








“Improving customer relations in the banking sector of Ukraine through the development of priority digital banking products and services: Evidence from Poland”

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IMPROVING CUSTOMER RELATIONS IN THE BANKING SECTOR OF UKRAINE THROUGH THE DEVELOPMENT OF PRIORITY DIGITAL BANKING PRODUCTS AND SERVICES: EVIDENCE FROM POLAND

Abstract

The emergence of new players – fintech companies, neobanks and non-banking companies – changes the structure of competition in the banking sector, reduces the profitability of traditional banking activities, and therefore forces banks to look for new sources of income. The paper deals with the issue of improving relations with clients in the banking sector of Ukraine, which is proposed to be implemented through the development of priority digital banking products and services. The study used a survey method using a statistical apparatus of a small unique sample, the degree of representativeness of which was assessed using the Student's test. Slightly higher, closer to the level that characterizes the significant impact on the client's perception of the whole complex of digital activities in the case of Polish banks (3.81, with a maximum possible score of 5.0) than Ukrainian banks (3.75), which indicates greater involvement and willingness to accept the digitalization of the people of Poland. Generally, banks in both countries are recommended to use a customer-oriented approach in forming product policy using digital products and services, which should be implemented and developed in practice in specific areas identified during customer surveys.

Keywords

digital activity, digital technologies, digitalization, digital transformation, bank-client relations

JEL Classification

G21, M15, O33

INTRODUCTION

The digital transformation of the Ukrainian banking sector has a good foundation. The population is increasingly actively using remote service channels, while the level of their distribution still lags behind the level of Internet penetration, which indicates the potential for growth. Mobile applications of some domestic banks now have one and a half to two times more functions than similar programs of leading European banks. In part, this is explained by the fact that the relevant domestic industry was formed already in the digital age, immediately adopting the best practices.

Digitalization allows more complete, quick and efficient interaction with customers in implementing banking products and services. Its active implementation at the level of a specific bank allows not only to optimize internal banking operational and technological processes but also helps reduce the cost of services and create additional oppor-

tunities to improve the interaction between the bank and customers through the introduction of new banking digital products and services (based on digital technologies and those which actively use them). Because of this, there is a need to consider digital products and services primarily in terms of ensuring effective relationships between the bank and its existing and potential customers. It is primarily because in today's business environment, consumers' needs, preferences and expectations focus on building a compelling product policy. The banking sector is no exception to this marketing and management trend (Druszcz, 2017).

This problem is especially relevant for countries with transition economies, in particular Ukraine, whose banking sectors are currently in the process of transformation and development. At the same time, this country is implementing quite advanced solutions in bank digitalization, which significantly stimulate changes in customer preferences. Thus, the country has a relatively high level of use of bank cards, mobile and contactless payments, and mobile banking applications, often at a higher level than some European countries (Druszcz, 2017; Khudolii & Khalievina, 2021). It is also interesting to analyze the experience and priorities of digitalization of Ukrainian banks compared to the experience of Polish banks, the territorial proximity of which allows us to interpret it in the context of the development of Ukraine's European integration.

Taken together, solving the outlined problem of improving customer relations in the banking sector through the development of priority banking digital products and services is a prerequisite for increasing the competitiveness and strengthening the position of banks in this paper in a highly competitive banking and financial services market, which is played by both banking and non-banking institutions with the latest high-tech solutions.

1. LITERATURE REVIEW

The study of methods and forms of interaction of banking (and non-banking) institutions in the market of banking and financial services with customers has become, on the one hand, as shown in Kozak and Golnik (2020), one of the most covered in the scientific literature development, on the other hand, a significant amount of work is focused on choosing a way to implement digitalization in practice (in particular, as in Hrustek et al., 2019), or a new banking product and service (Khanboubi & Boulmakoul, 2019), as a priority for the development of modern banks. The reason for this was the increasingly challenging conditions of competition in the markets of banking products and services (which is exacerbated by the influence of non-banking institutions, as noted in Mosteanu et al., 2020). It has led to the complication in the ways of interaction between banks and customers, as noted in Reczulski (2019) and Shpak et al. (2020), which identifies the most important factors influencing customer preferences.

The dynamics and methods of implementing advanced solutions based on digital technologies are

described in Akimenko and Mamontenko (2021). Dubyna et al. (2021) and Druszcz (2017) investigated the behavior of households in terms of their credit and other activities in response to the digitalization of financial services markets. At the same time, these solutions, to some extent, cannot be implemented without the readiness of the consumer market to accept them (Dyba & Garnego, 2018). We should agree with this because measuring the effectiveness of digital solutions in the banking sector through the inherent digital indicators of the digital world without considering the perception of bank customers of these solutions is a one-sided and inefficient approach.

The concept of efficiency, quality, usefulness, necessity, and functional value at the assessment stage of perception under the influence of digitalization may generally differ from the real, rationally perceived. In the works of modern researchers, this problem, if it is covered (Kitsios et al., 2021; Tretyakova et al., 2021), it is rather superficial. Instead, an attempt should be noted to better understand the issue in the works of Hrustek et al. (2019) and Prokopenko et al. (2020), who examine the effectiveness of business processes in the digi-

tal economy and give examples of the application of evaluation tools in practice, such as in particular, in Dyba and Garnego (2018).

