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THE USE OF E-BANKING BY HOUSEHOLDS: POLAND AND UKRAINE EXPERIENCE

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Анотація. В статті проаналізовано особливості розвитку e-banking та детально досліджено характеристики попиту на даний банківський сервіс з боку домогосподарств. Проведене дослідження дозволило виявити спільні та відмінні риси стану розвитку та сприйняття клієнтами дистанційного банківського обслуговування у Польщі та Україні.

Summary. The authors analyzed the peculiarities of the e-banking development; the special attention was paid to the research of the different features of households' demand on this bank sale technology.

Ключові слова: дистанційне банківське обслуговування, Інтернет-банкінг, онлайн-банкінг.

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Key words: the remote banking service, Internet-banking, e-banking.

Statement of the problem. A fast development of modern technologies started at the turn of the 20th and 21st centuries. In fact, it covered all the sectors in the economy including banking. The arrival of new IT solutions resulted in the increase of clients' demand as for services offered to them, which, in turn, favored the improvement of the quality and various types of services offered by banks. The impact of new technological solutions on economy and the society brought about dramatic changes in modern banking. Banks which are aware of the changes undergoing in the society, try to tailor the offer of their services to provide their clients with the best possible access to them without time or area limitations.

Introducing new access channels as well as new financial services, often thought to be identical as the

Аннотация. В статье проанализированы особенности развития e-banking и подробно исследованы характеристики спроса на данный банковский сервис со стороны домохозяйств. Проведенное исследование позволило выявить общие и отличительные черты состояния развития и восприятия клиентами дистанционно-го банковского обслуживания в Польше и Украине.

This performed research has allowed us to find out the common things and distinctions in the remote banking service development and its perception by the households in Poland and Ukraine.

idea of e-banking, has not only the aspect of building up long-term relation between the bank and the client but it is also considerably related to cost cuts of direct service. For example, Internet-banking, as a form of e-banking, is the mechanism that allows reducing such transaction costs as: the negotiation and contract execution costs; information searching costs; payments conducting costs; business protection costs; monitoring costs; property right protection costs etc. Due to automation of the services of processes, the cost of account services is falling systematically, a number of bank branches is decreasing, and the spending on employment is reduced. Therefore, banks are interested in investing in e-banking, because it encourages the simultaneous fulfillment of two essential aspects: the growth in client base and

the costs reduction. The subject of this article is to analyze the first area and to verify the commonness of various solutions of e-banking as well as to examine how these solutions are assessed by bank's clients. A big contribution to this article is the research carried out among 365 households from Lublin Voivodship, which was run within the project by the Banking Department of Maria-Skłodowska University in Lublin.

1. The concept of e-banking

While defining generally the concept of e-banking one should point out its functional aspect, i.e. the ability to provide the bank's client with access to services via a wide range of electronic carriers. Its essence lies in using the bank's system of an electronic payment transfer without the circulation of paper documents. It means including the client as a user into computerized bank system while, at the same time, maintaining a proper level of security both for a transaction and the bank itself [1].

However, in the subject literature there are a few ways of defining e-banking. One of them presents e-banking as a set of technical means allowing access to bank services. In this context of e-banking one may refer to the definition worked out by the experts of the American service BankersOnline.com stating that „E-banking is the general notion for defining electronic procedure allowing the client to perform e-banking, without physically visiting the premises of the institution” [5]. A similar interpretation of this concept is given by T. Kulisiewicz, who understands e-banking as [3]: „a set of IT means allowing online access to a bank account”.

By another approach e-banking is viewed not as instruments but rather a distribution channel. Such a way of understanding of e-banking is referred to

by the statement defining e-banking as “any business and technological solutions enabling interaction between the bank and the client through the use of electronic channels as well as integration of such an information exchange channel in the organizational and technological structure of the bank” [6].

A wider approach defines e-banking as a service. This concept is proposed by W. Chmielarz, who treats e-banking as one of modern forms of providing bank services which makes their use possible in any area [2]. Such an approach is also argued for by legislation applied in Poland, namely, the Act of 12 September 2002 on Electronic Payment Instruments [7].

Yet, regardless of the scope of any definition or an approach, a few common features may be distinguished which make the investigated issue different from traditional banking [4]:

- no need for physical presence in the bank;
- the possibility to perform a bank transaction at any time;
- no agency of the bank staff;
- automatism of decision in relation to the client's demands and no possibility of negotiating the terms;
- limited possibilities of getting advice.

