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The use of artificial intelligence systems in the financial market on the example of credit scoring – challenges for consumer protection law

Wykorzystanie systemów sztucznej inteligencji na rynku finansowym na przykładzie scoringu kredytowego – wyzwania dla prawa ochrony konsumentów

Abstract

One of the segments of the financial market in which artificial intelligence systems (AI systems) are used is the banking market. The purpose of the paper is to attempt to counteract the occurrence of specific risks for consumers associated with the use of AI systems used in the banking sector to assess creditworthiness by means of credit scoring. Therefore, the risks for consumers regarding this matter, the practical problems associated with them and *de lege ferenda* postulates for their solution are identified.

Keywords: AI, consumer protection law, credit scoring, artificial intelligence systems

JEL: G18, K29

Streszczenie

Jednym z segmentów rynku finansowego, w którym używane są systemy sztucznej inteligencji (systemy AI), jest rynek bankowy. Celem opracowania jest próba przeciwdziałania występowaniu konkretnych ryzyk dla konsumentów związanych z wykorzystaniem systemów AI stosowanych w sektorze bankowym do oceny zdolności kredytowej za pomocą scoringu kredytowego. Dlatego określono ryzyka dla konsumentów dotyczące tej materii, problemy praktyczne z nimi związane oraz sformułowano postulaty *de lege ferenda* dotyczące ich rozwiązania.

Słowa kluczowe: SI, AI, prawo ochrony konsumentów, scoring kredytowy, systemy sztucznej inteligencji

Introduction

One of the segments of the financial market[1] in which artificial intelligence systems (AI systems) are used is the banking market. It was chosen for the purpose of analysis because of the credit scoring that operates there, which is an example of the use of AI systems for automated decision-making (ADM), including profiling.

The research intention undertaken in this study is to attempt to identify specific risks for consumers associated with the use of AI systems used in the banking sector, i.e. ADM, including profiling to assess creditworthiness through credit scoring. Accordingly, the risks for consumers regarding this matter, the practical problems associated with them and *de lege ferenda* postulates for their solution are identified. In selecting the risks for consumers, the criterion of potential consequences that may occur on the part of the consumer when issuing an automated decision was applied. A situation in which ADM, including profiling, may involve any negative consequences for the consumer, including those resulting in harm, was considered a risk (see Maciejewski, 2010, pp. 36–47).

The paper begins by quoting basic definitions related to its subject matter, describing the essence of credit scoring and ADM regulations, including profiling (under Article 105a of the Banking Act,[2] and Article 22 (1) of the GDPR,[3]

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AIA[4]). It focuses on examples of malfunctioning of automated systems, the causes of disruptions and proposals for their solution. And then *de lege ferenda* postulates are formulated concerning which should counteract them.

The study uses a comparative law method.

The concepts of artificial intelligence, artificial intelligence system, machine learning

The term AI is difficult to define, among other things, due to its ambiguity (see: Namysłowska et al., 2023, pp. 72–72; Rzeźnik, 2023, p. 5). Therefore, due to the difficulty in defining the further direction of AI developments, it is more useful to use the term artificial intelligence system (AI system), which involves a variety of techniques, *e.g.* machine learning (Szostek et al., 2022, p. 8; European Commission, 2018, p. 1). Machine learning systems create new knowledge based on the actions of algorithms using large sets of available information (Rojszczak, 2020, p. 64; Ayodele, 2010, p. 9). For the first time, the legal definition of "AI system" appeared in Article 3 (1) of the AIA as "a machine-based system that is designed to operate with varying levels of autonomy and that may exhibit adaptiveness after deployment, and that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments".[5] In the classification of systems included in the AIA, AI systems used to assess creditworthiness are categorized as high-risk. The decision-maker is the "deployer" of an AI system and the one who establishes it is the "provider". Many more requirements of high-risk AI systems concern the "provider" than the "deployer" (*e.g.* art. 6, 8–22, 26–27 of the AIA). High-risk are *e.g.* "AI systems intended to be used to evaluate the creditworthiness of natural persons or establish their credit score, with the exception of AI systems used for the purpose of detecting financial fraud" (Annex III 5 (b) to AIA). In the United States, profiling using AI systems is permitted when profiling by the credit reporting companies. At the federal level the data protection by the US Fair Credit Reporting Act is provided, *e.g.* there are limitations on what type of information the consumer report may contain. Moreover, the Gramm–Leach–Bliley Act and many state laws "protect personal (financial) information. Furthermore, specific rights exist under anti-discrimination laws" (Langenbucher, 2024, pp. 15–16). State law also regulates other issues related to various forms of AI (see MultiState, 2023).