Essential for the development of the relationship between a bank and its customers is the dissemination of practical tools within the Concept of Open Banking (The Open Banking Standard, 2022), which is the basis for the implementation of many fundamentally new models of banks and other financial institutions (Dratva, 2020). According to this concept, software developers have the opportunity to create products and services for the benefit of a bank and combine them into a single digital ecosystem (Akimenko & Mamontenko, 2021). As part of “open banking”, the bank provides third parties (developers) with access to customer data (with their consent) using open APIs (technology for exchanging data between information systems through standard interaction protocols). It allows analyzing the needs of a particular customer and personalizing products and services to his requests (Mosteanu et al., 2020; Khudolii & Khalievina, 2021). Thus, the aspect of interaction with customers through digital tools in modern banking is complemented by the need to involve certain “third parties”, whose interests and capabilities should also be considered.

Modern researchers widely use an economic-mathematical apparatus to identify the relationships of processes and phenomena in the banking sector (Polishchuk et al., 2020; Kerimkulova et al., 2021; Kulyniak et al., 2021). Omelyanenko et al. (2020) consider the use of digital technologies as part of a structured strategy, which is also important, given the need and greater efficiency of digitalization in banks within the digital transformation strategy (A. Guley & S. Guley, 2019; Khanboubi & Boulmakoul, 2019; Kitsios et al., 2021).

For Ukraine and similar countries with economies in transition and for developing countries, the use of consumer-oriented digital technology solutions to improve interaction with customers in the banking sector can be a factor in enhancing the development of this sector, its effective digital transformation and dissemination of this experience in other areas of the economy. Ponomarenko et al. (2018a), Kryvovyazyuk et al. (2020), and Tretyakova et al. (2021) study the issue of ensur-

ing the competitiveness of the information economy in Ukraine in the context of widespread implementation of digital solutions and technologies. It should be noted that the works such as Ponomarenko et al. (2018b) set out comparative assessments of the use of different digital technologies and products.

Digital transformation means a complete change in development strategy, management system, organizational structure and corporate culture, as well as the emergence of entirely new types and ways of doing business, reformatting existing business processes (Kozak & Golnik, 2020). At the same time, speaking about the digital transformation of a bank in order to increase the efficiency of its interaction with consumers, it should be noted that in this context, new technologies can reduce bank costs and help compete in the market with non-bank fintech companies. However, by implementing the latest digital technologies, banks may face the problem of the inability to work within the concept of Open Banking, using the old management and operational models. Thus, Tretyakova et al. (2021) note that current banking models, including business building models, management systems and operating models, are unsuitable for large-scale digital transformation.

The paper aims to substantiate the use of priority banking products and services used in modern digital technologies to improve customer relations in the banking sector of Ukraine and Poland.

The primary hypothesis is the assumption of the possibility of improving the interaction of banks with customers in Ukraine and other countries with economies in transition by intensifying the introduction and dissemination of specific innovative digital banking products and services within certain areas.

2. METHODS

To identify the severity of the impact of effective interaction between a bank and its customers on specific banking digital products and services, an expert study was conducted, a survey of bank customers in the two countries:

- Ukraine, as a basis for developing recommendations for improving the process of interaction between the bank and customers through the digitalization of products and services;
- and Poland, as a country bordering Ukraine, whose digitalization experience to some extent reflects the trends of developed economies, and territorial proximity allows us to interpret this experience in the context of the development potential of Ukraine's European integration.

The survey was conducted by telephone interview of 50 respondents for each of the analyzed countries, Ukraine and Poland, which were selected by random sampling from the general population – a database of telephone numbers of the respective countries. The primary criteria for selecting respondents for the survey during the initial telephone contact was the fact of using digital products and services of banks from the list presented in the questionnaire (Table A1). The respondent's readiness to participate in the survey, which "will last no more than five minutes", was also determined. In case of confirmation of the use of digital products and services and readiness for the survey, a specifically selected respondent was informed about the confidentiality of his personal data and the subject of the study, after which the survey procedure was carried out directly. Otherwise, the respondent's data were removed from the database of telephone numbers to comply with the selection conditions for a small non-sample.

The criterion base for the study was a list of digital products and services of banks, compiled using data from the portal "Ministry of Finance" (MinFin, n.d.), which highlights the prevalence in Ukraine of banking services and products provided using digital-technologies, during the implementation of which there is an interaction in the form of a specific reaction of the consumer of banking products and services and the bank (see Figure 1, the list of digital products and services).

The survey, according to the questionnaire content (Table A1), developed by the authors of this paper, assessed the five-point system progressively assessing the impact of effective interaction between the bank and customers on specific digital products and services of banks from the list above. This impact is

determined by the average data on scores (five-point system) of respondents on the importance of the availability and development of certain digital products and services of the bank to establish effective relationships with banks where people are served, improve the perception of these banks as innovative and focused on the fullest, most convenient and fastest satisfaction of customers' needs in banking and financial services.

Score 1 shows that certain banking products and services based on the use of the latest digital technologies do not affect the perception of the bank; 2 – almost do not affect; 3 – moderately affect; 4 – significantly affect; 5 – is crucial for the perception of the bank as innovative, customer-oriented and focused on the fullest, most convenient and fastest satisfaction of customer needs in banking and financial services.

When evaluating the results of a small random sample of experts, the value of the general variance in the calculations is not considered (Kalinina & Pankin, 1998). The benchmark of the reliability of the study acceptable for economic research is the range of probabilities (possible limits of sampling error) of the study at a level not exceeding +/- 10%, i.e. – with reliability of more than 90%. To determine the possible limits of error, it is proposed to use Student's test. With a probability of 95.4% with a confidence factor of 2.0, it is sufficient to involve 50 experts in the study to talk about the high representativeness and reliability of the study (Shmoilova, 1996).