2. The e-banking market in Poland

The shift in the Polish society's attitude towards e-banking and the dynamic growth in its common use are indicated by the fact that at the end of 2012 a number of individual clients with bank agreements giving access to e-banking services was nearly 20,8 m, which accounted for the majority of the bank account holders [8]. By comparison, at the end of 2010 there were 16,2 such persons, which shows nearly a 30 % increase over two years.

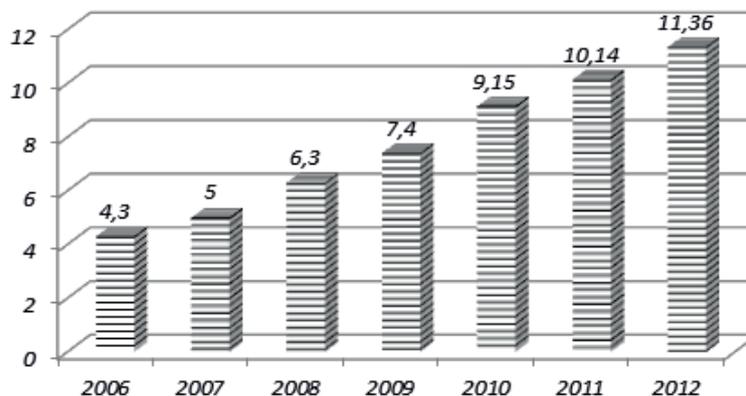


Figure. 1 Active individual clients in 2006-2012 (m)

Source: Polish Bank Association, NETB@NK, Raport bankowości internetowej i płatności bezgotówkowe podsumowanie IV kwartału 2012 roku, p. 5

The development of e-banking is also proved by the dynamic increase in the number of active bank account holders, as shown in Fig. 1. in 2006 only 4,3 Poles were recognized as active bank account holders, i.e. persons who at least once a month log into their own accounts and perform monthly more than four electronic transfers. At the end of 2012 there were already well over 11m of such persons. It proves

an increase by more than 164 % over six years. In this way not only the number of persons using services of e-banking increased but also the frequency of its use which only fast development. It is worth noting, that over the last two years the fell considerably which may prove market saturation and the big maturity of Polish sector of e-banking.

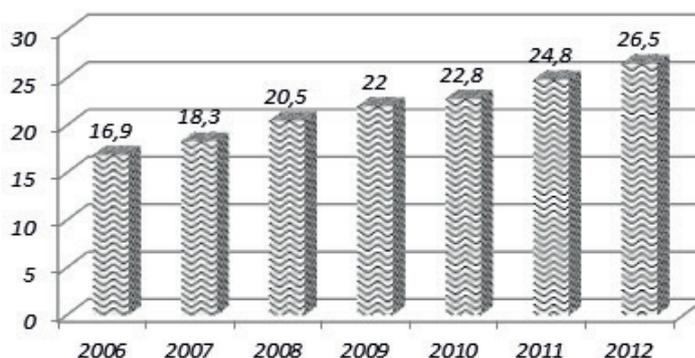


Figure 2. Debit cards issued in Poland in 2006-2012 (m)

Source: Polish Bank Association, NETB@NK, *Raport bankowość internetowa i płatności bezgotówkowe, podsumowanie IV kwartału 2012 roku*, p.7

In the recent years a number of debit cards issued in Poland has been growing systematically, too. At the end of 2012 there were 26,5 of them in Poland which means that the majority of bank accounts holders had an ability to perform payment operations in a cashless system. Since 2006 till the end of 2012 a number of cards issued increased by 9,6, i.e. by nearly 57 %. It meant the card holder performed over 200 transactions with the use of his card in the total amount PLN 43,57 thousand. One should note, however, that the market saturation with these products is relatively high as the annual dynamics fluctuates within 10%. The maturity of the e-banking is also confirmed by a high value of transactions performed through debit cards, which was over PLN54bn in 2012. That indicated the yearly average for the use of a debit card by an account holder was over 200 payment tasks of the total value of PLN 43,570 [8]. Although this result is much lower than in the countries with a longer history of e-banking development, it proves a high activity in this segment of a large group of the society, especially that some part of debit cards holders is not active, which in turn means that active cards holders perform many more transactions and of a higher value.

