Economics and Business Review

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Consumer perceived ethicality of banks in the era of digitalisation: The case of Poland[1]

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Abstract: Ethically conducted business has a positive impact on consumer trust, satisfaction and loyalty. The aim of this paper is to identify the bank activities that customers perceive as ethical and to what extent they affect consumer perceived ethicality. The binomial logit model applied in this study demonstrates that the honesty of financial advice, use of e-banking services and use of artificial intelligence technology to improve the quality of banking services have a significantly positive impact on consumers' perception of banks in Poland as ethical institutions. Significant variables that negatively influence consumer perceived ethicality include gender, education, use of financial advisory services, banks' manipulation of information about financial products and use of personal data against the will of customers.

Keywords: banking ethics, ethical judgement, digital technologies, electronic banking, financial advisory services, artificial intelligence.

JEL codes: A13, G21, G41, O33.

Introduction

In recent decades researchers have begun to develop the field of consumer ethics in theoretical terms and also increasingly in empirical research (Karimova, Hoffmann, Heidbrink, & Hoffmann, 2020). Leonidou, Kvasova, Leonidou and Chari (2013) note that models of consumer ethical decision-making take into account the influence of internal and external factors. Consumer decisions depend on factors that can be categorised as (1) individual, (2) situational, (3) environmental and (4) issue-contingent (also called 'moral intensity'). The concept of consumer perceived ethicality (CPE) recognises the dependence of consumer perception of a company's or service's morality on domains such as (1)

consumers, (2) employees, (3) environment, (4) overseas community, (5) local economy and community and (6) business community (Brunk & Bluemelhuber, 2011). Within the consumer category Brunk (2010) identified: pricing, labelling, advertising, targeting, product quality, customer service and freedom of choice/lock-in as the factors to which consumers pay attention.

A review of publications by Craft (2013), Lehnert, Craft, Singh and Park (2016), and McLeod, Payne and Evert (2016) indicates that the topic of bank operations has not received much attention in qualitative research on ethical decision-making or empirical research on organisational ethics. The literature review conducted here has shown that empirical research in the field of consumer ethics has also only marginally focused on the banking sector. The study by Valenzuela, Mulki and Jaramillo (2010) of customers of financial institutions in Chile found that the customer perceived ethicality of a financial firm is positively related to customer loyalty. Studies conducted by Román and Ruiz (2005) among bank customers in Spain found that perceived ethical sales behaviour has a positive impact on customer satisfaction, trust and loyalty to the bank and the quality of the relationship between customer and advisor. Similarly a study of banks operating in Turkey conducted by Demirgüneş (2015) showed that ethical behaviour by salespeople exerts a strong effect on confidence in the salesperson and the business. Elsewhere a study of Jordanian bank customers indicates that the most valued attributes of bank managers are ethics, followed by respect, financial knowledge and communication (Al-Salim, 2018). Elsewhere, Jasevičienė's (2012) research identified the most desirable ethical behaviours of employees, such as professionalism and competence, honesty and thoroughness, followed by ability to communicate, conflict avoidance and responsibility.

Researchers have also analysed factors that adversely affect business ethics. Fichter (2018) demonstrated that a discrepancy between an institution's declared formal ethical standards and its implemented practices negatively affects the quality of work and ethical climate. Approaching the issue from another angle Rogowski (2018) found the sources of personal conflicts in inappropriate motivational policies, which led salespersons to use aggressive sales techniques. His research showed that in the opinion of bank employees in Poland, high pressure from the bank's managers to increase the sales of banking products resulted in the violation of ethical rules in relations with customers. Elsewhere Cohn, Fehr and Maréchal (2014) and Maurer (2019) undertook to verify the claim that dishonesty in the behaviour of bank employees should be linked to the specificity of the business culture of these institutions. In the former paper, the results of a survey conducted among employees of a large international bank confirmed the presence of such a relationship (Cohn et al., 2014), while the latter study where the behaviour of employees of regional cooperative banks in Germany was analysed did not prove the existence of the mentioned relationship (Maurer, 2019).

The studies presented above show that there has been little research in the area of banking ethics analysed from a customer perspective. The author also identified a research gap relating to the determinants of consumers' ethical perceptions of banks analysed in the literature. Previous research has emphasised the impact of interpersonal relationships, while very limited attempts have been made to assess the ethicality of using information and communication technologies in customer service. The digital transformation in which the banking sector has been involved for many decades has had a significant impact on the way financial services are delivered, the most visible manifestation of which is the reduction in the importance of human contact in favour of the wider use of digital technologies. Therefore the impact of digitalisation of financial services on consumer perceived ethicality of Polish banks is worth investigating. The empirical research conducted in this study creates an opportunity to address these research gaps.

This study aims to identify what factors influence customer perception of banks operating in Poland as institutions that act in accordance with ethical norms in their relations with customers. In addition to socio-demographic characteristics the study will take into account both the determinants centred around the human factor and those accentuating the technological factor.

