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FinTech as an innovative banking sector

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ABSTRACT

The current area of consumers in the banking sector is increasingly narrowed down to telecommunications solutions with particular emphasis on online banking and various types of smartphone applications used for communication with their own bank. Developing in recent years has greatly contributed to the development of the "fintech" subsector. Technological finance is now an inseparable element of modern banking. Fintech enterprises dealing with innovations in the field of banking are very often co-operators of traditional banks, providing them with world-class telecommunications solutions as is the case in Poland.

Keywords: bank, banking, fintech, analysis, online banking

1. INTRODUCTION

The functioning of banking services consumers has changed over the years. Technological changes are clearly visible on the example of the financial sector. Development in this sector has always been dictated by changes in the technological sphere in society from the introduction of bills of exchange at the beginning of banking. The present times give a much greater complexity of processes that affect the financial sector dictated by globalization. Current changes such as contactless payments, instant transfers or social loans are the result of ongoing technological changes in recent years. The article aims to present banking in relation to the technology used by consumers of banking services. The first part presents the essence of banking and its basic types, then moving to the application of technology in finance referred to

as FinTech and in the research part, an analysis of the current situation on the technology finance market.

2. BANKING

The history of banking has been located in medieval Italian port cities. The first bank was created as a goldsmith in Florence, which dealt with the storage of silver and gold coins of merchants. By depositing coins, the goldsmith issued in exchange for promissory notes that enabled them to be used in transactions. Bills of exchange enabled the realization of receivables in a similar way to a modern bank transfer. Take action initiated a cashless banking turnover (Fig. 1).



Fig. 1. Banking [google].

The name "bank" is also associated with medieval transactions. It is assumed that the term "bank" comes from the Italian word "banco" and means a bench, counter, where money traders have carried out banking operations [1].

An important feature of financial services in the medieval period was a strong connection with commercial activities [2]. Metallic money was converted into a promissory note, interest-bearing loans were granted, and then its scope of activities was extended to receive cash deposits. These activities were not carried out by banks, as is currently the case, but by the so-called department stores [3].

2. 1. Types of banks

The legal basis for banks' operations is not identical, therefore their practice to some extent varies depending on the type of bank. These differences mainly relate to various purposes

in the bank's operations. If the main purpose of the bank's existence is taken as the basis for the criterion and will be considered from the category of interests of their owners, then you can distinguish:

- commercial banks,
- cooperative and self-help banks,
- municipal banks,
- savings and loan funds.

Figure 2 presents the breakdown of the basic types of banks [4].