While discussing the e-banking market in Poland, it is worth referring to the results of the research done by Homo Homini for Deutsche Bank in 2012. They show the Internet has become the main channel of using bank services, as it was pointed at by more persons than at performing operations directly in the bank branch. The fact that new technological advances get more confidence with bank clients is also proved by the results of this research where bank operations performed via call center were indicated by as many as 11,3 % of respondents and the use of application downloaded on a mobile phone – by another 4,4 %.

3. The e-banking market in Ukraine

The activation of the remote banking service is inherent not only for Poland, but for Ukraine as well. The rapid development of IT-technologies is the driving force of it and the second substantial factor is the costs reduction necessity. One of the e-banking development indicators is the intensity of the bank cards market (Figure 3).

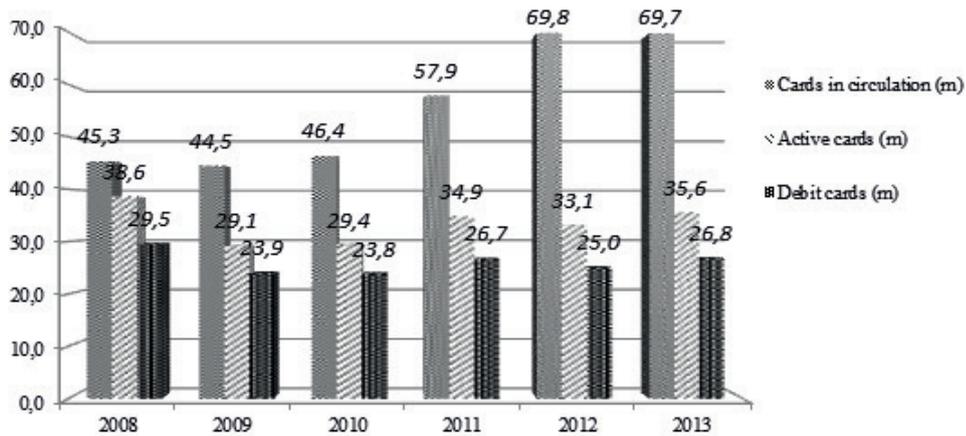


Figure 3. Cards issued by the banks of Ukraine

Source: Official Internet-agency of the National Bank of Ukraine, Payment System, Special payment instruments

It's worth mentioning, that only 80 % of banks of Ukraine are the members of the card payments system. 49,7 million persons are the card holders. It's necessary to underline that on the 1st of January 2014 there are 45,4 million inhabitants of Ukraine, 37,2 million of them are older than 18 years old. It indicates that one banking service customer can hold cards issued by different banks. At the end of 2013 banks of Ukraine issued 69,7 million cards. The growth in the payment cards issuing during 2008-2013 was 54 %. But at the same time, the increase of annual gap between the amounts of issued and active cards (the card is active if there is at least one

expenditure operation during the last three months) has been observed. The maximum gap was observed in 2012 – 53 % or 36,7 million issued cards didn't become active. The next year (2013) was characterized by some improvements: the amount of active cards increased while the issued cards number was constant. The active cards on 75 % consist of debit cards.

The quality of the banking cards market is described by its usage frequency. While researching e-banking should be mentioned that its level of implementation grounds on sums and number of non-cash payments by bank cards (depicted on the Figure 4 and 5).

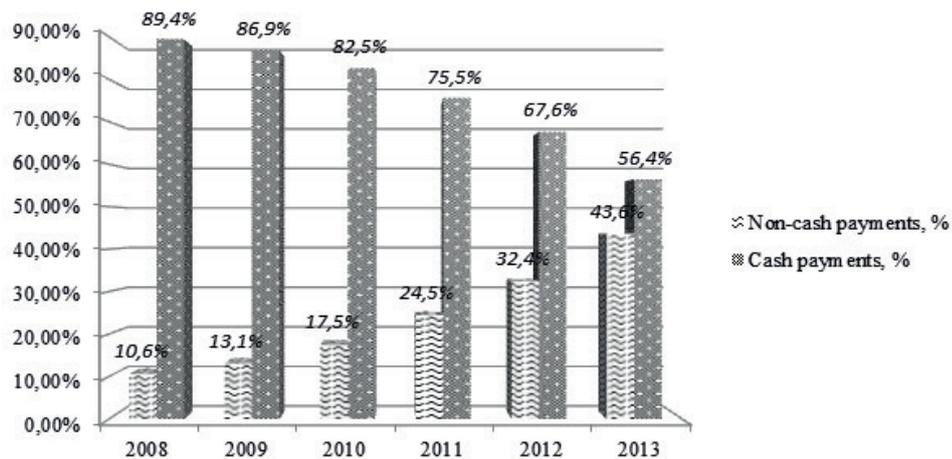


Figure 4. The number of bank cards transactions in Ukraine (the share in the total number)