The remainder of this paper is organised as follows. Section 1 presents a literature review and hypotheses development in three research areas: electronic banking, conventional financial advisory and the application of artificial intelligence technology in banking. Section 2 provides a description of the data obtained through a CATI survey and presents the research methods used in the analysis. Section 3 discusses the empirical findings concerning the determinants of consumer perceived ethicality of banks. The conclusions as well as theoretical and practical implications are discussed in the last part of the paper.

1. Literature review and hypotheses development

Business ethics is a particular type of ethics. Crane, Matten, Glozer and Spence (2019) defined it as 'the study of business situations, activities, and decisions where issues of right and wrong are addressed'. Meanwhile Vallance (1995) believed that business ethics 'is concerned to produce a certain outcome in business, that is, to encourage good actions'. According to de Graaf (2019), business decision-making cannot occur in isolation from ethical considerations. Warren (2011) emphasised that ethical categories should be applied to both the conduct of business and the individuals functioning within the organisation.

The business of banks is based on providing financial services to customers. In recent years the widespread use of ICT has seen a radical change in the way banks do business around the world (Wewege, Lee, & Thomsett, 2020; Cisco, 2017). Consumer behaviour has also been changing as customers are becoming

inclined, especially under the influence of the COVID-19 pandemic, to make more use of modern technological solutions in the area of finance (Capgemini, 2020; Huterska, Piotrowska, & Szalacha-Jarmużek, 2021).

In the banking sector digital technologies have found applications in credit risk prediction, customer profiling, fraud detection and market data analysis (Calzolari, 2021). Consumers see the applications of digital technologies mainly through the changing way they communicate with their bank (Cichowicz, Iwanicz-Drozdowska, & Kurowski, 2021). Direct contact with bank staff is increasingly being replaced by communication using electronic banking channels (OECD, 2018; Boczoń, 2016, 2021). The customer experience of online and mobile banking (and in the future probably also of services using artificial intelligence technology to a greater extent) influences the perception of these institutions. Digital technologies implemented by banks operating in Poland make them innovation leaders in the payments market (NBP, 2020) as well as in the use of cloud-based solutions (FinTech Poland, 2021). In a KPMG report relating to the use of digital technologies by the banking sector in Poland 90% of Poles surveyed declared that banks ensured the security of funds collected (KPMG, 2019). In another survey 90% of respondents said they felt safe using electronic banking while 59% identified banks as leaders in cyber-security in Poland (ZBP, 2020). The presented results show that the effects of the digital transformation of the banking sector in Poland have been analysed from different angles but the research has so far neglected the issue of business ethics.

This study analyses CPE by focusing on three areas of banks' activities: electronic banking, financial advisory services provided by staff in bank branches and advisory services supported by artificial intelligence. It focuses on these areas because of the importance of personal contact between customers and bank employees, the degree of application of information technology in the delivery of financial services, the type of services provided and the customer experience in using them.

1.1. E-banking

In e-banking services customers access their bank accounts through electronic devices such as a computer, ATM, payment terminal, or smartphone (Bondari, 2017). A key characteristic of this service delivery channel is the lack of physical contact between the customer and the bank employee. Thanks to the application of self-service technologies (SST) customers carry out operations, usually simple ones, such as checking account balances, transferring funds and making payments for goods and services purchased at physical or online points of sale (Wang, Harris, & Patterson, 2013). Because the only person directly involved in the delivery of the service is the customer there is no possibility of a direct breach of ethical standards by a bank employee. The CPE of the bank's services through this communication channel may therefore relate to the content of the

services or the reliability of the IT software. Here bank employees are involved in handling complaints submitted by customers.

The analysis of works in the field of electronic banking indicates that empirical studies of customer acceptance of e-banking services as well as their satisfaction with them almost entirely disregard ethical issues. Analysing Internet banking acceptance in Poland, Polasik and Wisniewski (2009) took into account factors such as Internet experience, perceived security of Internet transactions, exposure to marketing campaigns and experience with other banking products. A literature review by Ha, Canedoli, Baur and Bick (2012) showed that the most common determinants of customer acceptance of mobile banking services were customer perceptions of usefulness, compatibility, risk, cost and ease of use. Meanwhile a study conducted by Ho, Wu, Lee and Pham (2020) among Taiwanese and Vietnamese bank customers showed that the main determinants of the intention to adopt mobile banking were peer opinion, perceived behavioural control, compatibility, perceived usefulness, perceived risk, self-efficacy and facilitating conditions.

This review of the literature demonstrates an almost complete absence of factors relating to ethics in research on electronic banking services. Notably one of the important factors in the adoption of electronic banking was confidence in technology in terms of the reliability and speed of IT systems. One might therefore assume that there would be a marginal impact on customers of unethical behaviour by bank employees responsible for the design and maintenance of the IT system. With these considerations in mind the following hypothesis was adopted:

H1: The use of e-banking services has a statistically significant and positive impact on the perception of banks as institutions that follow ethical standards in their relations with customers.

