

**SŁAWOMIR JUSZCZYK**

Warsaw University of Life Sciences – SGGW, Poland

## **PROSPECTS FOR DEVELOPMENT OF MOBILE BANKING IN RURAL AREAS**

Key words: rural areas, mobile banking, increasing the offer, waiting for price cuts

**ABSTRACT.** The conducted research concerned prospects for the development of mobile banking in Poland. The article is a fragment of this research and concerns prospects for the development of this banking in rural areas. The aim of the research was to determine the expectations of mobile banking customers living in rural areas and the likely directions of changes in non-cash payments. The research period for rural areas concerned the years 2016-2018. The research covered the Polish banking sector. In addition, from January to March 2019, a questionnaire was carried out among 250 clients of banks living in rural areas. The research established that customers most often use mobile banking to check account balances and make payments at online stores. Customers in mobile banking appreciate comfort, time saving, being cash free and the freedom to make payments. The expectations of mobile banking users relate to: continuous increase of Internet coverage, improvement of security for telephone theft, increasing the possibility of using the BLIK service, adapting mobile applications to older generation smartphones and further price reductions of remote banking services. Therefore, it is almost certain that technical, organizational and financial changes in mobile banking in rural areas will head in this direction.

### **INTRODUCTION**

In conditions of technological progress and growing globalization, including rural areas, the continuous development of banks is an inseparable part of their innovativeness. This forms the basis for achieving a competitive advantage in the banking services sector. The decisive factor affecting the choice of service provider by the contemporary client is the broad offer of the bank as well as the efficiency and versatility of its service. To meet these requirements, commercial and cooperative banks compete by improving existing financial instruments, as well as creating new and better technological processes [Ziomba 2012]. Banking innovation can be divided into 4 areas, namely product, service, process and organizational. In this respect, product and process innovation is particularly important [Binkowski, Beeck 1998]. Product bank innovation aims, among others, at increasing the scope and speed of providing banking services, especially in rural areas. Examples of product innovation may be [Krzyżkiewicz 1996]:

- facilities in the area of a bank account, such as combining it with another product or consulting (for example private banking),

- facilities in the area of saving and investing (e.g. savings plans, quick automatic deposits),
- credit facilities (consolidation loans, leasing).

In banking practice, there is also an area concerning service innovation, i.e. using services or products offered by banks. This is reflected in the introduction of facilities to improve these activities. These innovations are associated with technological development and mobility. Their essence is to reduce the unit costs of delivering and using banking services, as well as increase their quality by improving or providing the customer with something new. There are many definitions of electronic banking in the literature, which results from the fact that its perception changes over time. Therefore, in the circle of terms of electronic banking, two areas are indicated: internal and external. The internal zone is related to an integrated banking system that allows the bank to function and cooperate with other entities of the financial system. Without a properly functioning internal sphere, it would be impossible to have an external environment for electronic banking. The external aspect, on the other hand, includes electronic distribution channels that allow the expansion of banking services. From the point of view of banks, it is crucial to determine the right proportions between the product, the customer and the distribution channel. Michał Polasik [2007] defines electronic banking as a set of technical means that allows remote access to a bank account. By definition, the existence of a telecommunications connection and an electronic device is a prerequisite for the distribution of banking products. Secondly, with regard to the formal and legal aspects, he includes electronic banking as a separate service, which is a key element of the bank's offer.

In light of the binding Act on the provision of electronic services, it appears that electronic banking is classified as a distance service without the simultaneous participation of two parties. The service is performed via electronic devices that store data transmitted over the telecommunications network. In addition to the Act of 18 July 2002 on the provision of electronic services, the scope of relations between the client and the bank is regulated by the Act of 12 September 2002 on electronic payment instruments. On its basis:

- the bank is obliged to provide access to funds accumulated on the bank account via wired or wireless network devices and perform commissioned banking operations,
- the customer authorizes a given bank to debit his account with the amount of transactions made and the associated fees and commissions payable to the bank.