The essence of credit scoring

AI systems are used for credit scoring, which is a method of assessing a borrower's credit score, in which points are awarded for certain characteristics (see Woźniak & Rogowski, 2012, pp. 110–111). Thus, it is a form of statistical analysis that assesses the probability of repayment of a loan (cf. Word Bank, 2019, p. 9) using machine learning or statistical methods, mainly stochastic or descriptive (see Vojtek & Kocenda, 2006, pp. 155–163; Balina & Idasz-Balina, 2021, pp. 3–5). The determination of credit risk is made on the basis of a model that uses up to several dozen parameters concerning, among other things, the individual characteristics of the borrower, his/her financial situation, credit history. The use of the AI system for scoring makes it possible to create an advanced profile of the borrower and compare it with other profiles and their repayment history. This is because the system can assess each credit application using different databases as well (Rojszczak, 2020, pp. 66–67; Siddiqi, 2017, p. 11, see also Toh, 2024, *passim*). Therefore, credit registers that allow the exchange of credit information can be helpful for assessing a consumer's creditworthiness (Markowski, 2012, p. 8).

Scoring is therefore used to assess creditworthiness, which can determine the final decision on obtaining a loan. Important issues are the impact of scoring on the final decision and the databases used. These may be external databases and the scoring may be carried out by credit reference agencies. As an example, credit scoring models used by two credit registers – the German Schufa Holding AG and the Polish Credit Information Bureau SA (BIK) – can be mentioned. The first of these, Schufa, is the oldest European credit register, using credit scoring (see Borowicz, 2012, p. 80). Schufa uses such personal data for this purpose, *e.g.* personal data, payment behaviour and contract loyalty (Schufa, n.d.). The Polish BIK establishes a score based on information available from banks and cooperative savings and loan associations (*e.g.* repayment of credit without delays, use of credit cards and consumer loans, history of repaid loans) (BIK, n.d.–a). Scoring is possible if at least one loan has been repaid for 6 months. The score takes values from 0 to 100 points, and the more points, the more likely the loan is to be repaid (BIK, n.d.-b).

Credit scoring therefore involves profiling, as the borrower's credit score is determined by comparing his or her "financial behaviour" with the profiles of other borrowers with similar characteristics. Such a procedure raises a number of risks for consumers, especially if the scoring is used to issue an automated decision. It is therefore expedient to outline the nature of ADM, including profiling.

Automated decision-making, including profiling in light of Article 105a of the Banking Act and Article 22 (1) of the GDPR

ADM can be defined as a decision-making process based solely on automated data processing without human involvement. Profiling, if it precedes such a decision, also does not involve a human being (see European

Commission, 2018, p. 20; Mednis, 2022). ADM, including profiling is used to determine the creditworthiness of borrowers, *e.g.* by means of scoring. The right to make automated decisions regarding creditworthiness assessment is given to banks, other financial institutions authorized by law, the entities listed in Article 59d of the ACC,[6] and those established pursuant to Article 105 (4) of the Banking Act (Mednis, 2022). ADM is a broader concept than profiling, as no assessment of an individual is made in the course of it, so in practice profiling is a subcategory, an element of ADM, which is not separately regulated in the GDPR (Ciechomska, 2017, p. 38; see also European Commission, 2018, pp. 8–9; Langenbucher, 2024, pp. 6–7). Profiling is any form of "automated processing of personal data that involves the use of personal data to evaluate certain personal factors of an individual", such as, for example, an analysis or forecast of the individual's economic situation (Mednis, 2022). Article 4 (4) of the GDPR defines profiling as "any form of automated processing of personal data consisting of the use of personal data to evaluate certain personal aspects relating to a natural person, in particular to analyse or predict aspects concerning that natural person's performance at work, economic situation, health, personal preferences, interests, reliability, behaviour, location or movements". ADM may occur with or without profiling in the above sense and *vice versa*. However, these may not be completely separate activities as, depending on the use of the data, the ADM process may be based on profiling (see European Commission, 2018, pp. 6–8).