1.2. Financial advisory services carried out by staff in bank branches

Financial advisory services play a substantial role in the business of commercial banks. They accompany almost every service addressed to the retail customer from choosing a bank account, through analysing the characteristics of savings products, investment products and payment instruments, to obtaining financing in the case of loans. The quality of advisory services affects the amount of financial revenue generated by banks and also the level of customer trust, satisfaction and loyalty (Demirgüneş, 2015). The personal traits and professional competencies of financial advisors are extremely important in building positive relationships with customers due to the nature of financial services where it is impossible to separate the process of their production and consumption and the related relatively frequent contact with customers (Danieluk, Muda, Kicia, & Stasiuk, 2020). Although information technology has already entered

the realm of financial advisory services physical contact with staff in bank branches remains the primary channel for providing such services (Cruciani, 2017). Customers value the expertise of employees which helps them better understand not only the design and functioning of financial instruments but also their own financial situation (Migliavacca, 2020).

Among the many expectations formulated for bank employees conduct in accordance with ethical principles occupies an important spot. It is also one of the factors in the consumer perceived ethicality of banks. Among the virtues valued in business professionals are caring, confidentiality, friendliness, honesty, justice, kindness, legality, loyalty, reliability, respect, responsibility, sensitivity, trust, trustworthiness, truthfulness and wisdom (Shanahan & Hyman, 2003). Some of the virtues expected of bank employees relate to moral norms while others are desirable for ensuring proper relations between members of society (Conrad, 2018).

It can sometimes be difficult to meet the expectations that customers have of advisors. This difficulty is not only due to the personality traits of the financial advisor but also the circumstances that influence their behaviour and the decisions they make. An ethical problem may arise when time pressures require quick action, there is a threat of large losses, or there is difficulty in determining ex ante which decisions are ethical or whether to consider them in ethical terms at all (Fleming & Zyglidopoulos, 2008).

Another source of ethical problems can be found in the conflict of interest related to the contradiction of targets set for the advisor by managers (Kurland, 1995). On one hand salespersons are under pressure to meet short-term sales targets to generate revenue for the banks, while on the other they strive to sustain strong long-term relationships with customers (Román & Ruiz, 2005). An ethical advisor should promote the welfare of the customer above all. Their relationship with customers should be characterised by a concern for customer interests, honesty in intentions and actions and truthfulness and accuracy in communication (Hansen & Riggle, 2009).

However, as many studies have shown factors relating to targets and strategies for achieving them set in organisations influence the ethical decision-making and the behaviour of salespersons (Ardichvili, Mitchell, & Jondle, 2009; Kish-Gephart, Harrison, & Treviño, 2010). The study by Green (1989) confirms the impact of management pressure to meet financial targets on the increased incidence of unethical sales practices.

The following hypotheses apply to advisory services provided by bank staff:

H2: The use of financial advisory services has a statistically significant and negative impact on customer perception of banks as institutions that follow ethical standards in their relations with customers.

H3: Customer perception of advisory services as honest has a statistically significant and positive impact on their perception of banks as institutions that follow ethical standards in their relationships with customers.

H4: The practice of manipulating information about financial products has a statistically significant and negative impact on customer perception of banks as institutions that follow ethical standards in their relations with customers.

H5: The practice of making unwanted offers of financial products has a statistically significant and negative impact on customer perception of banks as institutions that follow ethical standards in their relations with customers.

1.3. Artificial intelligence in banking

Artificial intelligence (AI) has been increasingly applied in the financial sector (Hayes, 2020). Banks use this technology for fraud detection, analysis of creditworthiness, financial risk management and in investment advisory services (Arthur & Owen, 2019; Mashrur, Luo, Zaidi, & Robles-Kelly, 2020). Bank customers have direct contact with artificial intelligence when using automated assistants such as chatbots and robo-advisors (Ris, Stankovic, & Avramovic, 2020).

Banks through the use of AI have more information than ever before about the customers they serve and are therefore able to learn more about their behaviour and preferences. This information may permit better tailoring of financial services to customer needs (Moşteanu, 2019). At the same time, however, technological advances have created the threat that banks may use extensive customer knowledge for ethically questionable activities. These actions can undermine customer confidence not only in individual banks but also in the financial sector as a whole (Jubraj, Graham, & Ryan, 2018).

Clarke (2019) addressed issues concerning the ethical use of artificial intelligence. In banking the risks associated with the use of artificial intelligence arise in the use of customers' data in ways that are contrary to their interests and in the area of liability resulting from the use of robo-advisors and chatbots. It also raises questions about the lack of control over the contents of the black box. Bank customers do not know, for example, which criteria and data trigger the artificial intelligence's decision to refuse a mortgage loan (Arrieta et al., 2020). Numerous controversies also surround the vulnerability of machine learning algorithms to discrimination based on gender, race, political leanings, or sexual orientation (Giza & Wilk, 2021; Lin, 2019).