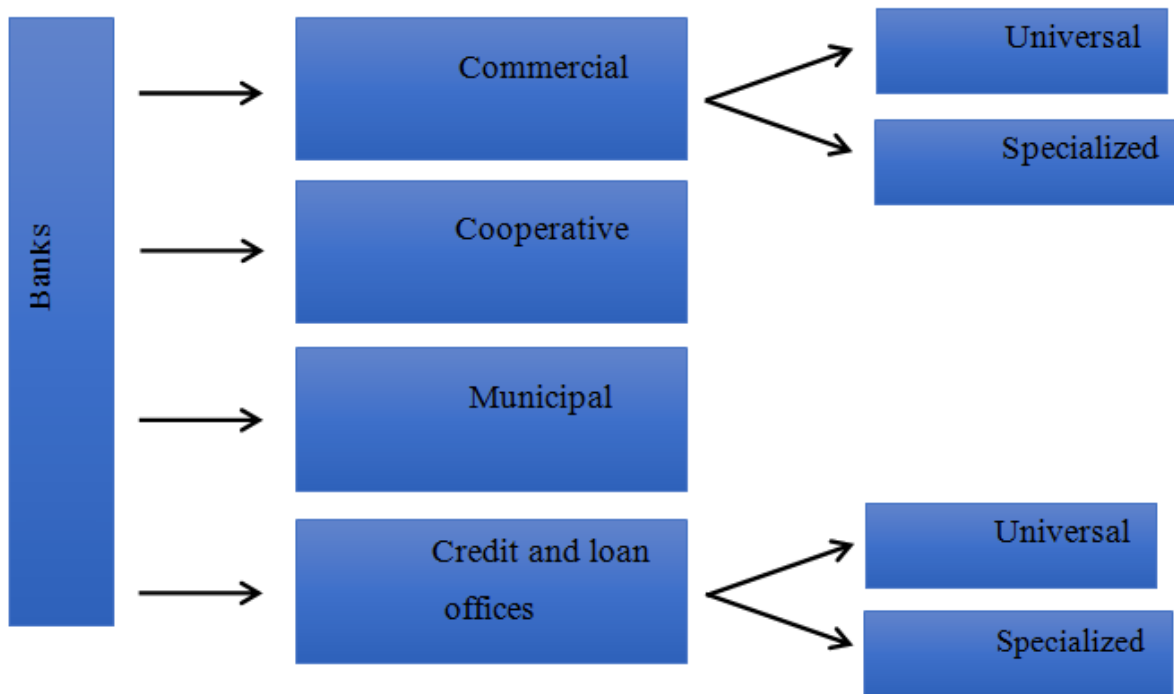


Fig. 2. Basic types of banks [5]

The activities that are carried out by the bank depend on the type of this bank. In the literature one can find the authors' indication that there is not only one criterion for the division of banks. The literature states that the most commonly used divisions of banks are dividing both universally and professionally. Specialized banks can be distinguished, such as investment and mortgage banks. At present, there are several mortgage banks operating in Poland, whereas investment banking is practically non-existent. Also in other countries, investment banking lost its importance, which was caused by the crisis on the financial markets [6].

Another division of the banking system includes the following groups of banks:

- central banks,
- operational banks (deposit-credit, investment and universal),

- special banks (mortgages and credit and regional associations),
- savings banks,
- credit cooperative.

The first type of bank is the central bank. It is referred to as the most important element of the banking system. At the same time, the central bank operates as an issuing bank, a bank of banks and a bank of the national economy. He is the regulator of the monetary circulation within the country as well as the balance of payments balance. He also performs the function of a state bank for granting loans to the government, servicing sovereign debt and cash-based budget services. The central bank is obliged to ensure the stability of the national currency and stimulate economic development. These activities may have a positive impact on the growth of national income as well as a drop in unemployment. In order to guarantee financial stability in the sector, the bank of banks acts as a reserve bank for commercial banks. Two types of money can be distinguished, which is created by the central bank [7]:

- cash (money of cahs),
- cash (livelihood money),

The functions fulfilled by the central bank are as follows: [8]

- regulates the circulation of emitted money,
- regulates the amount of money created by banks,
- regulates the liquidity of the banking system,
- shapes the credit potential of banks.

Other functions of the central bank also include other activities such as handling and processing of foreign payments, mediation in the purchase of gold and foreign currencies, implementation of state policy in the context of exchange rates, and maintenance of reserves for international cash [9].

The most common types of banking institutions are commercial banks. It consists of operational banks and special banks. The purpose of this type of banks is to generate profit. It is an institution aimed at gaining market share and, as a result, revenues. These banks provide specific services indispensable for the society, inter alia in the form of cash and non-cash transactions. The overriding objective of a commercial bank is to strive to satisfy the needs of given economic entities, acting in the field of banking services and at the same time charging various types of fees for specific services.

The implementation of this goal is related to limitations such as:

- the need for liquidity, in the case of bank customers' insolvency;
- the need to comply with financial regulations regarding finance;
- the need to guarantee the bank's customers safety.

The operation of a commercial bank is based on the complexity of its functions. Implementation of various banking services as well as their development is guaranteed by maintaining the bank's profitability and the unchangeable degree of clients' trust in this institution. Specialization of banks leads to their division into investment and deposit-credit banks. In the case of deposit and credit banks, which focus their activities in the field of credit

and realizing settlements. The investment bank, on the other hand, collects funds for financing investments. Capital resources are collected only on the basis of contributions from customers as well as the issue and sale of own bonds [10].