In the case of the subject matter of this paper, the main focus is on the analysis of Article 22 (1) of the GDRP and Article 105a of the Banking Act, as they relate to the situation of the personal data subject who is subjected to ADM, including profiling for credit scoring purposes.

Article 22 (1) of the GDPR covers the right of a person whose data is processed not to be subject to an automated decision, *i.e.* based solely on ADM, including profiling, and which produces legal effects or similarly significantly affects the data subject. The following observations can be made against the background of this provision.[7]

Firstly, a person will not be subject to ADM if a human being has a real influence on the content of the decision made in this process. It can therefore be considered that, in order to avoid the prohibition of Article 22 (1) of the GDPR, a decision may be suggested by an automated mechanism, but the final choice as to its content should be made by a human being. In contrast, the extent of human participation in this decision-making process may be controversial (Geburczyk, 2022, p. 37; Ciechomska, 2017, p. 40). Article 22 (1) of the GDPR regulates the situation in which an automated decision is made by the profiling entity. However, the case where the entity – which is the ultimate decision-maker – makes such a decision using profiling carried out by another, external entity may be problematic. This issue is addressed by the judgment of the Court of Justice of the European Union (CJEU) of 7.12.2023, C-634/21, in which the Court interpreted for the first time the scope of Article 22 GDPR. The case concerned a credit scoring of an OQ company by the credit information bureau Schufa, which resulted in a third party denying credit to the company. In this judgment, the CJEU held that the provision of Article 22 (1) of the GDPR must be "interpreted as meaning that the automated establishment, by a credit information agency, of a probability value based on personal data relating to a person and concerning his or her ability to meet payment commitments in the future constitutes 'automated individual decision-making' within the meaning of that provision, where a third party, to which that probability value is transmitted, draws strongly on that probability value to establish, implement or terminate a contractual relationship with that person". In order to attribute a "decision" within the meaning of Article 22 (1) GDPR to an ADM outcome that was carried out by an entity other than the ultimate decision-maker, it is therefore necessary that there is an unambiguous impact of such an operation on the final decision determining the legal or factual situation of the individual. As M. Kupiec aptly points out, the condition proposed by the CJEU of the "decisive significance" of the outcome of the ADM operation of a "third party entity for the controller-decision-maker as a prerequisite for qualifying such profiling as a decision within the meaning of Article 22 of the GDPR is vague and *de lege ferenda* should be postulated for further elaboration by the Court in subsequent rulings on Article 22 of the GDPR" (Kupiec, 2024, pp. 33–39). It seems that the minimum requirement for credit scoring to be the "determining factor" in an automated decision is that a credit application should be rejected on the basis of a low credit score of the borrower.

In contrast, the CJEU did not rule on who would bear the burden of proof regarding the determination of the decisive role of the scoring in the decision, *i.e.* whether the individual or the entity performing the scoring (cf. Langenbucher, 2024, p. 18–19). In practice, therefore, despite the relevance of the above-mentioned ruling for the interpretation of Article 22 of the GDPR, a lot of ambiguity still remained regarding the determination of the "decisive influence" of ADM in the form of, *e.g.*, scoring on a decision.

Secondly, against the background of Article 22 (1) of the GDPR, there is also the risk that with processes of *e.g.* machine learning, due to the sophistication of the algorithm, human monitoring may exceed human cognitive abilities. This may result in a so-called automation bias (automation error) (Geburczyk, 2022, p. 37; Ciechomska, 2017, p. 40).