This study developed the following hypotheses in the area of data management and the use of artificial intelligence technology in banking:

H6: Customer experience of having their personal and financial data used by the bank against their will has a statistically significant and negative impact on the perception of banks as institutions that follow ethical standards in their relations with customers.

H7: There is a statistically significant and positive relationship between the positive assessment of the impact artificial intelligence has on the quality

of services provided by banks and the perception of banks as institutions that follow ethical norms in their relations with customers.

2. Method and material

This study used the results of a CATI (computer-assisted telephone interview) survey on a representative sample of 911 Polish citizens aged 18–65. The sample was representative of Polish population in terms of gender, age and place of residence. The selection of respondents for the sample was random-quota. The survey was conducted by a professional research agency—Interactive Research Center Sp. z o.o. in October 2020 based on a questionnaire developed by the author. The full-scale survey was preceded by a pilot study which allowed the verification of the comprehensibility and completeness of the questions contained in the questionnaire. A list of survey questions used in the article is included in the Appendix.

Because meeting the objective of the study required respondents to have experience in using banking services the analyses focused on respondents who declared that they had a bank account. This condition was met by 862 respondents representing 94.6% of the sample. This figure corresponds to the percentage of 18–65 year olds with a bank account as reported by Narodowy Bank Polski (NBP, 2021).

Table 1 presents the main socio-demographic characteristics of the sample comprising bank customers while Table 2 shows the characteristics of the variables and the structure of responses received from respondents who are bank customers. Dependent variable CPE Banks refers to customer perception of banks operating in Poland as institutions that follow ethical standards in their

Table 1. Sociodemographic characteristics of bank customers (*N* = 862)

Variable		Percentage of response
Gender	Female	50.2
	Male	49.8
Age Group	18–24	8.0
	25–34	24.1
	35–44	25.3
	45–54	19.6
	55–65	23.0
Residence	Village	28.4
	Village-suburban area	7.8
	Town with population up to 20,000	13.4
	City with population up to 100,000	20.6
	City with population up to 500,000	17.7
	City with population over 500,000	12.1

Source: Own research.

relations with customers. The explanatory variables on the other hand relate to the use of financial advisory services, frequency of using electronic banking services, evaluations of the ethicality of bank employee behaviour and expectations towards the quality and ethicality of banking services using artificial intelligence technology.

Table 2. Characteristics of variables and the structure of responses obtained in CATI (*N* = 862)

Variable	Variable description	Response scale	%
CPE Banks	banks operating in Poland comply with ethical standards in relations with their customers	1 – definitely not 2 – rather not 3 – it's hard to say 4 – rather yes 5 – definitely yes	3.2 11.2 18.9 56.4 10.3
Gender	gender	0 – female 1 – male	50.2 49.8
Age group	age group	1 – 18–24 2 – 25–34 3 – 35–44 4 – 45–54 5 – 55–65	8.0 24.1 25.3 19.6 23.0
Education	education level	1 – primary and below 2 – lower secondary and basic vocational 3 – secondary 4 – higher	2.1 16.9 40.6 40.4
E-banking	frequency of use of e-banking services (Internet and/or mobile banking)	1 – less than once a year 2 – several times a year 3 – several times a month 4 – a few times a week 5 – several times a day	10.7 0.9 19.7 42.4 26.3
Financial advisory	use of bank advisory services related to savings, investment, or obtaining financing in the form of a loan	0 – no 1 – yes	31.6 68.4
Honest advisory	banks advise honestly	1 – definitely not 2 – rather not 3 – it's hard to say 4 – rather yes 5 – definitely yes	3.4 12.6 26.6 50.3 7.1
Manipulate information	banks manipulate information about financial services	1 – definitely not 2 – rather not 3 – it's hard to say 4 – rather yes 5 – definitely yes	6.2 27.6 29.9 26.6 9.7

Variable	Variable description	Response scale	%
Unwanted products	banks make unwanted offers of financial products	1 – definitely not 2 – rather not 3 – it's hard to say 4 – rather yes 5 – definitely yes	5.2 16.5 19.1 38.9 20.3
Against customer will	banks use personal and financial data against the customer's will	1 – definitely not 2 – rather not 3 – it's hard to say 4 – rather yes 5 – definitely yes	33.9 39.2 19.0 4.4 3.5
AI quality	the use of artificial intelligence technologies by banks will increase the quality of services provided	1 – definitely not 2 – rather not 3 – it's hard to say 4 – rather yes 5 – definitely yes	7.1 15.2 31.5 34.3 11.9
Chatbot ethics	using a chatbot instead of a bank employee will have a positive impact on the bank's compliance with ethical standards	1 – definitely not 2 – rather not 3 – it's hard to say 4 – rather yes 5 – definitely yes	18.2 22.4 32.5 21.8 5.1
Robo ethics	replacing a bank employee with a robo-advisor may have a positive impact on the bank's compliance with ethical standards	1 – definitely not 2 – rather not 3 – it's hard to say 4 – rather yes 5 – definitely yes	12.7 28.7 33.1 21.8 3.7

Source: Own research.

