

Central Bank of Ireland

Data ethics within insurance¹



¹[Data ethics within insurance - Centralbank.ie](https://www.centralbank.ie)

BACKGROUND

As part of their “Future Focused” strategy, the Central Bank of Ireland (the Central Bank) has identified increasing digitalisation across the insurance value chain as an emerging risk within the insurance sector. The rapid and ongoing advancements in digitalisation (referred to as the use of Big Data and Related Technologies (BD&RT)) presents increased opportunities, however, with these benefits comes the potential for new or increased risks.

In this context, the Central Bank undertook a research project, the Data Ethics Within Insurance Project (the DE project), over 2021 and 2022. This was a technical support project implemented by European Commission – DG REFORM and supported by KPMG as delivery partner under the Technical Support Instrument (TSI) of the European Union.

The DE project involved an in-depth study into the use of BD&RT across the insurance value chain, with a particular focus on ethical aspects. A data collection exercise in the form of surveys and complementary interviews was conducted with a range of firms supervised by the Central Bank to identify the existing and intended uses of BD&RT. In addition the DE project sought to identify potential benefits and risks for both consumers and firms associated with the use of BD&RT. The key findings across uses, issues and benefits are set out on the pages overleaf.

BD&RT is a key area of ongoing research and development. European Insurance and Occupational Pensions Authority (EIOPA) performed a Thematic Review of Big Data Analytics in Motor and Health Insurance² and have established a consultative expert group which has led to the publication of its report *AI Governing Principles: Towards Ethical and Trustworthy Artificial Intelligence in the European Insurance Sector*³. Work is also ongoing at an EU level on the AI Act with the European Parliament recently approving its negotiating position. At an international level, digital innovation is a strategic theme for the International Association of Insurance Supervisors (IAIS) who have established a FinTech Forum. Furthermore, recent developments, in particular the use of ChatGPT, has prompted significant political and regulatory attention in terms of potential benefits and risks it presents.



² https://register.eiopa.europa.eu/Publications/EIOPA_BigDataAnalytics_ThematicReview_April2019.pdf
³ <https://www.eiopa.europa.eu/publications/artificial-intelligence-governance-principles-towards-ethical-and-trustworthy-artificial-en>

USES

The current and planned use of BD&RT within the insurance sector were explored as part of the survey conducted with the firms.



Uses - Key findings and observations



Use across the insurance value chain

- Most firms were, to some extent, either already using BD&RT within their businesses and across the insurance value chain or they expected to do so within three years.
- All firms were currently using, or planning to use, BD&RT within the pricing and underwriting stage and most firms were already using, or planning to use it, within the sales, distribution and marketing stages.
- Furthermore, the majority of firms considered that BD&RT had the largest impact on the pricing and underwriting stage, followed by the sales, distribution and marketing stages.
- The stages of the insurance value chain that firms considered to be least impacted to date were fraud detection and the post sales services and assistance stages.



Types of data

- The most common types of data used by firms included: loss data, population data and demographic data obtained from both internal and external sources.

- In respect of other/non-traditional data, it found that firms' own digital data, geo-coding and online media data were already in use to some extent.
- Responses also suggested that the use of the Internet of Things (IoT) data is where firms expect to expand in the next three years.



Use of related technologies

The key findings in relation to the use of related technology across each stage of the insurance value chain were as follows:

- Product development: The most common current and planned use is the use of AI or other BD&RT on various forms of data, with some firms also currently or planning to use it, is for predictive modelling.
- Pricing and underwriting: The majority of firms were already using automation to some extent in the underwriting process and also in their risk assessments.
- Sales, distribution and marketing stage: The most common uses reported here were website monitoring and communication with customers. Use cases for sales and personalised advertising were also common.

- Post-sale services: The uses here mainly related to process automation and customer self-service tools.
- Claims management: The most common current use was for claims settlement, and the majority of firms expected to use BD&RT within claims processing and management in the next three years.
- Claims fraud management: The most common area of current and planned use was for claims scoring and anomaly detection.



Observations

The Central Bank notes the research confirms that the use of BD&RT is already present across the insurance value chain and appears set to become more widely utilised over the next few years. The impact of the use of BD&RT appears to be greater within certain stages of the value chain, e.g. in respect of pricing and underwriting. The Central Bank notes that these findings are consistent with EIOPA's findings in its thematic review in 2019⁴ where it reported that in the European market there is a strong trend towards increasing use of BD&RT and that traditional data sources are increasingly combined with new sources of data.