Source: Official Internet-agency of the National Bank of Ukraine, Payment System, Special payment instruments

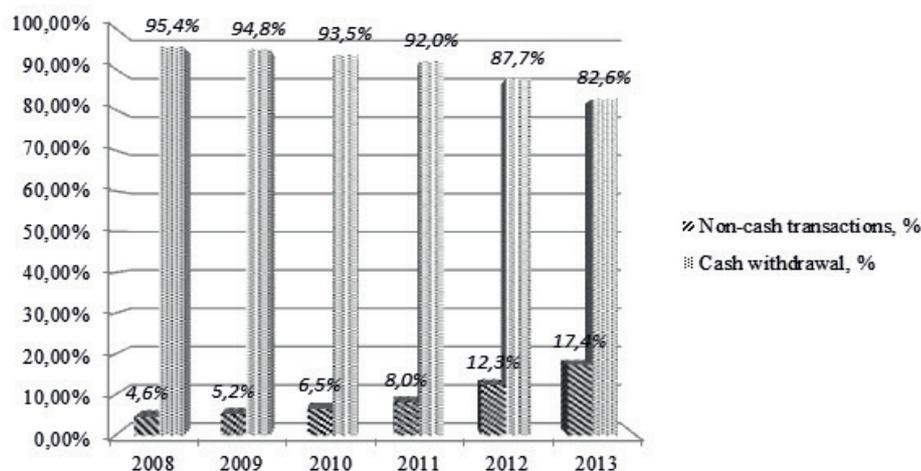


Figure 5. The sum of bank cards transactions in Ukraine (the share in the total sum)

Source: Official Internet-agency of the National Bank of Ukraine, Payment System, Special payment instruments

As it's shown on Figure 4, the number of non-cash transactions has been increasing all the time: at the end of 2013 such transactions' share was 43,6 % (2008 – only 10,6 %). More informative is to present this trend in million units: 2008 – 67 million transactions; 2013 – 584 million. Though superposing the number of non-cash transactions on their sum we can conclude their scanty amount: 2008 – 4,6 % of the total non-cash payments sum; 2013 – 17,4 %. The positive trend in Ukraine was caused by the e-banking activation. At the same time, high level of black economy, insufficient point-of-sale technical providing, lack of up-to-date 3G and 4G mobile telecommunications technologies have caused poor market of non-cash transactions.

4. The use of online banking among households

The profile of survey sample. The assessment of e-banking was one element of the survey research done within the scientific project „The Use of Bank Services by Households in Lublin Voievodship” carried out by the Department of Banking of Faculty of Economics at Maria Curie-Skłodowska University in Lublin. The research covered 365 respondents from Lublin Voievodship. The questionnaire was filled in by 231 females and 134 males who accounted for 63,29 % and 36,71 % of the sample respectively. The respondents aged 21-30 were predominant (approx. 39 %), the smallest group made up persons under 20 (3,84 %) and those over 60 (nearly 5,48 %). The other age groups 31-39 and 50-59 had a similar share in the sample at the level of 16-18 %.

Among the respondents the majority of persons had a university degree (nearly 36 %), and a secondary school education (about 35 %). Only ten persons declared primary education and seven persons declared a scientific degree. Four persons taking part in the research did not give any answer to the question about their education.

While analyzing monthly net incomes gained by households, one may notice a very big diversity. Most respondents declared their incomes are between PLN 1 501 and PLN 3 500. They accounted for 43 % of all the surveyed, 71 persons declared they get incomes up to PLN 1 500, only 17,5 % persons marked in the questionnaire their incomes at the level above PLN 3 500, 14 persons declared they do not gain any earnings, 2 persons provided no answer to the question.

The common use of online banking. As world's experience has proved, the remote banking service intensity directly depends on the Internet spreading: the growing of demand for the Internet-banking takes place while 60 % inhabitants use the Internet. Based on Internet World Stats data, Ukraine is one of the ten European countries with the biggest number of Internet users. In 2013 Kyiv International Sociology Institute defined that 50 % of adults in Ukraine used the Internet. Though, Ukraine has the lowest Internet spreading among adults up to 65 years old. In comparison, in 2013 85 % of adults in the USA are active Internet users. Ukrainians still have access to worldwide net through PCs (62 %), notebooks (29 %), smartphones (13 %). It should be mentioned, that such statistic is adequate just for now, because in 1-2 years it can be radically another situation due to

IT-world dynamic development.