The degree of representativeness of the study was assessed using Student's criterion (Shmoilova, 1996): the weighted average of the score for each criterion was compared with the center of the distribution of estimates (the difference between the middle of the interval (x') and the weighted average (\bar{x}) – $x' - \bar{x}$); the obtained value $x' - \bar{x}$ is compared with the standard deviation, which is calculated by the formula:

$$\sigma = \sqrt{\frac{\sum \left(\frac{x' - \bar{x}}{N} \right)^2}{N}}, \quad (1)$$

where N – the number of studied factors (areas of digital activity of Ukrainian banks).

As a result, the value $t = (x' - \bar{x})/\sigma$ was determined, which modulo should be limited to the value of Student's criterion, which is determined by the tabular method for a probability of 0.95 and degrees of freedom $k = n - 1 = 49$ (Kalinina & Pankin, 1998) and under these conditions is 2.01.

3. RESULTS

According to a survey conducted by the Capgemini Research Institute (Capgemini Research Institute, 2020; Zaverbnyi & Sokulskyi, 2021) (Figure 1), one-fifth of consumers before the pandemic often visited the branch, and the same number of respondents said they would continue visit bank offices after the pandemic.

Figure 1 also shows that most bank customers declare their intention to interact with the bank more often remotely, even after the coronavirus pandemic (via the Internet and mobile applications, as well as through chatbots). This information indicates that the transformation of customer preferences and opportunities for interaction between the bank and its customers is significantly transformed under the influence of changes in customer experience, due largely not only to subjective factors but also objective circumstances (quarantine restrictions and threats during a pandemic coronavirus, in particular).

Nevertheless, the intensification of the use of digital solutions in the banking sector has been a relatively stable trend in recent years, and pandemic restrictions have only exacerbated this trend. Thus, according to the survey "Maturity of digital banking in 2020. How do banks react to digital (r) evolution?" conducted by the consulting company Deloitte, in recent years, there has been a dynamic acceleration of the development of digital banking channels (Deloitte, 2020a) and a reorientation of banks to actively implement digitalization. For example, due to the coronavirus pandemic and related quarantine restrictions, 60% of banks worldwide have reduced or closed their branches. The study also shows that more than 40% of banks worldwide have increased the limit of contactless payments during quarantine restrictions, with 34% of banks using fully digital processes, 23% providing customers with remote identification, and 18% introducing contactless payments. This rapid response means that banks have begun to fully implement the processes they have already prepared in the wake of the pandemic. Thirty-nine countries took part in the survey, among which Turkey, Spain, Belgium and Poland took the first place in terms of the development level of digital channels in the banking system (Deloitte, 2020b).

Thus, the position of Poland, which is a neighbor of Ukraine and, at the same time, a member of the EU, in the use of digital solutions in the banking