Table 3 provides a statistical description of the variables used in the empirical analysis conducted in the paper.

The subsequent part of the paper analyses the results obtained in the survey conducted with the CATI method. The study used a logit model which can be written as follows:

$$\text{logit}(P_i) = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \ldots + \beta_k x_{ik}$$

where $\dfrac{P_i}{1-P_i}$ is the odds ratio, while logit $(P_i) = \ln\dfrac{P_i}{1-P_i}$ means that the likelihood logit is the logarithm of the odds ratio that the variable Y will or will not equal 1. The parameters β_0, β_1, …, β_k, which are elements of the vector β, were estimated using maximum likelihood estimation (Maddala, 2006).

The logit model is a probabilistic model that allows the determination of what factors affect the phenomenon under study and how (Greene, 2003); in this case, it is customers' perceptions of banks as institutions that act in accordance with ethical standards in relations with their customers. The logit model applies when the explanatory variable is a qualitative variable.

Table 3. Summary statistics

Variable	Mean	Standard deviation	Minimum	5th percentile	Median	95th percentile	Maximum
CPE Banks	3.592	0.932	1.000	2.000	4.000	5.000	5.000
Gender	0.497	0.500	0.000	0.000	0.000	1.000	1.000
Age group	3.254	1.270	1.000	1.000	3.000	5.000	5.000
Education	3.192	0.787	1.000	2.000	3.000	4.000	4.000
E-banking	3.727	1.177	1.000	1.000	4.000	5.000	5.000
Financial advisory	0.684	0.465	0.000	0.000	1.000	1.000	1.000
Honest advisory	3.451	0.919	1.000	2.000	4.000	5.000	5.000
Manipulate information	3.061	1.084	1.000	1.000	3.000	5.000	5.000
Unwanted products	3.525	1.140	1.000	1.000	4.000	5.000	5.000
Against customer will	2.044	1.008	1.000	1.000	2.000	4.000	5.000
AI quality	3.286	1.082	1.000	1.000	3.000	5.000	5.000
Chatbot ethics	2.732	1.142	1.000	1.000	3.000	5.000	5.000
Robo ethics	2.750	1.050	1.000	1.000	3.000	4.000	5.000

Source: The author's own calculation using SPSS software.

Due to the fact that in the logit model used in this study the dependent variable is dichotomous responses expressed on a 5-point Likert scale were transformed to 0–1. For the variable CPE Banks (Banks operating in Poland comply with ethical standards in relations with their customers) a value of 0 was assigned to those responses in which the respondents expressed reservations or doubts concerning banks' compliance with ethical standards (1—definitely not, 2—rather not). In relation to the other answers (3—it is hard to say, 4—rather yes, 5—definitely yes) the value 1 was adopted. Theory and empirical findings on the impact of various pieces of information in shaping customer perceptions of the ethicality of corporate behaviour were applied in the transformation. According to the configural model of impression formation there is a phenomenon of asymmetric information influence on consumer perceived ethicality (Kunda, Sinclair, & Griffin, 1997; Fiske & Taylor, 2017). The studies by Brunk and Bluemelhuber (2011) and Brunk and de Boer (2020) demonstrated that if consumers perceived even one business practice as a serious breach of business ethics it could result in a complete change in customer perception of the company or brand. It can therefore be assumed that customers answering 3—it is hard to say, 4—rather yes, 5—definitely yes, have not experienced a serious breach of ethics by the bank.

3. Results and discussion

The results of the survey indicate that the vast majority of customers of banks operating in Poland (85.6%), did not object to the statement that these institutions act in accordance with ethical standards in their relations with customers (Table 2). Given the absence of research on consumer perceptions of the ethicality of banks operating in Poland this result can be compared with the results of research on trust in the banking sector in Poland (ZBP, 2019). However, it must be kept bear in mind that there are significant differences between these concepts. The latest available data from the April 2019 report show that 72% of the Polish public trusted banks. Among bank customers this confidence was even higher. Eighty-seven percent of respondents declared confidence in the bank they used while 83% declared confidence in the bank's customer service representative. Analysing the above results it should be emphasised that relatively high levels of perceived ethicality/trust in the sector were recorded at a time when banks were presented in the public media in a very unfavourable light.

The analysis of the answers obtained to the other questions shows that the majority of customers (68.7%) actively used e-banking services and had used financial advisory services provided by banks (68.4%). Their experience of co-operating with banks in the area of advisory services was twofold. On the one hand, the majority of customers (57.4%) believed that banks gave fair advice but on the other a similar majority (59.2%) noticed the unethical practice of offering unwanted financial products. In the case of another unethical activity, namely the manipulation of information about financial services the percentages of those taking note of such practices in the activities of banks and those of the opposite viewpoint were similar at around 35%. The results of the survey also indicate a perception that banks behave ethically in managing the personal and financial data of their customers. The responses given indicate that only a small percentage of customers (7.9%) expressed the view that banks had used their personal and financial data against their will.

