stability issues” seems to be a leap in logic. This should only be stated after clarifying facts, such as the transmission channels of risks. These wordings should be deleted from this IP.
96	We would like a more detailed explanation on what is meant by “back-testing". Also, the terms of service regarding customer data and the establishment of governance to protect data are required in Japan. Additionally, there are cases where the validation of algorithms (e.g. verifying accidents against data, setting a threshold of each risk element) is required within the product approval process, or within usual supervision parameters. Moreover, in order to help ensure that the consumer’s needs are met, Japanese insurers reconfirm consumer intention at the time of contract conclusion. In these cases, assessing the effectiveness of advice based on BDA insights and the suitability of products offered to customers is unnecessary.
99	As we commented on paragraph 1, it is unrealistic for supervisors to thoroughly monitor algorithms, considering its complexity. In addition, consistency with frameworks in each jurisdiction (e.g. how mandatory insurance works within them) and existing supervisory requirements on premium ratings should also be taken into account. For example, the terms of service regarding customer data and the establishment of governance to protect data are required in Japan. Additionally, there are cases where the validation of algorithms (e.g. verifying accidents against data, setting a threshold for each risk element) is required within the product approval process, or within usual supervision parameters. In these cases, we think it is unnecessary for products using BDA to be subject to double supervision at the operation stage, which is not applied to other products, just because they use BDA. Also, the perspectives to be considered should be built on dialogues between supervisors and insurers in each jurisdiction, and any prescriptive descriptions about algorithms should be avoided at this stage given that innovation using algorithms is also expected to lead to benefits for customers. In addition, the examples in the third and subsequent bullet points should be deleted, since these statements could lead supervisory methods in certain directions that could impede insurer innovation.

100	As we commented on paragraph 1, it is unrealistic for supervisors to thoroughly monitor algorithms considering its complexity., We think that instead of checking the details of insurers' algorithms themselves, focusing on how insurers ensure the appropriateness and rationality of outcomes is a more realistic way. If verification of algorithm processes are to be conducted, "sample verifications" and "integrity checks" should be described only as examples because other possible alternative methods are available. Moreover, as we stated in the beginning, consistency with frameworks for insurance systems in each jurisdiction and existing supervisory requirements on premium ratings should also be taken into account. In jurisdictions such as Japan where the effectiveness of an algorithm is already validated in the product approval process, supervising the design of algorithms for products that have already been approved may result in double supervision and verification, and should be avoided.
100 EU example	We believe that a more detailed explanation on what "Traceability" and "Mechanism" mean in this context of the EU example would be helpful for readers.
102	We do not think supervisors need to set any BDA-specific supervisory frameworks because they can address this within a supervisory framework for third parties.
106	Although we understand that inappropriate use of data could result in mistrust of the insurance sector as a whole, we believe that the data collected directly from customers by insurers is done with the customers’ prior consent. This is also required in terms of privacy protection in many jurisdictions. For example, in Japan the Protection of Personal Information Act is in force, and we, the GIAJ, also publish Personal Information Protection Guidelines to encourage member insurers to protect personal information. We think that the above-mentioned points should be referred to in the IP.