As for Ukrainian financial market, it should be emphasized, that only 31 of 50 biggest retail banks have their own Internet-banking systems. The banks of Ukraine offer 40 different functions for their clients as maximum. The best worked out and the most popular among the users is the “PryvatBank” Internet-banking system – 12,6 million consumers. The number of the Internet-banking registered users is near 15 million, but an average amount of the in-

involved clients to the e-banking applications is only 10-15 % with some exceptions of the leading banks where the 4th – 3rd part of clients use online banking.

As for Poland, the researched households were characterized by a high extent of the use of online banking. Among 365 respondents only 69 persons indicated nobody in their households uses the instruments of online banking. It accounted for merely 17,5 % of the survey sample.

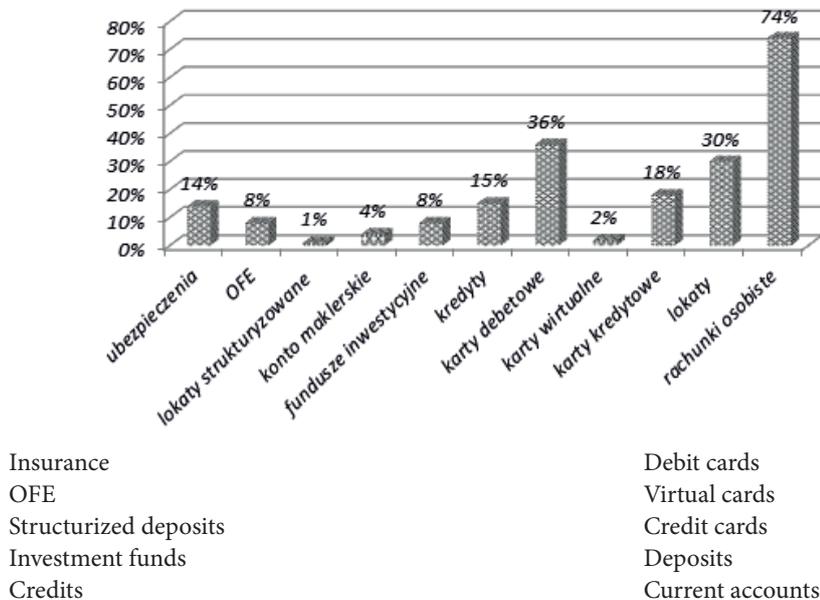


Figure 6. Particular services used via online banking by households of Poland

Source: The author’s own study based on the questionnaire research

While analyzing bank services, which were most popular with the respondents, one should notice that clearing instruments prevail. The majority pointed at checking accounts (74 % of the respondents), and 36 % declared the use of debit cards, 18 % – credit cards, and 2 % – virtual cards. Far fewer surveyed persons used different channels of e-banking to perform investment services. Within this group there were 30 % of the respondents who made a bank deposit online, 14 % who bought insurance, 8 % invested their means in Open Pension Funds and investment funds, 4 % made investments on the capital market via brokerage account, and 1 % made a structured deposit. Definitely the fewest, as merely 15 % of respondents, made use of e-banking to take a credit.

The development of e-banking is evidenced not only by the commonness of its use but also the com-

monness of using particular services. Most often e-banking was used by households to view the balance or to review transactions for their accounts. Over 36 % of respondents were performing this task at least once a week, 3,56 % of who – every day, and more than 20 % – a few times a week. There was also a high frequency of cash withdrawals via cash dispensers. At least once a week they were performed by 35 % of the surveyed, 25 % of who performed this service daily or a few times a week.

A slightly less popular were payments realized via debit cards and performing bank transfers. Over 25 % of respondents claimed the performance of these operations at least once a week. The frequency for the rest of the examined operations was much lower as the majority of respondents acknowledged they perform them either a few times a month or even less.