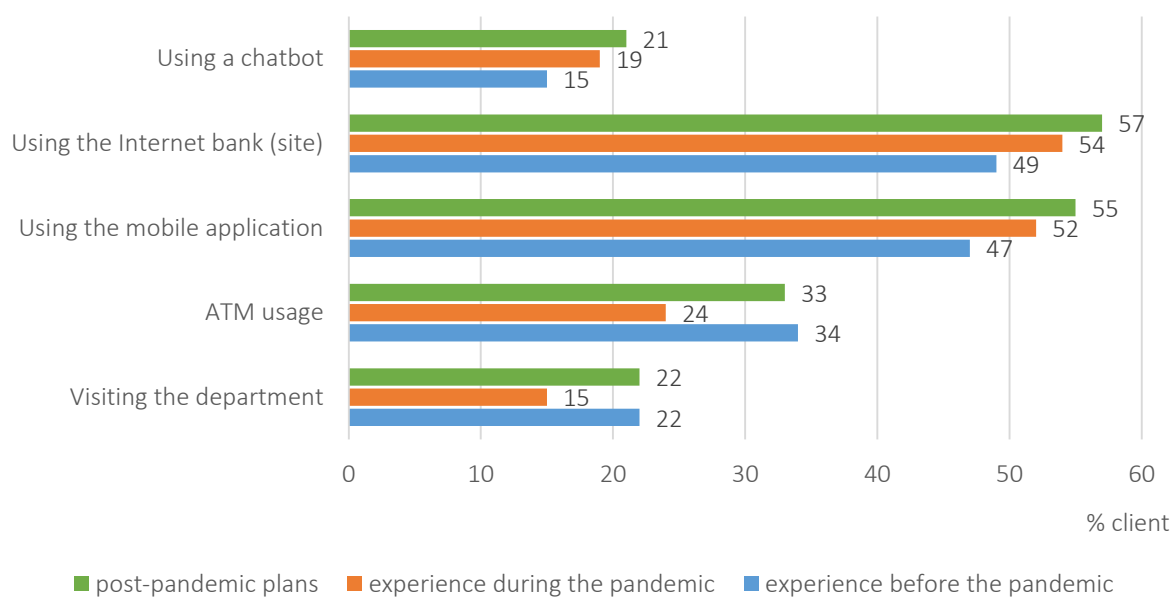


Figure 1. Share of bank customers using certain banking channels

Table 1. Number of users of mobile banking services in Poland in 2016–2020

Bank	2016	2017	2018	2019	2020	2020–2016	2020–2019
PKO BP	1,652,460	2,258,095	2,785,645	2,560,497	3,255,000	197%	127%
mBank	1,327,555	1,607,904	1,919,907	1,894,721	2,274,335	171%	120%
ING Bank Śląski	1,048,486	1,461,624	1,754,068	1,599,000	1,922,000	183%	120%
Bank Pekao	672,000	938,000	1,263,000	1,384,812	1,665,454	248%	120%
Santander BP	974,336	1,193,282	1,457,530	1,290,836	1,583,122	162%	123%
Bank Millennium	595,756	711,000	963,000	1,179,004	1,466,290	246%	124%
Other banks	564,174	774,496	1,062,527	1,099,953	1,704,797	302%	155%
The banking sector of the country as a whole	6,834,767	8,944,401	11,205,677	11,008,823	13,870,998	203%	126%

sector is quite strong (Forsal, 2021). In addition, the latest data from the Polish Banking Association show that almost 20 million Poles (about 53% of the population) already use online banking, and almost 14 million customers of Polish banks will use mobile banking services at the end of 2020 (see Table 1 and Figure 2) (Business Insider Polska, 2020; Kozak & Golnik, 2020; PRNews, 2021).

Figure 2 clearly shows the rapid dynamics of growth in Polish bank customers' activity in using mobile banking services. Interestingly, the development of this group of services is not only due to the growing number of users in the six largest banks, as shown in the figure and Table 1, but also due to the intensification of the use of these services in other banks (more than three times during the analyzed period and by 55% for its last year, which is higher than the average for the country's banking sector, 203% and 126%, respectively).

Thus, the leading banks in the Polish banking market have, to some extent, reached the most active potential audience of mobile banking, and the development of the customer base is more active in the case of offering new digital solutions from smaller banks that can compete for the customer by implementing more innovative digital solutions.

At the same time, for Ukraine, there is not enough reliable aggregate data for several periods (to identify trends) on the digital activity of the country's banks and their implementation of innovative solutions in the field of digital transformation, neither at the level of government and statistical bodies nor at professional associations. Therefore, it is possible to analyze this subject area only in the context of individual data on the dynamics and size of the market. Thus, bank digitalization in Ukraine is charac-

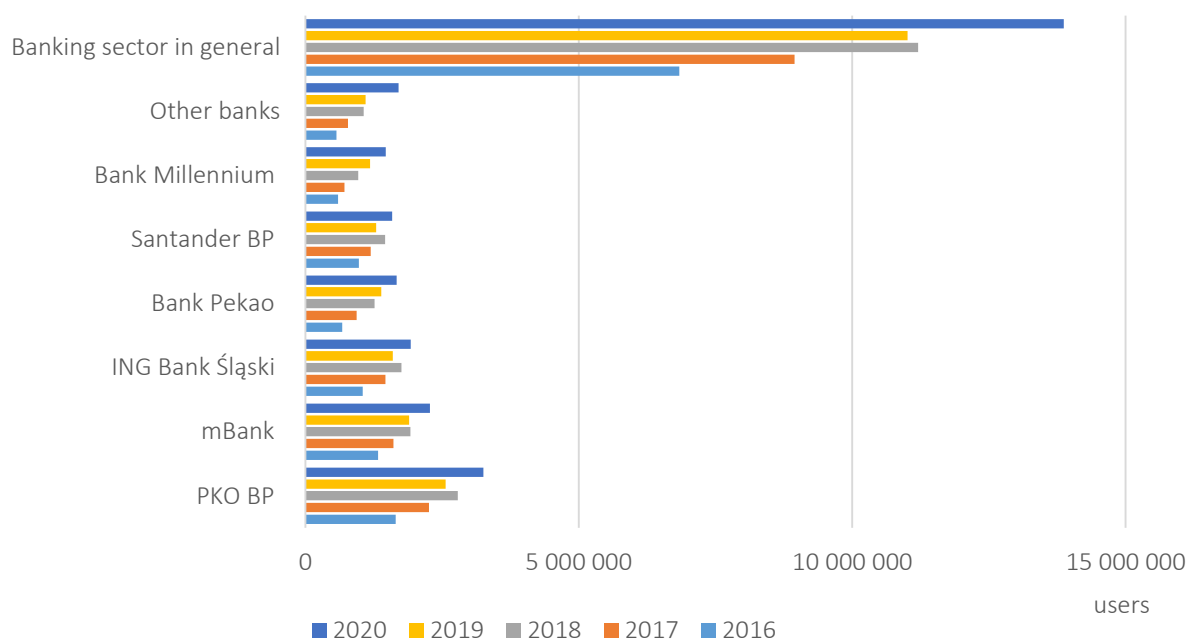
**Figure 2.** Dynamics of the number of users of mobile banking services in Poland in 2016–2020

Table 2. The results of assessing the impact of effective interaction between the bank and customers on specific areas of digital activity of Ukrainian banks

Areas of digital activity of banks	Score					Weighted average
	1.0	2.0	3.0	4.0	5.0	
1	2	3	4	5	6	7
Opportunity to become a bank customer without visiting a branch	1	6	9	10	24	4.00
Transfer money from card to card	2	4	8	16	20	3.96
Making a deposit online	2	7	13	13	15	3.64
Payment for utilities	3	5	14	11	17	3.68
Currency exchange online	2	9	10	9	20	3.72
Recharge your mobile account	2	5	13	12	18	3.78
Online lending	1	12	12	12	13	3.48
International currency transfers	1	3	13	12	21	3.98
Ability to identify the client's identity and confirm his identity	2	8	13	13	14	3.58
Ability to manage limits on online payments or cash withdrawals	3	4	12	13	18	3.78
Free notification of transactions with one or more communication channels	2	9	10	9	20	3.72
Ability to charge cashback	3	5	15	12	15	3.62
Average value	–	–	–	–	–	3.75

terized by the following indicators (Tretyakova et al., 2021; NBU, n.d.; NBU, 2020):

- fourth place in the world for the development of contactless payments in 2020 (over 38 million active cards, of which 5.3 million are equipped with contactless technology);
- fifth place in the world for NFC payment transactions (more than 20 banks offer NFC services).