Credit unions are defined as local banks as "in accordance with the provisions of the Act, operating under authorizations authorizing to carry out risky banking activities, funds entrusted under any repayable title" [11]. The purpose of cooperative banks is primarily a social objective, which is implemented through:

- provision of financial services in a given area,
- an offer for economically weaker customers,
- counteracting financial exclusion of the population.

A cooperative bank is a financial institution that primarily pursues a social goal, it can not be accused of social activity because it is still a bank. The factors that distinguish a cooperative bank from commercial ones is the fact that a cooperative bank provides its services in a small area, which is why it is referred to as "local" serving the local community. His actions do not only refer to the generation of profits, but as his co-operative name bears, that is, to bring help. Being in this group of shareholders, we have the right to apply for a loan from our bank, hoping for better treatment, more favorable than for commercial banks.

Currently, cooperative banks offer a range of financial services in small towns. Only 3% of branches operate in the 10 largest cities in Poland. Another 7% operate in cities up to 100,000 residents [15].

The overriding task of the savings bank is the close connection between the savings activity of this institution and small enterprises and households. Such functioning must bring a measurable effect in the form of a generated profit, which is transferred to the local government.

The basic assumptions of savings banks are as follows:

- acts as an independent universal bank;
- its founding body is the local self-government, which determines the status of the cash register and selects the council of the coffers;
- the council consists of representatives of local authorities and employees of the coffers;
- the management of the cash register is responsible for the current activity of the coffers;
- the supervisory body over savings banks is exercised by the local executive authority [16].

The above discussion presents the specificity of the banking sector, taking into account individual entities on it. Due to the subject of this article, special attention should be paid to the products and services of these institutions as they are key for customers. It is very important from the point of view of further considerations regarding technology finance to define innovative products and financial services. In the literature on the subject, the term bank product refers to an intangible set of properties and functions and assigned for a given access channel, defined in order to satisfy specific customer needs. An example of this is a personal account, deposit or loan. In contrast, the concept of financial services is the provision of traditional access channels requiring personal contact with an adviser as well as electronic services using telecommunications solutions. These include the processing of loan applications, transfers of funds or opening a deposit [12]. The above assumptions can be illustrated in the following way, which is shown in Figure 3.

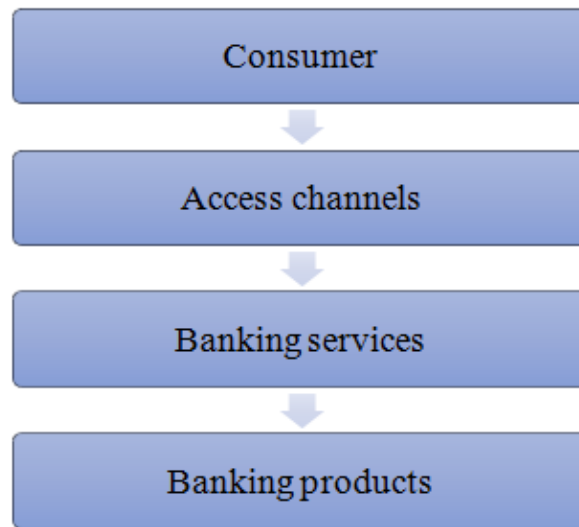


Fig. 3. The relationship between the access channel, the product and the banking service [13].



Fig. 4. Vizualization of banking [google]

Banking services have specific features that determine the functioning of individual banks. The most important features according to Grzegorzczuk are [14]:

- immateriality - in other words electronic proceedings;
- heterogeneity - that is, the need to adapt to the requirements of consumers by individualizing products;
- lack of protection of the content and form of banking products through the possibility of copying them;

- high complexity;
- universality;
- the role of the client in creating banking services - that is, taking customer's needs into consideration as well as his knowledge, trust in a given institution (Figure 4).