4 https://register.eiopa.europa.eu/Publications/EIOPA_BigDataAnalytics_ThematicReview_April2019.pdf

ISSUES AND RISKS

In addition, the DE project sought to identify potential risks for both consumers and firms associated with the use of BD&RT and these were further explored with firms as part of the data collection exercise.



1. General issues

Key findings

The research explored general issues that can arise from the use of BD&RT. These issues can be grouped into the following categories:

- Issues with data, including the use and management of data
- Issues with the design and use of models/technology
- Accountability issues
- Issues associated with outsourcing
- Cyber and security issues

Observations

The Central Bank note the research highlighted the importance of adequate data and model management and governance as well as appropriate data privacy management. It also identified risks associated with granting consent for data use. Indeed, firms may in the future use data for purposes not envisaged at point of consent, resulting in a lack of understanding of the scope of consent given and asymmetry of information. All of this suggests that existing processes and controls for the management of data may need to be reconsidered and updated, with potential upskilling. Strong governance is critical in ensuring data issues do not go unnoticed.



2. Governance risks

Key findings

Through follow up interviews with the firms who participated in the survey, the DE project explored how data ethics was being incorporated within the governance and risk management system of firms.

- Larger firms and firms that are part of groups may be more developed and advanced in relation to data ethics, governance and risk management.
- Governance: Most firms did not have explicit definitions of data ethics or specific policies in relation to data ethics; and many firms looked to GDPR and information security in response to questions related to data ethics considerations.
- Use of third parties: It was observed that within the procurement process, there was a reliance on GDPR to cover ethical matters, rather than an explicit consideration of data ethics.
- Use of external data and models: Firms face validation challenges, with external and more non-traditional data being perceived as having a higher level of inaccuracy or providing correlations with prohibited data.
- Governance from a conduct perspective: Most firms did not have a broad internal definition of fairness and non-discrimination, and where firms did have a definition in place it referred to specific aspects in pricing.

Observations

The Central Bank noted the findings highlight the importance of strong governance and risk management with respect to a firm's use of BD&RT and a possible need for more explicit consideration of ethical matters. The Central Bank stresses the importance of appropriate and informed board and senior management engagement, where BD&RT risks are material. Furthermore, the Central Bank also stresses the need for firms to explicitly consider ethics. It is important for firms to note the Central Bank's expectation in this respect would extend far beyond compliance with existing requirements and controls e.g. GDPR.

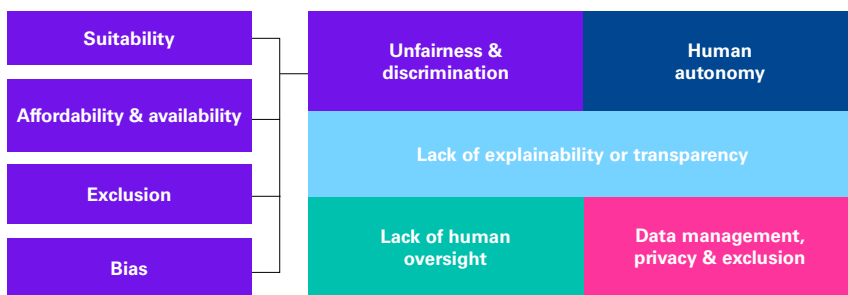
ISSUES AND RISKS



3. Consumer Risks

Key findings

The research identified a number of risks to customer outcomes, relating to the use of BD&RT across the insurance value chain. The potential risks to consumers were grouped into five risk groups as set out in the chart below.



Risks associated with each stage of the insurance value chain were identified and attributed to the risk categories and the key findings included:

- The pricing and risk assessment stage is where the highest potential impact on consumers was and that the associated risks were likely to increase over the next three years, as firms enhance use of BD&RT.
- These risks were followed by those related to advertising and personalised offerings and other marketing and selling practices.
- Risks relating to the use of behavioural data were also considered to be potentially high impact but expected to emerge over a longer time horizon.

Observations

The Central Bank noted it is important to emphasise that there are existing consumer protection requirements both prudential and conduct, e.g. Solvency II and the Consumer Protection Code, as well as other guidance, e.g. EIOPA’s AI Governance Principles, that contain provisions requiring or guiding firms to have measures in place that mitigate many of these risks.