Table 1*Frequency of using particular banking services via e-banking in Poland*

Type of bank transaction	every day	a few times a week	once a month	a few times a month	once a month	every few months	never
Performing transfers	1,64 %	16,44 %	7,12 %	34,79 %	8,22 %	3,56 %	10,41 %
Sprawdzenie salda lub historii operacji na rachunku	3,56 %	20,27 %	12,33 %	26,58 %	9,32 %	2,19 %	7,40 %
Cash withdrawal in the bank or a cash machine	1,37 %	23,56 %	9,59 %	26,85 %	6,85 %	4,11 %	9,32 %
Payments into the account in a cash deposit machines	0,82 %	1,10 %	2,19 %	5,48 %	3,84 %	9,86 %	54,78 %
Payments by debit card	5,75 %	15,62 %	6,03 %	13,70 %	2,47 %	5,21 %	27,67 %
Regular orders	0,55 %	1,37 %	1,64 %	4,38 %	7,95 %	14,52 %	44,93 %
Opening and closing deposits	0,55 %	1,37 %	0,82 %	1,10 %	2,19 %	19,18 %	30,68 %
others	0,27 %	0,55 %	0,55 %	0,55 %	0,55 %	1,10 %	7,12 %

Source: The author's own study based on the questionnaire research

From the point of view of commonness of the use and the analysis of e-banking development, it is also essential to analyze the period in which households started using e-banking services. As the data in Fig. 7 show the majority of the respondents (29 %) have already made use of these services for 2-5 years. Equally large was the group of persons who used this sort of solutions for over than five years. The fact that a half of the questioned have been using e-banking services for a long time is connected with a number of systematic activities both in the Polish economy, world technology and the bank system itself, which contributed to the growth in the popularity of these services. At that time the Internet, which is the main channel of access to e-banking, gained in popularity and commonness.

The example of the above are also all those activities aiming to popularize teleservices in Poland as well as a fairly dynamic development of access to broadband net, both in large urban, rural, and urban-rural areas. Much should be said also in favor of banks which, in view of clients' needs and chances to reduce costs of service, carried out a number of activities in order to increase popularity of particular channels of e-banking. Since 2004, in fact, all main commercial banks operating on the market have had on their offer online-banking and have started campaigns promoting this form of access to their services. A number of online facilities have been introduced which support clearing servicing trade via Internet. Also at that time the network of ATMs, cash deposit machines and commercial outlets to serve cashless clearings have been expanded.

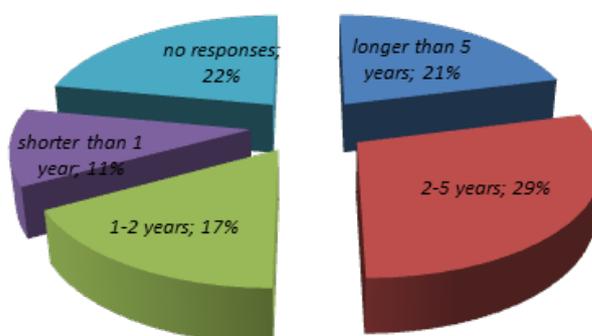


Figure 7. Satisfaction with the use of e-banking in Poland

Source: The author's own study based on the questionnaire research

5. The assessment of the use of e-banking in households' opinion

What every entity providing a given service or a product seeks for is consumer's satisfaction. In the case of e-banking it is much the same. The awareness

that the way in which they perform their services is satisfactory enough is very important for banks. Therefore, in the research households were asked about their satisfaction with e-banking and their opinions on its potential threats.

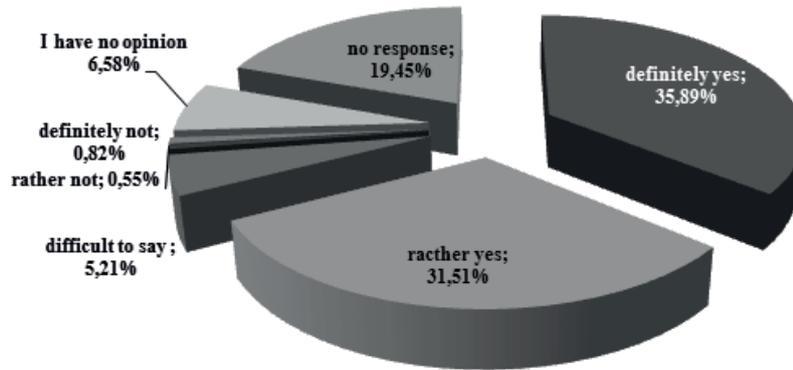


Figure 8. Satisfaction with the use of e-banking in Poland

Source: The author's own study based on the questionnaire research

The results of the research on satisfaction with e-banking which were done among the households indicate that the vast majority, because as many as almost 68 %, declared they are satisfied with this form of banking. Of all the households taking part in the research about 36 % acknowledged that electronic solutions fully meet all their expectations, and another 31 % pointed at the high level of satisfaction. Among the respondents dissatisfied with services of e-banking there were only 1,5 % of the surveyed, 0,82 % of who were persons definitely dissatisfied. This result is not only very good but surprisingly very

good, especially that the same respondents pointed at a number of risks which largely affect e-banking rather than traditional banking.