Further results of the research related to customer expectations towards the application of artificial intelligence in banking. According to 46.2% of customers, the implementation of artificial intelligence technology could positively influence the quality of services provided by banks. Given the low level of public awareness of the digital transformation of banking this figure should be assessed as relatively high. In the case of the next two variables relating to the application of artificial intelligence in banking respondents' pessimistic expectations outweighed the optimistic ones. Moreover the question on the beneficial impact of replacing employees with chatbots or robo-advisors on customer perceived ethicality of banks produced the highest share of responses marked by indecision. This result may be indicative of the difficulty in analysing and assessing the issue and should be attributed to the complex nature of the phenomenon

analysed and the scant experiences of customers of banks operating in Poland in using financial services through chatbots and robo-advisors.

Table 4 presents the results of the analysis conducted using Spearman's rank correlation coefficient. It was shown that the following variables had a statistically significant correlation with the variable related to customers' perception of the ethicality of banks operating in Poland: Gender, Education, E-banking, Financial advisory, Honest advisory, Manipulate information, Unwanted products, AI quality, Against customer will, Chatbot ethics and Robo ethics. It should be added that for the variables E-banking, Honest advisory, AI quality, Chatbot ethics and Robo ethics the correlation was positive and in the case of the other statistically significant variables the correlation was negative.

Table 4. Spearman's rank correlation coefficient results

	CPE Banks
Gender	−0.091 0.008***
Age group	−0.055 0.109
Education	−0.132 <0.001***
E-banking	0.070 0.039*
Financial advisory	−0.066 0.052*
Honest advisory	0.567 <0.001***
Manipulate information	−0.360 <0.001***
Unwanted products	−0.163 <0.001***
Against customer will	−0.323 <0.001***
AI quality	0.150 <0.001***
Chatbot ethics	0.086 0.012**
Robo ethics	0.082 0.016**

*** statistically significant at the 1% level; ** statistically significant at the 5% level; * statistically significant at the 10% level.

Source: Own calculation using SPSS software.

The estimated logit model (Table 5) indicates the significance of the impact of the Gender explanatory variable on consumer ethical perceptions of banks in Poland. However, in contrast to the findings of many previous studies suggesting that women are more morally sensitive and have more critical attitudes towards unethical behaviour (Stedham, Yamamura, & Beekun, 2007; Franke, Crown, & Spake, 1997) the results of this survey indicated that men had a more negative perception of the ethicality of banks operating in Poland. This result can be explained by the fact that the study did not focus on the ethics of care typically manifested by women (Crespo & van Staveren, 2011) but rather on the 'justice perspective' that characterises men's perceptions of ethical issues (Leonidou et al., 2013).

Table 5. Logit model results

Dependent Variable CPE Banks					
Variable	**Coefficient**	**Standard error**	**Z**	***p*-value**	**Significance** [a]
Const	−0.299675	1.00489	−0.2982	0.7655	
Gender	−0.572240	0.261916	−2.185	0.0289	**
Education	−0.407226	0.178052	−2.287	0.0222	**
E-banking	0.424697	0.117607	3.611	0.0003	***
Financial advisory	−0.644330	0.302378	−2.131	0.0331	**
Honest advisory	1.58920	0.161610	9.834	<0.0001	***
Manipulate information	−0.434888	0.145324	−2.993	0.0028	***
Unwanted products	0.0272365	0.131649	0.2069	0.8361	
Against customer will	−0.428259	0.122842	−3.486	0.0005	***
AI quality	0.209478	0.124519	1.682	0.0925	*
Chatbot ethics	−0.0298620	0.125972	−0.2371	0.8126	
Robo ethics	−0.114436	0.135047	−0.8474	0.3968	

[a]*** statistically significant at the 1% level; ** statistically significant at the 5% level; * statistically significant at the 10% level.
McFadden *R*-square = 0.408656.
Number of cases of 'correct prediction' = 783 (90.8%).

Source: The author's own calculation.

Education is another statistically significant explanatory variable that affects the CPE of banks. The estimated model warrants a conclusion that an increase in the level of education increases the probability of consumer perceptions of unethical activity by banks. This result coincides with the results of the works of Swaidan, Vitell and Rawwas (2003), and Wimbush, Shepard and Markham

(1997) where better-educated respondents had a lower tolerance for unethical behaviour than less-educated ones. Drawing on Kohlberg (1984) this phenomenon can be explained by the fact that less-educated people are unable to notice and analyse and consequently properly evaluate the unethical actions of banks. Also of relevance is that better-educated people not only have more knowledge about financial services but also use a wider range of bank services and use them more often. This difference increases the possibility of critically analysing the offerings of banks and making ethical judgements about the behaviour of employees at these institutions.