Thirdly, it is necessary for an automated decision to have a legal effect or other significant impact on a person (Ciechomska, 2017, p. 40), *i.e.* a situation in which its effect is the creation, modification or termination of a legal relationship, triggering a change in legal or contractual rights or obligations. In contrast, "other significant effect" on a person in the literature is generally described quite casuistically, and one of the examples cited is the credit scoring decision (Geburczyk, 2022, p. 38).

The interpretation of Article 22 (1) of the GDPR raises many further ambiguities regarding, among other things,

the impact of scoring on the process of issuing an automated decision by the final decision-maker when it is made by an external entity, and possible difficulties in determining the impact of an algorithm on a human decision. These doubts are also not resolved by national regulations on credit scoring. ADM, including profiling is also regulated by Article 105a (1a) of the Banking Act which stipulates that, for the purposes of creditworthiness assessment and credit risk analysis, banks may take decisions relying exclusively on ADM, including profiling personal data (also constituting bank secrecy). In such a situation, this provision grants the person affected by the automated decision, inter alia, the right to receive an adequate explanation of the grounds for the decision taken. The scope of the data subject to profiling is set out in Article 105a (2) of the Banking Act, with the provision that the aforementioned decisions may be taken only on the basis of data necessary in view of the purpose and type of credit. Thus, taking an automated decision, including profiling, does not mean the complete exclusion of human participation in the process (see Kociucki, 2020). Another issue that can be signalled is the scope of data processed in connection with the assessment of creditworthiness, also for the purposes of an automated decision. It is set out in Article 105a (1b) of the Banking Act by expressly stating that these are data necessary in view of the purpose and type of credit, in particular the categories of data listed in the provision. In the case of consumer credit, on the other hand, the scope of this data is not explicitly specified. However, it should be data that is necessary for the purposes of the creditworthiness assessment so as not to violate the data minimization principles of Article 5 of the GDPR (see Article 9 (2) of the ACC; Gałązka, 2019, pp. 99–100). This postulate is partially fulfilled in the case of the Directive 2023/2225,[8] as its Article 18 (3) defines the scope of information necessary to carry out a creditworthiness assessment. The right to explanation of individual decision-making is also established in the Article 86 (1) of AIA. It has the right to obtain from the deployer a "clear and substantive explanation" of the role of the AI system in the decision-making procedure and the main elements of the decision taken.

In practice, it may be difficult to provide the consumer with a "clear and substantive" explanation of the role of the AI system in the automated decision-making process (*e.g.* explaining the role of the AI system in such a decision at all due to the lack of transparency of the algorithms, or the lack of information held by the final decision-maker, especially if the scoring is done by an entity other than the final decision-maker). For example, Article 86 (1) of the AIA does not specify that the final decision-maker is the entity making the scoring. If they are two different entities, the automated decision-maker will not be able to provide the data subject with the required information, as it will only have the scoring (cf. Langenbucher, 2024, pp. 19–20). At the same time, algorithmic bias may not always result in a negative outcome and can sometimes even be beneficial (cf. Danks & London, 2017, pp. 1–7). This, and other risks, will be analysed in the final section of the paper.

Risks regarding the use of automated decision-making, including profiling for credit scoring, and related challenges for consumer protection law

The use of ADM, including profiling for credit scoring, involves various risks for consumers. The risks most frequently mentioned in the literature are analysed below.

The first risk relates to the entity authorized to process the data and involves the use of scoring done by an entity other than a bank, such as a credit reference bureau (see Article 6a (3)(1) of the Banking Act; Article 22 (1) of the GDPR; Articles 8–12, 17 of the AIA). This raises issues such as the outsourcing of credit risk assessment and the problem of redundant data (Rojszczak, 2020, p. 68). Currently, under Article 6a (3)(1) of the Banking Act, a bank cannot entrust an external entity to perform creditworthiness assessment and credit risk analysis, which may limit the application of an AI system, in this case only to information from one bank (making machine learning difficult). A more significant limitation may be the existing rules for data collection and processing, as banks have no legal basis for processing data other than that currently set out in Article 105a (1b) of the Banking Act, which includes basic data about the borrower. There is therefore no legal basis for processing additional borrower data that could be used to improve scoring models (Rojszczak, 2020, pp. 68–69). This restriction does not extend to institutions that provide consumer credit (see Article 9 (2) of the CCA; Czech, 2023, Rojszczak, 2023, p. 69; CJEU ruling of 18.12.2014, C-449/13, para. 34). In order to mitigate this risk, it is possible to postulate the regulation in the banking law of the rules on the use by banks of the outsourcing of personal data to ADM.