As the data in Tab. 2 show the highest threat, in the respondents' opinion, are threats arising from technical failures of the bank system, including potential leakage of the system and hackers' attacks from outside. This was pointed at by 42 % of the respondents. It is worth noting, however, that among the surveyed households a fairly large group (13,42 %) claimed this risk to be higher in traditional banking.

Table 2

Households' opinions on threats connected with the use of e-banking in Poland

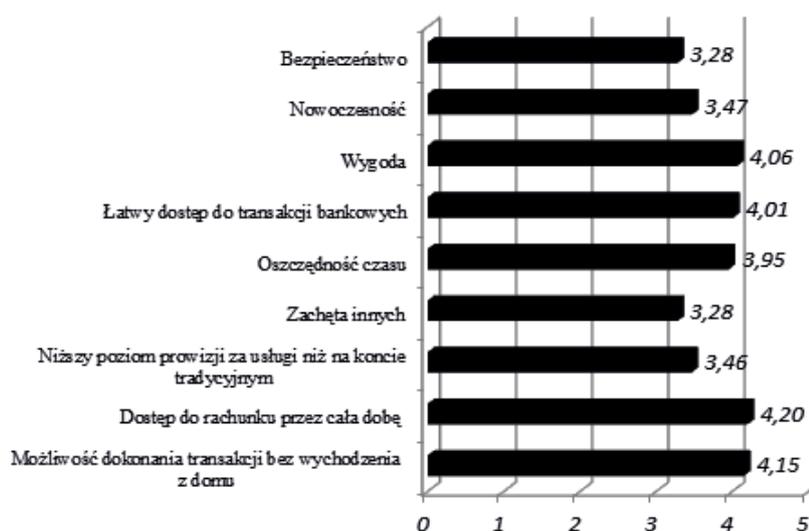
Risks	Yes, and it is higher compared with traditional banking	Yes, and it is lower compared with traditional banking	Does not exist	Difficult to say	No data available
There is a threat to e-banking due to bank frauds	36,16 %	13,97 %	10,68 %	31,78 %	7,40 %
There is a threat to e-banking due to a bank employee's error	12,05 %	21,92 %	27,40 %	31,23 %	7,40 %
There is a threat to e-banking due to a bank customer's error	34,79 %	17,26 %	9,59 %	29,04 %	9,32 %
There is a threat to e-banking due to technical failures of the bank system	42,19 %	13,42 %	7,12 %	29,04 %	8,22 %

Source: The author's own study based on the questionnaire research

In the opinion of the surveyed a significant risk of e-banking arises also from bank frauds and errors of the bank customer. In both cases about 35% of the surveyed pointed at risk being higher in e-banking than in traditional and several per cent of respondents held a different view. While the opinions on the latter risk seemed to be justified as the essence of using advanced IT solutions lies in a bigger automation of the process and shifting the burden of customer service on the customer himself, hence a higher risk in this respect, bank frauds are equal in this regard in both areas. One should bear in mind, however, that a large part of threats in e-banking, and in particular the Internet banking, results from the fact that clients themselves do not maintain a proper level of security. Yet, they perceive information on frauds with the use of electronic channels as bank errors, not as their own, thus there is such a high assessment of risk in the case of e-banking.

Determinants of using e-banking. While analyzing the data shown in Fig. 9 one may notice that among examined factors those connected with con-

venience and flexibility of access to banking services had the biggest impact. An average assessment of such determinants as access to a bank account on a 24 hour basis, the possibility of performing bank transactions and convenience was higher than 4. Therefore, one may say that e-banking services perfectly well meet the expectations of the 21st century man for who convenience, a leeway in taking decision and time have become most important. It is also confirmed by a high assessment of saving time at the level of just under 4 points. Factors connected with the public opinion such the opinion of others, the novelty of the used solutions and cost factors had a far lower influence on the choice of e-banking. Particularly surprising is a low assessments of savings from commission fees compared with a traditional account, because in the majority of research on remote services cost factors are essential. It only proves the maturity of the Polish society who now appreciates more its leisure and freedom of taking decisions and minimizes the importance of capital savings.