The Central Bank noted firms need to ensure that they implement practices that consistently result in fair outcomes for consumers, enabling them to make choices that are in their best interests; and firms need to ensure that consumers can access timely and customer-focused service, including where a consumer needs, or is best served by, an in-person engagement with the firm.

BENEFITS

The DE project also sought to identify potential benefits for consumers associated with the use of BD&RT and these were further explored with firms as part of the data collection exercise.



Benefits

Key findings

The potential consumer benefits identified by the project included enhanced claims processing and resolution, enhanced consumer engagement, more personalised products, services and pricing, lower administration and operational costs.

The key findings from firms ranking of the level of importance of each potential benefit from a consumer perspective included:

- Over half of the firms who responded considered enhanced claims processing and resolution to be exceptionally important.
- This was followed by enhanced customer engagement and enhanced personalisation of products and services.

Observations

The Central Bank recognises that benefits can accrue to firms, consumers and society and considers it very important that there is an appropriate balancing of interests across these stakeholders. The Central Bank considers that the use of technology by consumers should serve their interests and not be used as an opportunity to take advantage of their behavioural vulnerabilities, or to increase information asymmetries between consumers and firm.



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CONCLUSIONS AND NEXT STEPS

Key conclusions drawn include:

- The results indicate that the majority of respondents were undertaking, or planning to undertake, initiatives to use BD&RT. For some planned uses, the developments were largely at research stage, suggesting that the use of BD&RT is at an early stage of maturity.
- In relation to integration of the associated risk within the overall governance systems, more focus may be needed to ensure appropriate adherence with existing prudential and consumer protection requirements, in particular with respect to the ethical use of BD&RT.
- The Central Bank's view on the need for good governance around the use of BD&RT is echoed by the Organisation for Economic Co-operation and Development (OECD) in its AI principles, which are equally applicable to the use of BD&RT more generally. Principle 1.5, Accountability, notes that "in this context, "accountability" refers to the expectation that organisations or individuals will ensure the proper functioning, throughout their lifecycle, of the AI systems that they design, develop, operate or deploy, in accordance with their roles and applicable regulatory frameworks, and for demonstrating this through their actions and decision-making process (for example, by providing documentation on key decisions throughout the AI system lifecycle or conducting or allowing auditing where justified⁵)."
- Solvency II requirements in relation to the system of governance and risk management within firms includes appropriate integration within relevant operational, control and risk management systems, and adequate consideration at board and senior management level.
- The use of BD&RT provides clear examples of the importance of maintaining a consumer focus as the way in which financial services are designed and delivered evolves. In adopting BD&RT, the obligation on firms to act in their customers' best interest remains a key responsibility.

⁵ <https://oecd.ai/en/ai-principles>

- Recent developments in the use and application of technology (such as ChatGPT) across a range of industries, and its potential proliferation have prompted a lot of political and regulatory attention. This is likely to be an area of increased focus going forward.

The Central Banks expectations include:

- Firms to ensure they adopt a consumer-focused approach, which includes careful consideration of the ethical questions and broader implications of their use of BD&RT in a manner that is in line with existing consumer requirements.
- Firms should ensure they apply proper and adequate governance around the use of BD&RT in their activities in a manner that ensures they continue to meet their prudential requirements with respect to those activities.
- The Central Bank note there is considerable material that already exists and is publicly available which can support firms in adopting BD&RT in an appropriate manner. The publication references work performed by performed by EIOPA, IAIS and the AI Act.

The Central Bank will continue its work to expand its understanding of the nature and extent of the use of BD&RT in the insurance sector and will evolve its supervisory and policy approach accordingly. Any such approach will seek to be flexible and proportionate and will involve appropriate engagement with stakeholders, including industry and consumers, as it is being developed.

HOW KPMG CAN HELP

We were delighted to support the Central Bank and DG Reform on this dynamic and relevant topic. As delivery partner for this project, we have gained a huge wealth of knowledge and insights on the level of BD&RT uses and the nature and extent of potential risks for relevant stakeholders stemming from these uses. Through our combined Insurance, Technology, Risk and Regulatory expertise, we can support the development of BD&RT use cases and the understanding of the ethical risks that can arise from these uses. Furthermore, based on our understanding of existing legislation and the sources of good practice we have observed, we can assist in identifying and developing actions firms can take to mitigate the risks that can arise.

Key contacts have been included below.

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