The next risk relates to the problem of the use of redundant data (see Articles 6, 105a (1b) (1c), (3) (5) of the Banking Act; Article 9 (2) of the ACC; Article 5 (1), Article 9, Article 22 (1) of the GDPR). It is linked to the fulfilment of the basic principles of data processing set out in Article 5 (1) of the GDPR (Fajgielski, 2022). Profiling may, for example, make it difficult to trace the path of a given decision and thus affect data transparency, or the acquisition of redundant data, which may violate the principle of data minimization (cf. Ślażyńska-Kluczek, 2021, p. 59; Rojszczak, 2023, p. 69). The principles of processing information constituting banking secrecy, processing of personal data for statistical purposes, or time limitations of data processing are regulated in the Banking Act (Mednis, 2022, art.105a (3) (4) of the Banking Act). On the other hand, the bank's internal regulations often fail to specify a time limit for processing the data of credit applicants who, as a result of a negative assessment of their creditworthiness, did not receive the loan (Urząd Komisji Nadzoru Finansowego, 2020, p. 3). This risk therefore refers to a situation in which there is no legal basis for processing data other than the bank's basic customer data. In order to eliminate it, it is necessary to regulate the rules of data retention by banks in a situation where an individual's data was processed for the

purposes of creditworthiness assessment and he or she was not granted a loan.

The next risk is that a person is misjudged and discriminated against by an algorithm (see Czerniawski, 2018; Article 22 (1) of the GDPR; Articles 105a (1a), 70–70a of the Banking Act, Article 86 (1), Articles 8–12, 17 of the AIA). In the case of this risk, characteristics such as age, gender, race can be treated by the algorithm as systemic flaws that will determine the denial of credit. The use of algorithms and databases can therefore have a significant impact on the likelihood and forms of discrimination. This can be both an impact that results in discrimination, as well as an improvement in the situation of groups with certain characteristics. On the one hand, algorithms based on machine learning may allow access to credit for those usually overlooked (*e.g.* without a credit history), while on the other hand, they may increase disparities in interest rates between different groups of borrowers (Hurlin et al., 2021, pp. 2–3, 6–9). Therefore, transparency in the operation of the algorithms is important, as well as informed consent to the collection of data, its use for a specific purpose and for a specific period of time (cf. Bodo et al., 2017, pp.164–167; Rodrigues, 2020). The issue of determining the impact of scoring on the process of issuing an automated decision by the final decision-maker is relevant here, *e.g.* when scoring is performed by an external entity. It may be helpful, for example, to identify precisely the categories of personal data that may be used during the ADM (cf. State of California, 2023), or the separation of ADM and profiling, allowing the consumer to decide at the pre-contractual stage whether to use scoring (cf. Langenbucher, 2024, pp. 22–24).

Another risk may concern the violation of the consumer's right to privacy due to lack of knowledge about profiling (see Article 22 (1) GDPR, Article 105a (1a), Article 70–70a of Banking Act; Article 9 (2) of the ACC; Article 86 (1) of the AIA). Consumers may not be informed about this. Such a problem occurred, for example, when Apple introduced a credit card, when due to the black-box algorithm, the method of setting the credit limit was not clear to the user, and he was not informed that an automated decision had been made (see Baumol et al., 2022, pp. 88–89). One may postulate *de lege ferenda* to regulate the rules for the data retention period after the purpose of processing has ceased to exist and to clarify the categories of data that can be processed for scoring purposes (*e.g.* art. 9 (2) of the ACC). This last issue is also related to the next risk, which concerns the violation of information autonomy due to the consumer's lack of knowledge of what specific data are used for profiling and what conclusions are drawn on their basis (see Article 22 (1) of the GDPR, Article 105a (1a), Article 70–70a of the Banking Act). In the case of automated decisions, it may be difficult to determine the category of data used for profiling and to explain the premises that influenced the final decision, because the basic principles of protection, among others, the right to explain the decision taken may be difficult due to, for example, the complexity of the algorithm. Consequently, challenging an automated decision may also be difficult due to the lack of clear premises for its adoption (cf. Roig, 2017, p. 5–6). Therefore, it may be postulated to specify what information exactly regarding the principles of operation of the algorithm the consumer should receive in the case of an automated decision. On the other hand, in the event of failure to inform the consumer about the use of ADM, protective measures may apply (including a complaint to the supervisory authority) and compensation for the damage suffered (see Article 77–79, 82 of the GDPR; Fajgielski, 2022).