The leaders of Ukrainian digital banking (by the criterion of mobile banking) in 2021 are the largest bank in Ukraine – the state-owned Privatbank with the mobile application Privat24 (13.5 million users) (Privatbank, n.d.) and the state-owned Oschadbank with the service “Savings24/7” (more than 4 million users at the end of 2020) (Oshadbank, 2020) and the project “Monobank”, implemented in partnership with “Universal Bank” (more than 3 million users) (Zaverbnyi & Sokulskyi, 2021).

The statistical base of analytical agencies and professional organizations of these countries was used to analyze the specifics of digitalization in the banking sector of Poland and Ukraine. In particular, data from the analytical portal PRNews.pl (PRNews, 2019) and the Financial Market Development Foundation were used for Poland. For Ukraine, data from the National Bank of Ukraine (NBU, n.d.; NBU, 2020) and the portal

“Ministry of Finance” (MinFin, n.d.), as well as the work of Ukrainian researchers (Tretyakova et al., 2021; Zaverbnyi & Sokulskyi, 2021; Kovalenko & Radova, 2021) were used.

The results of the survey showed that when assessing the impact of effective interaction between the bank and customers on specific areas of digital activity of Ukrainian banks, bank customers were singled out as the most influential, tangible, with a score above the weighted average (3.75 points), the following (Table 2 and Figure 3):

- Opportunity to become a client of the bank without visiting the branch (4 points);
- International currency transfers (3.98 points);
- Transfer money from card to card (3.96 points);
- Recharge of mobile account (3.78 points);
- Ability to manage limits on online payments or cash withdrawals (3.78).

In general, these priority areas of the digital activity of banks reflect a particular specificity of both digitalization in the banking sector and the interaction between Ukrainian banks and their customers. First, it focuses on the speed and convenience of customer service, where interaction and

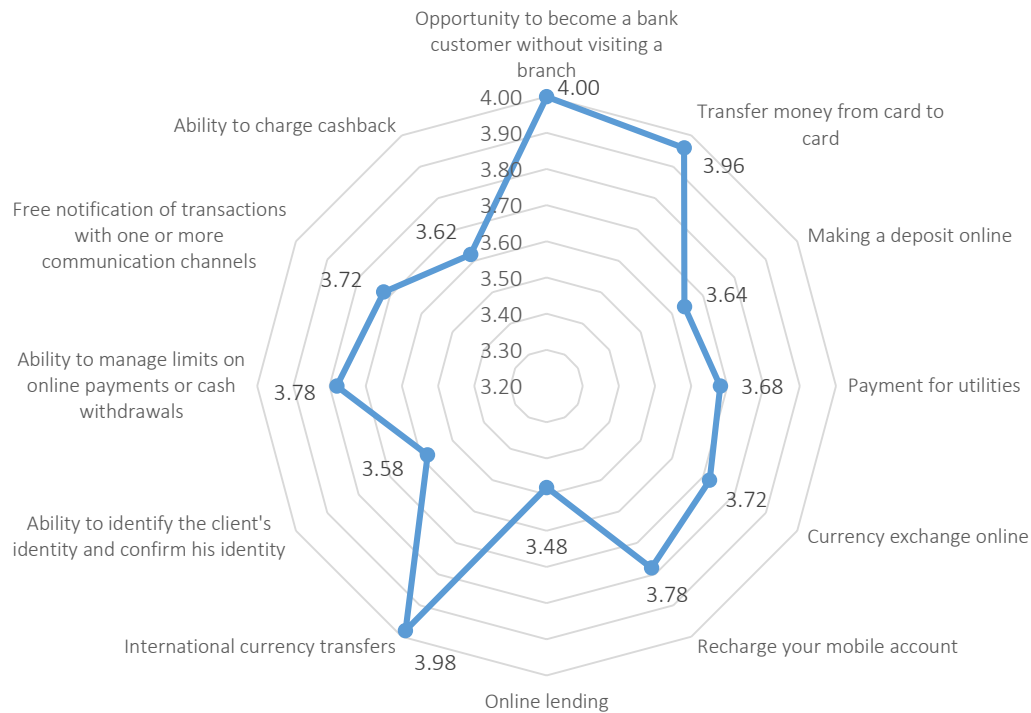


Figure 3. The impact of effective interaction between the bank and customers on specific areas of digital activity of Ukrainian banks

relationships with the bank without visiting the office are crucial. Given this, the priority should be to establish communication between the bank and the client through available channels (mobile communication, SMS-informing, chatbots and messengers, email-mailings, direct communication via e-mail, etc.), which would not lose the benefits of personal communication and even improve the customer's experience regarding visiting the bank's office.