Security

Modernity

Convenience

Easy access to bank transactions

Saving time

Encouragement from others

Lower commission for services than in traditional account

24h access to the account

The possibility of performing a transaction without leaving home

Figure 9. Determinants of using e-banking in Poland

The rating was made in a scale 1-6, where 1-very poor impact, 6-decisive impact

Source: The author's own study based on the questionnaire research

The significant differences between e-banking in Poland and Ukraine are as follows: firstly, the remote banking service and e-banking as well haven't yet become a habit for Ukrainians. For now the main goals of the Internet users are: 1) social networks – 56 %; 2) e-mail – 52 %; 3) films and music downloading – 41 %; 4) searching for information – 36 %; 5) the source of news – 29 %; 6) video-online – 23 %. At the same time, for Europeans the Internet-banking is one of the three most popular reasons for the Internet usage during last years.

The second difference is the service list offered for sale. For example, insurance, investment products and currency conversion are widely distributed in Poland, but are not offered in Ukraine with some rare exceptions.

As the result of the households interviewing, held in 2012, the TOP-10 of the Internet-banking options widely used by Ukrainians was defined: to view the balance of account; to make payments for municipal, mobile and Internet services; to get information about all personal bank accounts and banking products; to transfer funds among bank accounts; to make payments in national currency; to get account statement; to pay off debts using private accounts; to withdraw or to put funds from or into deposit account; to get information about exchange rate, financial news etc.; currency conversion.

Conclusion. Nowadays e-banking is one of the most dynamically developing sectors of economy which appears to become a key channel of access to services offered by banks. It is much impacted by benefits diagnosed in various research which are connected with convenience and flexibility from these services as well as from fast technological advances which make banks tailor their product offers. The research showed that the most developing form of performing e-banking is the Internet banking and the current account service related to it, including e-payments. Equally fast are developing settlement services with the use of debit cards. Due to the development of new technologies and wider and wider range of the Internet, the possibility of using e-banking services is not exclusively dedicated to selected persons with high incomes. It is common as evidenced by the outcome of the research quoted in the article which shows a high level of market saturation with e-banking.

However, the present situation does not reflect a slowdown in the development of e-banking market. One of the main trends in modern banking is multi-channeled access to performed services. Banks do not close to information coming from their sur-

rounding, on the contrary, they try to meet clients' demands and make use of various access technologies. It is proved by their immediate response to the development of the market of smartphones and introduction of dedicated IT solutions directed to perform services with their usage.

The Ukrainian financial experts consider that the main current trend of the Internet-banking is its functional extending – implementation of new products, services and systems “MasterCard Money Send” and “Visa Money Transfer”; the activation of the Internet-payments of the municipal services. In the future the credit-online, insurance and investment products will be implemented; banks will integrate into social networks and Internet-supermarkets; mobile payments based on NCF (Near Field Communication) technology will take place.

In general, the virtualization of the banking business is a logical step of the further banking system development in each country. Of course, for some banks it will be important, but not the only marketing channel for products and services sale. The others will create the whole business at this platform.

It is worth considering to which extent e-banking may wipe out traditional banking, and if the currently undergoing changes are likely to contribute in the near future to minimizing traditional banking and replacing it with remote services. It would have a considerable influence on functioning of the banking system and banks themselves. A number of bank branches would fall significantly, employment would be reduced, the structure of banks themselves and services performed by them would be transformed. It seems, however, that in the near future such significant changes will take place, because there is still quite a big group of people on the market, including mostly elderly persons and those living in rural areas, who are unwilling to use and who will not use e-banking services. It stems both from their reluctance to remote services as well as from much less access in their surrounding to the Internet and so called POSs (Point of sale)- credit card terminals. What is more, the actual goods and services market still limits the potential of e-banking development as a large part of it cannot be served online. In particular, it refers to so called small payments area, where cash is still dominant, and to clearing of public services, where settling of payments is often done in a traditional way. Consequently, soon one may expect a slowdown of developing trends in e-banking in a present form. As shown in the article, it is proved by high saturation of the market with these services and by a considerable group of people who will not take advantage of these modern solutions.

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