The current state of the banking market shows the relationship between the bank and its clients. The increasing knowledge, market knowledge and consumer needs are the determinants of the direction of changes in the sector. The development of technology also has an impact on this state, which somehow forces financial institutions to develop in this area [17].

3. FINTECH

3. 1. Innovative banking

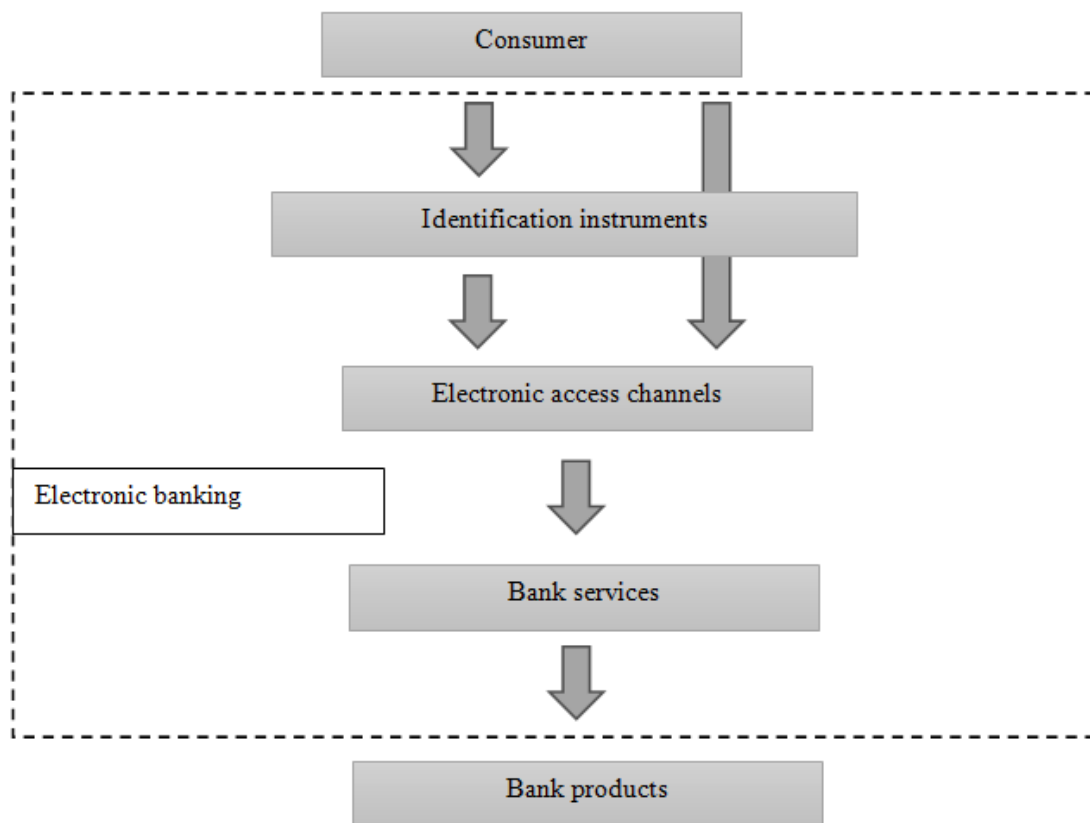


Fig. 5. Electronic banking and banking products and services.

An opportunity for further development of the financial sector is the Internet and all the possibilities it offers. The banking sector, wanting to adapt to the customer's profile, uses new technological solutions to continue providing financial services. Traditional banking is the basis for consumer acceptance of electronic solutions in finance at the present time. Confidence in the sector is a very important, strategic factor of survival for their institutions. This trust can

translate into confidence in the more frequent use of technological solutions by consumers. The rapid development of technology and consumer awareness results in greater requirements for the banking sector. Electronic banking is a logical consequence of consumer requirements and growing knowledge and awareness of available technologies as to how to contact your own bank.