Mobile banking is a modern form of providing banking services. Through available teleinformation channels, it provides clients with remote access to a bank account using appropriate devices and a telecommunications connection. As a result, clients can use it without time or space restrictions. This type of banking was established in the mid-1990s, but, initially, its development was much slower compared to online banking, which was created at the same time. The reason for this phenomenon was the low functionality and initial technical weakness of mobile phones as well as high costs of data transmission. The initiation of mobile banking was related to access to the account using WAP technology and SMS messages [Jadczak 2011]. The concept of mobile banking has many theoretical sources. The widest definition defines mobile banking as performing operations using a mobile phone. According to Przemysław Pluskota [2003], mobile banking is interactive access at any time and place to banking products. The most common definition states

that mobile banking is a service offered by banks that allows access to a bank account using a mobile device with Internet access e.g. a mobile phone, smartphone, tablet, etc. [King 2013].

Mobile payments are an alternative to traditional forms related to payment cards or cash. According to Stamatis Karnouskos and András Vilmos [2004], any payments in which a mobile device is used to activate, initiate or confirm such payments can be considered a mobile payment. In the so-called Green Paper Mobile payments are a complex concept resulting from the need to have portable devices and communication technologies that are used to handle payments. There are three models of mobile payments based on:

- NFC technology (short-range communication),
- internet connectivity installed in a mobile device,
- GSM standard in a telecommunications connection.

Due to the method of implementation, mobile payments can be divided into two types, i.e.:

1. Remote payments: they consist of ordering and confirming transactions between the sender and the recipient, but do not require the direct contact of mobile devices (mobile money transfers and remote mobile payments).
2. Contactless payments: consist of ordering and confirming transactions between the sender and the recipient; require direct contact between the client and the mobile device. In addition, they require data transfer at close range, and sometimes even direct contact between the device and the POS terminal (NFC payments, mobile POS terminals, contactless payments).

## MATERIAL AND METHODS

The aim of the research was to determine the expectations of mobile banking customers living in rural areas and their expectations as to the directions of changes in non-cash payments. The research period was three years and covered the years 2016-2018. The research covered the Polish banking sector. Taking into account the implementation of the adopted objective, data from the reports of banks operating in Poland and from information published by the National Bank of Poland, the Financial Supervision Authority, the Polish Bank Association and other institutions involved in the analysis of financial markets were used. In addition, in order to determine the essence and importance of mobile banking and non-cash payment services, questionnaire studies were conducted among part-time students of the Faculty of Economic Sciences of the Warsaw University of Life Sciences. The condition for participation in surveys was living in rural areas. The survey was conducted on a group of 250 people in the period from January to March 2019. The studies used elements of tabular and descriptive statistics as well as inductive and deductive thought actions. Analytical research was carried out by comparing the results from the questionnaire and bank reports. The conducted research concerned electronic banking, including mobile banking, paying special attention to payment cards and BLIK services. In addition, the popularity of payment cards and BLIK services among respondents were analyzed.

## RESULTS

The obtained results allowed to determine, among others, how often bank customers in rural areas use mobile banking and what operations they make using these banking services. 71% of respondents were women, and 29% were male. The age of the respondents ranged from 22 to 38 years. In addition, respondents were asked about their gross income. Its value amounted to 7300 zlotys, of which the modal amounted to approx. 2200 zlotys. The next question referred to the subjects' education. The results showed that 72% of respondents had higher education (BA) and 28% secondary education. The largest group of respondents were people in the age group of 23-25 years, constituting 86% of all respondents. Another group of people over 26 years of age was represented by 13% of all those participating in the study. In the further part of the survey, it was found that 89% of respondents actively used mobile banking in the surveyed group of respondents. The remaining 11% of people did not use it, but respondents indicated that they use other forms of electronic banking. Over 89% of respondents declared that they had a mobile application, which was related to the use of mobile banking. In the case of the remaining 11% of respondents who did not use mobile banking, an attempt was made to determine the reasons for not using this form of contact with the bank. The main reasons why respondents did not use mobile banking were lack of trust and fear for safety (48%), lack of such need (41%) and preference for direct contact with a bank employee (11%).