The last risk concerns information asymmetry between the consumer and the bank (see Article 22 (1) of the GDPR; Article105a (1a), Article 70–70a of the Banking Act; Articles 66, 86 (1) of the AIA). The stronger party to the transaction, *i.e.* the bank, has full information about the principles of the algorithm. That is why it is so important to guarantee the consumer the right to obtain full and transparent information about the reasons for making an automated decision, even if in practice this may be difficult, *e.g.* due to the lack of transparency of the algorithms. However, it is the bank that is obliged to provide the consumer with this information, and it is the bank that should exercise due diligence to provide such information. This results from Article 105a (1a) of the Banking Act, Article 86 (1) of the AIA and Article 18 (8) of the Directive 2023/2225. However, in practice, informing the consumer about the reasons that were taken into account in the automated decision may be difficult due to the complexity of the algorithm. In order to counteract both this and the previously mentioned risks, it would be advisable to create a national advisory/supervisory body for the regulatory and practical aspects of AI functioning, especially in public institutions, which would ensure compliance with consumer rights in this regard. Such bodies exist, for example, in Spain or the USA (cf. State of Texas, 2023, Real Decreto, 2023).

Final conclusions

Issuing automated decisions, including profiling used for credit scoring purposes, raises many challenges for consumer protection law. The analysis conducted allows us to formulate the following *de lege ferenda* postulates regarding this matter.

Firstly, the use by a bank of the principles of using data outsourcing for the purposes of issuing an automated decision requires regulation.

Secondly, the risk of processing excess data may lead to a violation of the basic principles of data processing. Therefore, for example, the principles of data retention by banks should be regulated in a situation where a natural person's data was processed for the purposes of assessing creditworthiness, and they did not receive a loan.

Thirdly, the protection of consumers against their incorrect assessment, discrimination by an algorithm due to certain characteristics, should be strengthened. Although

they have the right to a clear and substantive explanation of the reasons for making an automated decision, if the administrator is unable to exercise this right, it is possible to consider introducing regulations enabling the consumer to choose whether to use black-box profiling, if it is more beneficial for them. The controller's compliance with the requirement to explain the reasons for an automated decision may sometimes harm consumers more than it helps them. Consumers may, for example, be interested in profiling using various AI models in order to have the opportunity to choose between fulfilling this requirement and the benefits of a black-box score. Therefore, it is also possible to postulate the separation of ADM and profiling, which would allow the consumer to decide at the pre-contractual stage whether they want to use scoring (see Langenbucher, 2024, pp. 22–27). It is also reasonable to precisely define the categories of personal data that may be used during ADM (see State of California, 2023).

Fourth, it would be necessary to clarify what information on the principles of the algorithm's operation should be provided to the consumer when issuing an automated decision, in order to counteract violations of their right to privacy through lack of knowledge about profiling and its methodology. This would also require regulating such issues as clear and explicit specification of the data, technology and AI model used during ADM (cf. Langenbucher, 2024, pp. 22–24; Articles 8–12, 17 of the AIA).

Fifth, information asymmetry, as well as the above risks, can be counteracted by creating a national advisory/supervisory body in the field of regulation and functioning of AI, especially in public institutions, following the example of *e.g.* state law (Texas) or the Spanish body.