Instead, it is important for a client of a Ukrainian bank to receive currency transfers from abroad in a timely and convenient manner (a significant number of the country's population works abroad) and to make payments and settlements across the country, especially in settlements between individuals, often related to informal business activities, common in the country. In this context, it is vital to establish rapid communication to confirm payments and inform about their implementation and/or the presence of problems with payments and transfers and the threat of fraud.

Figure 4 and Table 3 present the results of a survey of bank customers from Poland, which showed that in assessing the impact of effective interac-

tion with the bank on specific areas of digital activity of banks, their customers were singled out as the most significant, tangible, above average (3.81 points), the following (points):

- Ability to manage limits on online payments or cash withdrawals (4.02);
- Online lending (4.00);
- Currency exchange online (3.96);
- Making a deposit online (3.92);
- International currency transfers (3.90);
- Payment for utilities (3.86).

Therefore, for other clients of Polish banks, some other aspects of digital interaction with banking institutions are essential, which are related to the possibility of more convenient use of available resources (changing limits, lending, currency exchange, making deposits). In this context, banks need to use existing channels, digital communications (mobile communication, SMS-informing, chatbots and messengers, e-mails, direct commu-

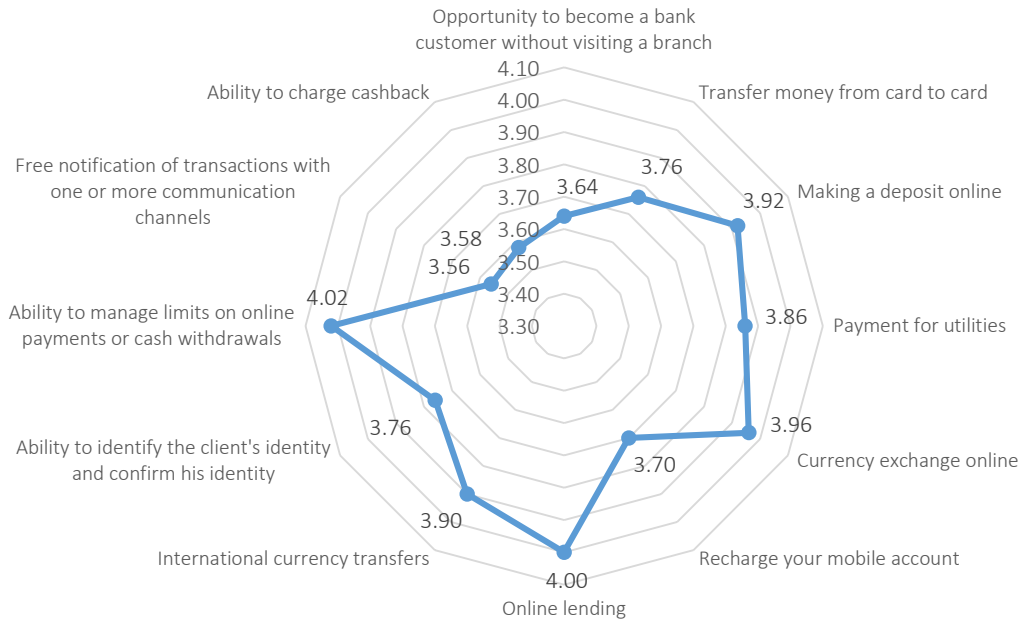


Figure 4. The impact of effective interaction between the bank and customers on specific areas of digital activity of Polish banks

Table 3. The results of assessing the impact of effective interaction between the bank and customers on specific areas of digital activity of Polish banks

Areas of digital activity of banks	Score					Weighted average
	1.0	2.0	3.0	4.0	5.0	
1	2	3	4	5	6	7
Opportunity to become a bank customer without visiting a branch	0	9	14	13	14	3.64
Transfer money from card to card	2	6	10	16	16	3.76
Making a deposit online	2	6	9	10	23	3.92
Payment for utilities	2	6	6	19	17	3.86
Currency exchange online	2	5	6	17	20	3.96
Recharge your mobile account	2	9	10	10	19	3.70
Online lending	0	4	14	10	22	4.00
International currency transfers	0	7	11	12	20	3.90
Ability to identify the client's identity and confirm his identity	3	4	14	10	19	3.76
Ability to manage limits on online payments or cash withdrawals	1	5	6	18	20	4.02
Free notification of transactions with one or more communication channels	1	9	14	13	13	3.56
Ability to charge cashback	4	6	10	17	13	3.58
Average value						3.81

nication via e-mail, etc.), primarily in order to convey to customers the benefits of specific banking products and services that they offer, and which will allow more use of available funds efficiently and profitable attraction of credit resources.

veloping the banking sector in Poland. These prerequisites provide for implementing the priority areas indicated in the figure to increase the efficiency of digitalizing relationships with customers in the banking sector.