The results of the estimated model have indicated that the frequency with which customers use e-banking services positively influences their perception of banks as institutions that follow ethical standards in their relations with customers. Therefore there are no grounds to reject H1. In explaining this relationship, attention should be paid to the nature of the services provided through the electronic banking channel and the specific characteristics of this channel. E-banking services are generally simple, largely standardised and repeatable to some extent. These features positively influence consumers' ethical judgement of electronic banking, while the fact that customers themselves decide when and what services they want to use makes it easier for them to ignore or reject unwanted offers. Moreover, very limited contact with bank employees minimises the risk of experiencing or spotting unethical behaviour. Notably the frequent use of e-banking services may reduce the need to acquire services in bank branches where the impact of the human factor is significant.

The study showed the statistical significance of the financial advisory variable. The use of financial advisory services reduces the likelihood of banks' being perceived as acting in accordance with ethical standards in their relations with customers. Therefore there are no grounds to reject H2. According to Koslowski (2011) the complex nature of financial products sometimes makes it difficult for customers to understand how they work and to price them correctly. The asymmetry of information that exists between customers and bank staff means that the practice of advising on savings and investment products and external finance is exposed to high ethical risks. The relatively high profitability of financial advisory services in comparison with other areas of banks' activity reinforces these risks. Under the Goldman rule an increase in venture profitability increases the risk of unethical behaviour by banks (Watkins, 2011).

The logit model also indicated that the more honest banks' financial advisory services seem to customers, the more likely banks are perceived as acting in accordance with ethical norms in their dealings with customers. Therefore, there are no grounds to reject H3. Drawing on Josephson's (2014) definition of honesty customers expect advisors' behaviour to be characterised by truthfulness, sincerity and avoidance of lying, cheating and stealing. The importance of honesty in the ethical assessment of a bank's activities highlighted in this study is in line with the findings of van Thiel and van Raaij (2017). Those authors in-

dicated that the most relevant attributes of the advisor and the advice service quality for hybrid and digital financial advice systems for UK and Dutch bank customers were honesty, credibility, accuracy and helpfulness.

The logit model indicated the statistical significance of banks' practice of manipulating information on financial products. An increase in consumers' belief that such manipulation exists reduces the likelihood that these institutions will be perceived as acting in accordance with ethical standards in their relations with customers. There are therefore no grounds to reject H4. The result shows that consumers are highly sensitive to the existence of this unethical practice. This result is consistent with the findings of Grosen (2014) that bank employees should place the interest of the customer above the sale of financial products.

The estimated logit model showed that there was no statistically significant impact of the practice of making unwanted offers of financial products on the perception of banks as institutions that follow ethical standards in their relations with customers. This result formed a basis for rejecting H5. A possible explanation for the insignificance of the impact of such behaviour on the ethical assessment of banks' activities is that some customers understand the situation of bank employees who are obliged to meet periodic sales targets. Another reason may be the widespread use of this market practice beyond the financial services sector which may result in low customer sensitivity to its occurrence. The assessment of customers may also take into account that the terms on which a financial product is offered may prove favourable.

The logit model indicated that an increase in customer perceptions of banks' unprofessional behaviour in managing customer personal and financial data reduces the likelihood of these institutions being perceived as following ethical standards in their relations with customers. The identified relationship indicates that there are no grounds to reject H6. It is worth noting that the results of the conducted study are consistent with the results presented by Roca, García and Vega (2009) indicating the importance of the consumer perceived threat of fraud or hacking of personal and financial data when using electronically delivered services.

The estimated logit model showed that an increase in customers' belief that the quality of financial services provided has improved as a consequence of the implementation of artificial intelligence increases the likelihood of banks' being perceived as institutions that act in accordance with ethical standards in their relations with customers. Therefore there are no grounds to reject H7. Customers' expectations of improved financial services as a result of banks' wider use of artificial intelligence technology are in line with the findings of van Thiel and van Raaij (2019).

The estimated logit model found no statistically significant relationship between the expectation of an increase in customer service ethicality as a result of replacing bank employees with chatbots of robo-advisors and the perception of banks as institutions that follow ethical standards in their relations with

customers. The insignificance of these variables can be attributed to the still minor importance of chatbots and robo-advisory services in services provided in the international financial market and in particular in the Polish market (Warchlewska & Waliszewski, 2020).

Conclusions

This study addresses the gap in the literature in terms of empirical findings in the area of consumers ethical perceptions of banks. It also addresses the gap covering the ethical aspect of the use of information and communication technologies in bank services.

The analysis of results relating to banks' advisory services, which in Poland are provided almost exclusively in branches, leads to pessimistic conclusions. Seeking advice usually requires personal contact with bank staff, which exposes customers to the risk of unethical behaviour by financial advisors. The logit model indicates that customer concerns about unethical behaviour by banks revolve around the lack of honesty of advisors manifested among other things by the manipulation of information about financial products. Therefore, the survey results indicating specific actions of bank employees as manifestations of violations of business ethics provide valuable guidance that banks should take into account in their efforts to improve ethical perceptions by customers.