Table 1. Preferred forms of payment

| Specification     | Percent |
|-------------------|---------|
| Internet payments | 27.0    |
| Mobile payments   | 71.0    |
| Other             | 2.0     |
| Total             | 100.0   |

Source: own research

Table 2. Frequency of making payments by mobile application

| Specification         | Percent |
|-----------------------|---------|
| Daily                 | 19.0    |
| A few times a week    | 29.0    |
| Once a week           | 15.0    |
| Several times a month | 25.0    |
| Once a month          | 7.0     |
| Less often            | 5.0     |
| Total                 | 100.0   |

Source: own research

Among the study participants, the largest group were people who actively used mobile banking for 1 to 2 years (70% of respondents). Another group were people who declared having mobile banking for 6 to 12 months (14% of respondents). The remaining 16% of respondents indicated that they had used mobile banking for less than 6 months. The obtained results indicate that clients are attached to mobile forms of payment and contact with the bank, and that customers do not give this form up. Another interesting issue was the number of mobile applications owned by the respondents. As results from the research, 75% of them only used one application, because it was related to their own banking products in only one bank. More importantly, 15% of respondents actively used two mobile applications, most of them being shared by banks with different business profiles. It is worth noting that the remaining part of respondents used at least 3 mobile applications. On the one hand, it may indicate the high potential of mobile banking, on the other hand it could be a result of a bank not meeting all the needs of these clients.

Another aspect of the undertaken research was the scope of using mobile applications by respondents. The research shows that 71% of respondents preferred mobile payments as a basic form of making payments; 27% of the surveyed group mainly used online payments, and, in the case of the rest of respondents, other forms of payment were indicated.

Table 2 presents the frequency of mobile payments made by respondents. The research shows that 63% of respondents made mobile payments at least once a week (19% – daily, 29% – several times a week, 15% – once a week). It is interesting and important that 7% of bank customers use mobile applications to make payments at least once a month, and only 5% of people who participated in surveys used mobile applications less often than once a month. This indicates a high interest in mobile applications, which is mainly due to their ease of use and availability of contact with the bank.

Taking into account the possibilities related to particular mobile applications offered by banks, the scope of activities most frequently performed by respondents using mobile applications was determined. As can be seen from the data included in Table 3, the surveyed bank clients most often used mobile banking to check the account balance (24.0%) and make payments in online stores (21%). It is also worth noting that the respondents also undertook traditional activities using mobile applications, such as making domestic transfers (16%), payments in stationary stores (13%), payment of bills (11%), purchase of public transport tickets (7%) or making company transfers, creating deposits, purchasing products, etc.

Table 3. Activities performed using mobile banking

| Specification                         | Percent |
|---------------------------------------|---------|
| Checking the account balance          | 24.0    |
| Domestic transfers                    | 16.0    |
| Payment of bills                      | 11.0    |
| Transfers (to ZUS, domestic, foreign) | 4.0     |
| Payments in stores                    | 13.0    |
| Payments in online stores             | 21.0    |
| Purchase of public transport tickets  | 7.0     |
| Logging in to the banking system      | 1.0     |
| Term deposits                         | 2.0     |
| Insurance products                    | 1.0     |
| Total                                 | 100.0   |

Source: own research

Table 4. Advantages of using mobile payments

| Specification            | Percent |
|--------------------------|---------|
| Convenience              | 38.0    |
| No need to have cash     | 11.0    |
| Speed of transaction     | 17.0    |
| Freedom to make payments | 9.0     |
| Time saving              | 23.0    |
| Financial benefits       | 2.0     |
| Total                    | 100.0   |

Source: own research

Interestingly, in the case of people actively using mobile applications, the number of transactions made with the use of mobile banking increased among 60% of them, among 38% of them it remained unchanged and among 2% of them this activity decreased. In the next part of the research, the respondents were asked to indicate the advantages and disadvantages of mobile payments. Table 4 presents the results regarding the benefits of using mobile payments.

Table 5. Disadvantages of mobile payments

| Specification   | Procent |
|---|---------|
| No defects  | 6.0     |
| Theft of the phone, closely associated with a loss of cash if necessary security measures are not set | 26.0    |
| I can withdraw cash using a mobile application (BLIK) not at every ATM                                | 12.0    |
| No technical support  | 2.0     |
| Not available for people with an older phone model  | 13.0    |
| No possibility to use the application in places where there is no coverage or Internet access         | 31.0    |
| Complicated technology for the elderly  | 10.0    |
| Total   | 100.0   |

Source: own research

The research shows that the clients most valued comfort (38%) and time savings (23%). Further, among the advantages of mobile payments, they indicated the speed of conducting transactions (17%), no need to have cash (11%), freedom of payment (9%) and financial benefits (2%).