Figure 5 summarizes the prerequisites for improving the efficiency of digitalization of relationships with customers in the Ukrainian banking sector, compared to the experience and priorities for de-

In general, it should be noted a slightly higher, closer to the level that characterizes the significant impact on the perception of the bank by the client of the whole complex of digital activities in the

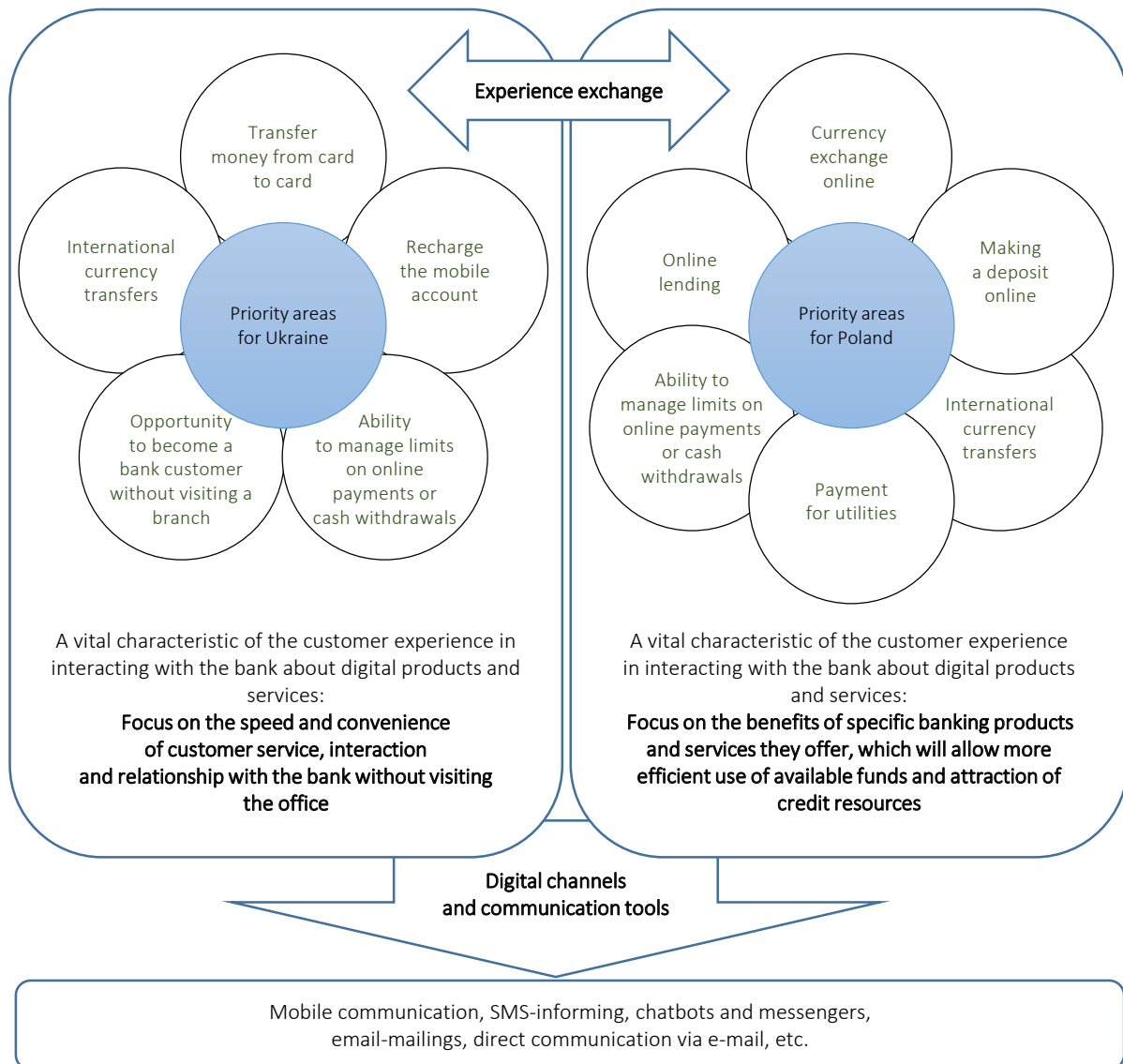


Figure 5. Priority areas for improving the efficiency of digitalization of customer relations in the Ukrainian banking sector (compared to the Polish experience and development priorities)

case of Polish banks (3.81) than Ukrainian (3.75). It indicates greater involvement and willingness to perceive digitalization in the banking sector by the people of Poland.

4. DISCUSSION

Given the problems that characterize the Ukrainian banking system (Dyba & Garnego, 2018; Ponomarenko et al., 2018b; Tretyakova et al., 2021), one of the factors that increase the efficiency and development of this system should be the optimization of using the available resource base of banks both at the level of a country's

banking system and at the level of specific banks. Therefore, the proper interpretation of the results obtained in the paper and their use in practice involves structuring management activity in Ukrainian banks and its focus on developing interaction with customers primarily in the essential areas of digital activity. At the same time, the experience of neighboring Poland (Druszcz, 2017; Deloitte, 2020a) should be necessary for the practice of Ukrainian banks.

The expert survey "Expert survey data Maturity of digital banking in 2020. How do banks react to digital (r) evolution?" (Deloitte, 2020a), which included the analysis of digital retail banking channels

of 318 banks in 39 countries, was used as a source of empirical data and comparison of the results of this study with studies of other authors at the global level and at the level of Poland (the activity of the banking sector which is also analyzed in the paper). The study conducted a functional analysis of 1,108 digital solutions offered to retail customers, digitalization of 13 major banking products and generalization of the best digital solutions in this area. A survey of bank customers was also conducted to determine the specifics of customer experience. In general, the results of this study are closely correlated with the results obtained in the article, in particular in justifying the development of customer-oriented banking products and services that will allow more efficient use of available funds and attract credit resources in Poland.