Notes/Przypisy

[1] For a definition of the financial market and its elements, see: Banaszczak-Soroka, 2014, p. 14; Lubasz & Rutkowska-Tomaszewska, 2015, *passim*.

[2] Act of 29 August 1997 – Banking Law, Journal of Laws of 2022, item 2324 as amended.

[3] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), Journal of Laws EU L 2016 No. 119, 1.

[4] Regulation of the European Parliament and of the Council laying down harmonized rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act), Journal of Laws EU L 2024 No. 1689, 1.

[5] For comments on this definition made during the work on the AIA, see: BDVA, 2021, p. 3; Cano, 2021, *passim*; Namysłowska et al., 2023, pp. 72–74.

[6] Act of 12.05.2011 on consumer credit, Journal of Laws of 2024, item 1497 as amended.

[7] Due to the volume framework, the study omits consideration of Article 22 (2–4) GDPR (see Fajgielski, 2022).

[8] Directive 2023/2225 of the European Parliament and of the Council (EU) 2023/2225 of 18.10. 2023 on credit agreements for consumers and repealing Directive 2008/48/EC, OJ EU.L.2023.2225.

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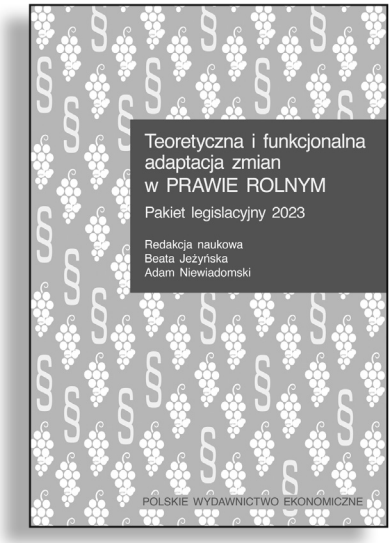
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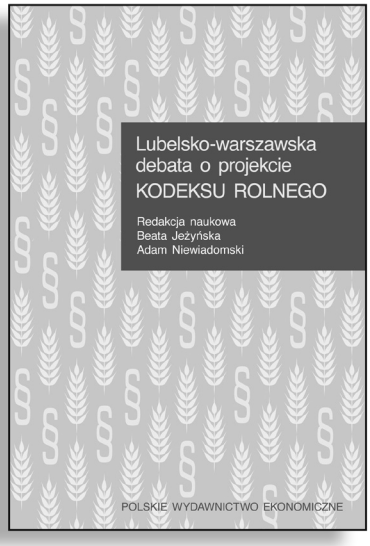
Habilitated doctor of law, professor at the University of Szczecin, economist, sociologist, legal advisor. She specialises in financial law, tax law and economic analysis of law.

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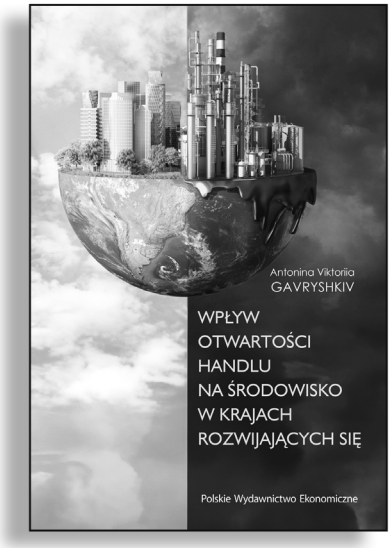
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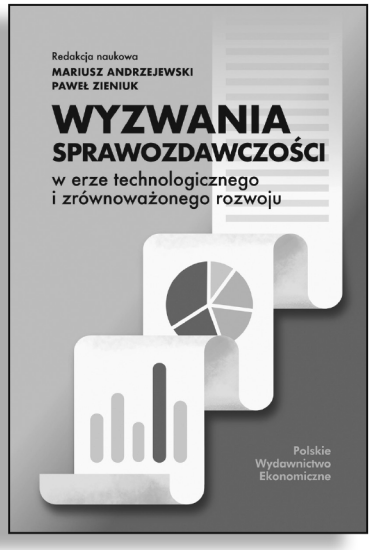
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