Respondents also highlighted the disadvantages of mobile payments, among which the dominant answer indicated a lack of possibility of using the application in places where there is no coverage or access to the Internet (31%). Further disadvantages of mobile payments pointed out was the fact that phone theft could expose customers to a loss of funds (26%), lack of possibility to use the BLIK service at every ATM (12%) and lack of mobile applications for older generations of smartphones (13%). Interestingly, 6% of respondents felt that mobile applications do not have any faults at all.

## CONCLUSIONS

The conducted research was of a fragmented nature, therefore the results obtained cannot be generalized to the entire population of cooperative and commercial banks in Poland as well as to all clients of these banks. They can, however, be of an auxiliary character for people interested in mobile banking and its further development in terms of quantity and quality. On the basis of the conducted research, the following conclusions regarding the prospects for development of mobile banking in rural areas were formulated:

1. Mobile banking has been on the Polish market for over 15 years. Banks implement these services while constantly improving them and increasing their scope of functionality.
2. The perspectives of using the Internet and smartphone, from the beginning of the 21<sup>st</sup> century, are organizationally and substantively a factor conducive to economic development and not only. Banks have more and more clients using m-banking. Many factors contribute to this, including the constantly growing smartphone market and the growing demand for the use of mobile Internet, which is now made widely avail-

able by mobile network operators. The development of mobile banking in rural areas concerns clients of both commercial and cooperative banks.

3. Mobile banking and mobile payments are a fast-growing distribution channel in Poland. In addition, this type of banking facilitates clients to use banking services, especially in rural areas.
4. Prospects for the development of mobile banking is associated with first-line support for young customers who mostly have smartphones in Poland. Other factors favoring the development of mobile banking are: society's greater awareness and knowledge, continuous improvement of mobile services by banks, the development and improvement of payment standards (BLIK, NFC), educational activities related to mobile payments, promotions and campaigns promoting mobile banking.

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## PERSPEKTYWY ROZWOJU BANKOWOŚCI MOBILNEJ NA OBSZARACH WIEJSKICH

Słowa klucze: obszary wiejskie, bankowość mobilna, wzrost ofert, oczekiwanie obniżki cen

### ABSTRAKT

Przeprowadzone badania dotyczyły perspektyw rozwoju bankowości mobilnej w Polsce i przedstawiono fragment tych badań, dotyczący perspektyw rozwoju tej bankowości na obszarach wiejskich. Celem badań było ustalenie oczekiwań klientów bankowości mobilnej zamieszkujących obszary wiejskie oraz prawdopodobnych kierunków zmian płatności bezgotówkowych. Okres badawczy dotyczący obszarów wiejskich obejmował lata 2016-2018. Badaniami objęto polski sektor bankowy. Uzupełniająco, od stycznia do marca 2019 roku przeprowadzono kwestionariusz wśród 250 klientów banków zamieszkujących obszary wiejskie. W toku badań ustalono, że klienci najczęściej wykorzystują bankowość mobilną do sprawdzania salda na rachunku oraz dokonywania płatności w sklepach internetowych. Klienci w bankowości mobilnej najbardziej cenią sobie wygodę, oszczędność czasu, brak konieczności posiadania gotówki oraz swobodę dokonywania płatności. Oczekiwania użytkowników bankowości mobilnej dotyczą: stałego zwiększania zasięgu internetu, poprawy zabezpieczeń na okoliczność kradzieży telefonu, zwiększania możliwości korzystania z usługi BLIK, dostosowania aplikacji mobilnych do smartfonów starszej generacji oraz obniżek cen zdalnych usług bankowych. W związku z tym jest prawdopodobne, że w tym kierunku będą zmierzać zmiany techniczne, organizacyjne i finansowe bankowości mobilnej na obszarach wiejskich.

AUTHOR

SŁAWOMIR JUSZCZYK, PROF. DR HAB.

Warsaw University of Life Sciences – SGGW

Faculty of Economic Sciences

Department of Finance, Division of Banking

166 Nowoursynowska St., 02-787 Warszawa, Poland