It is also interesting to interpret the results of the paper in the context of analyzing changes in consumer preferences for the use of banking products and services based on a study conducted in April 2020 by Capgemini (2020) that surveyed more than 11,200 consumers in 11 countries (China, France, Germany, India, Italy, the Netherlands, Norway, Spain, Sweden, Great Britain, the USA). Thus, in general, there is a tendency to increase the satisfaction of bank customers in the studied countries, and in Poland and Ukraine, in the case of providing them with more user-friendly, affordable and fast implementation of digital products and services.

This paper proposes to implement one of the approaches to obtaining information from customers regarding the priority of establishing effective communication with the bank in the process of obtaining modern banking services based on digital technologies and the Concept of Open Banking (Dratva, 2020). Given the ac-

tive spread of digitalization in banking practice, such a system of interaction should be based on receiving feedback from bank customers, which, in particular, is discussed in the paper (Druszcz, 2017). The results of this paper are related to assessing the current state and priorities of digitalization to improve customer relations in the Ukrainian banking sector. Therefore, they are interpreted and implemented in practice, given the need to ensure the interaction between the bank and consumers of products and services, which contains aspects of innovation (provides for the introduction of new promising digital products and services of banks, subject to proper justification), systematicity (these products and services must be scalable and capable of use in different environments), and strategic orientation (involves the involvement in the decision-making process of interaction with customers of persons who hold key positions in the bank).

Thus, modern banks will be able to direct resources to solve priority problems in communication, thus optimizing their resource base. In this context, it is the managerial, microeconomic aspect presented in the paper that the authors consider fundamentally important, given that the very fact of using digital technologies in banking and structuring communication activities to establish effective interaction with customers is not a way to ensure bank success, but models, methods, tools, options for action in response to changes in the magnitude and structure of demand for certain digital solutions in the banking sector determine the development opportunities of banks in the long run. The mentioned managerial aspect of the problem is also closely related to the problems of analysis and control (Khanboubi & Boulmakoul, 2019; Bodnar et al., 2020).

CONCLUSION

The paper aims to substantiate the use of priority banking products and services used in modern digital technologies to improve customer relations in the banking sector of Ukraine and Poland. In the process of achieving this goal, a statistical survey was conducted in the form of a survey of bank customers in Ukraine and Poland. It was determined that when assessing the impact of effective interaction between the bank and its clients on specific areas of digital activity of Ukrainian banks, the clients of these banks identified the following points as the most influential: the opportunity to become a bank customer without visiting a branch; international currency transfers; money transfer from card to card; top up a mobile account, the ability to manage limits on online payments or cash withdrawals.

The specifics of both digitalization in the banking sector and interaction between Ukrainian banks and their customers are noted, which is primarily focused on the speed and convenience of customer service, where interaction and relations with the bank without visiting the office is a crucial aspect. From this, it can be concluded that the priority for Ukrainian banks should be to establish communication between the bank and the client through available digital communication channels, which would not lose the benefits of personal communication and even improve the customer experience compared to visiting the bank office. According to the results of a survey of clients of Polish banks, it was determined that for them, the essential areas of digital activity of banks are: the ability to manage limits on online payments or cash withdrawals; online lending; online currency exchange; making a deposit online; international currency transfers; payment for utilities. Thus, it can be concluded that the aspects of digital interaction with banking institutions related to the possibility of more convenient use of available resources (changing limits, lending, currency exchange, making deposits) are essential for clients of Polish banks. In this context, banks are recommended to use existing digital communication channels primarily to bring to customers the benefits of specific banking products and services that will allow more efficient use of available funds and attraction of credit resources.

The practical significance of the results of the paper lies in the possibility of improving the interaction of banks with customers in Ukraine and other countries with economies in transition through the use of specific innovative digital products and services. In general, it should be noted that the impact of the digital activity on the effectiveness of interaction with customers is more significant in Polish banks than in Ukrainian ones, which indicates a greater involvement and willingness to accept digitalization by the people of Poland. Therefore, Ukrainian banks should focus their activities on the introduction of digital products and services in the areas identified in the paper. This, in general, will result in improving customer perception of banking products and services on the one hand, and on the other, in improving customer experience by obtaining more affordable, fast, quality and reliable banking products and services.

AUTHOR CONTRIBUTIONS

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APPENDIX A

Table A1. Questionnaire form for surveying respondents to assess the impact of effective interaction between a bank and customers concerning specific digital products and services of banks in Ukraine and Poland

Source: Developed by the authors.

Assess the impact of using the listed digital products and services of banks on ensuring effective interaction with the banking institutions where you are served

When filling out this questionnaire in its lines in the city marked “€”, give your assessment of the importance of the availability and development of certain digital products and services of the bank to establish effective relationships with banks in which you are served, improve the perception of these banks as innovative and focused, the most convenient and fastest satisfaction of your needs in banking and financial services

No.	Digital products and services of banks (based on the use of the latest digital technologies)	Score
		1 – does not affect the perception of the bank; 2 – almost does not affect the perception of the bank; 3 – moderately affects the perception of the bank; 4 – significantly affects the perception of the bank; 5 – is decisive for the perception of the bank
1	Opportunity to become a bank customer without visiting a branch	€
2	Transfer money from card to card	€
3	Making a deposit online	€
4	Payment for utilities	€
5	Currency exchange online	€
6	Recharge your mobile account	€
7	Online lending	€
8	International currency transfers	€
9	Ability to identify the client’s identity and confirm his identity	€
10	Ability to manage limits on online payments or cash withdrawals	€
11	Free notification of transactions with one or more communication channels	€
12	Ability to charge cashback	€