The research conducted indicates that customers perceive the services provided through the e-banking channel as more ethical than those provided by bank employees in the branches of these institutions. Consumers' belief in the ethical behaviour of banks when providing services through the e-banking channel increases with the frequency of use of this form of contact with the bank. The participation of bank employees in the provision of services through e-banking is very limited so the customers' assessment of the ethical behaviour of banks focuses on the technological solutions used. Inferring from the results of the survey it should be born in mind that currently in Poland the e-banking channel is used mainly to provide customers with information and to offer simple financial products. However, advances in the digitisation of the customer service process will increasingly result in the use of this channel to offer more complex products that require financial advisory. This in turn may increase the risk of unethical behaviour on the part of banks and make customers aware of this potential phenomenon. Therefore there is a need for greater consideration of ethical aspects in the implementation and provision of more advanced financial services through the e-banking channel.

An important achievement of this study is the finding that customers express high ethical sensitivity in the area of banks' use of their personal and financial data. Customers are concerned that these data may be used against their will. On the other hand however, they express the belief that using artificial intel-

ligence to analyse personal and financial data can improve the quality of service which in turn has a positive impact on the perceived ethicality of banks.

A particularly interesting area is the impact of the use of chatbots and robo-advisors in the provision of banking services on the ethical perception of banks' services. The results of this study indicate that at the current stage of market development the question of the ethicality of these solutions does not significantly affect consumer ethical perceptions of banks. However, it should be noted that a wider use of modern digital technologies in banks' advisory services may enhance the importance of ethical consumer perceptions of these solutions. Unlike standard e-banking services consumers evaluate advisory services to a greater extent based on ethical criteria. This issue requires in-depth empirical research.

The research results relating to the use of artificial intelligence technology and automated assistants in bank services also has practical value. They point to the need for banks operating in Poland to take ethical issues into account both in the area of customer personal data management as well as in the process of implementing chatbots and robo-advisors in the delivery of services. Banks have gained the knowledge that business ethics are as important as technical, legal and marketing issues when implementing innovative digital solutions. The research found that customers' lack of knowledge about the practical application of artificial intelligence in banking and its impact on the perceived ethicality of banks' operations could be a significant barrier to the acceptance of innovative information technologies. Banks will have to undertake educational and promotional activities to shape consumer ethical perceptions of chatbot and robo-advisor services, or more broadly the use of artificial intelligence technology in banking.

The research conducted in this paper also demonstrated the need for greater consideration of ethical issues in theoretical models and empirical research on customer acceptance and adoption of ICT used by banks. The trust determinant used in many works should take greater account of ethical considerations. Indeed, digital technologies are being used to offer increasingly complex financial products that require advisory. This raises the risk of unethical behaviour by banks, such as providing incorrect or incomplete information on financial offers via remote communication channels, offering products on terms that are not favourable to customers as well as offering products that are inappropriate given the level of financial literacy and the financial situation of customers.

Appendix

Questions from the survey questionnaire used in the paper

Specify your gender:
– female
– male

What is your age?
– 18–24
– 25–34
– 35–44
– 45–54
– 55–65

Specify the level of education you have already completed:
– primary and below
– lower secondary and basic vocational
– secondary
– higher

Specify the size of your place of residence:
– village
– village–suburban area
– town with population up to 20,000
– city with population up to 100,000
– city with population up to 500,000
– city with population over 500,000

How often do you use electronic banking?
(making payments, checking the account balance using internet banking or mobile banking)
– less than once a year
– several times a year
– several times a month
– a few times a week
– several times a day

Have you used banking advisory services related to savings, investments or obtaining financing in the form of a loan?
– no
– yes

Do you agree with the statement: Banks operating in Poland comply with ethical standards in relations with their customers?
– definitely not
– rather not

– it's hard to say
– rather yes
– definitely yes

Do you agree with the statement: Banks advise honestly?
– definitely not
– rather not
– it's hard to say
– rather yes
– definitely yes

Do you agree with the statement: Banks manipulate information about financial services?
– definitely not
– rather not
– it's hard to say
– rather yes
– definitely yes

Do you agree with the statement: Banks make unwanted offers of financial products?
– definitely not
– rather not
– it's hard to say
– rather yes
– definitely yes

Do you agree with the statement: Banks use personal and financial data against the customer's will?
– definitely not
– rather not
– it's hard to say
– rather yes
– definitely yes

Do you agree with the statement: The use of artificial intelligence technologies by banks will increase the quality of services provided?
– definitely not
– rather not
– it's hard to say
– rather yes
– definitely yes

Do you agree with the statement: Using a chatbot instead of a bank employee will have a positive impact on the bank's compliance with ethical standards?
– definitely not
– rather not

- it's hard to say
- rather yes
- definitely yes

Do you agree with the statement: Replacing a bank employee with a robo-advisor may have a positive impact on the bank's compliance with ethical standards?
- definitely not
- rather not
- it's hard to say
- rather yes
- definitely yes

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