In the literature on the subject, many definitions of electronic banking can be found. Most often it is presented as the application of technology as an intermediary in the contact between the bank and the customer and the automation of certain activities performed by the employee. A slightly different approach defines electronic banking as a form of delivery and implementation of banking services using remote access channels, enabled by information and communication technologies, without the need for the client to contact the bank employee personally [18].

The characteristic features of electronic banking should be indicated, such as:

- Use of electronic media;
- Contact and customer interaction with the bank;
- An integral part of the bank and banking in a wider scope [19].

Electronic banking, as is evident from its specificity, has a somewhat different relationship between access channels, banking services, banking products and instruments that are necessary for this purpose. This relationship is shown in Figure 5.

3. 2. The essence of FinTech

The term "fintech" was first used in 1980 by Peter Knight, the then news editor of the Sunday Times. In this case, the term was used to characterize the bot, which changed the parameters of his e-mail. Subsequently, fintech became widely used as a way to determine the stock exchange indices of companies that were in the technology and finance industry. It was not until 2008 that fintech was very popular in the financial world due to the crisis.

The term FinTech means in the literal sense fin - financial and tech - technologies. This means using state-of-the-art telecommunications and IT technology solutions to improve the process of providing financial services, in particular granting loans, creating deposits, managing finances, making online payments or exchanging currencies [10].

A slightly different approach is presented by Fintech as entities operating on the financial market, constituting a new category of parabanks. Fintech also means combining financial and digital services in increasingly individualized technologies using databases (big data). Fintech's activities include modern forms of mobile payments, advanced transactional banking, virtual currencies, innovative solutions in the field of investment funds as well as database management [8]. Another approach to defining the concept of fintech speaks of modern ways of implementing various types of transactions related to value management and enabling technologies [14].

The units dealing with technology finance are presented as parabanks, because they provide similar services as banks, but not with the same, but with the use of more modern, more advanced technologies [15].

The most important goals of fintech companies are to improve the efficiency and availability of financial services [13]. This is related to the reduction of operating costs because "parabanks" as defined by fintech do not have branches or branches, unlike traditional banks.

The reduction of these costs has a positive effect on the price of services offered to clients by units from the technology finance sector. Availability in this area is practically unlimited. Access to the network is the only limitation. Such a situation on the market also affects the reduction of the financial exclusion of the society, because as it was previously mentioned, fintech is a substitute for the banking sector.

Companies in the fintech sector are usually online companies and companies that are not banks, insurers or investment firms. The offer that Fintech has at its disposal, starting from instant transfers to applications for communication, through platforms and social loans payment [17].

It should be pointed out that fintech companies are not just a competition for banks and the banking sector. In the era of technological progress and rapid changes (globalization) on the market where unexpected takeovers, mergers and co-operations occur, it is an irreversible state. Banks initially perceived fintech as a threat trying to fight them. The surrounding technology and its constant growth gives direction to the development of entire sectors and, above all, to the financial sector. The banking sector, starting from the competitive struggle, adopted a cooperation strategy in order to generate additional benefits for its clients through solutions more relevant to the current technology. Banks very often use innovative fintech solutions because in this way they improve their image as more innovative in the sector. Cooperation between these units brings benefits for both parties because they can provide services to the bank on the basis of outsourcing, with tangible financial benefits.

Companies from the fintech sector today can not replace banks, as their share in the sector is too small (1% of the credit and loan market), but it is still growing. Currently, their creation forced the banks to change business models [16]. Perhaps in the future the above share will be reversed in favor of the fintech industry, as Bill Gates pointed out.

4. FINTECH ANALYSIS IN POLAND

The results presented in this article come from research conducted by Fintech Poland included in the report entitled "Fintech in Poland, opportunities or threats". The research part will present examples of fintech companies operating on the market as well as the characteristic features of Polish fintechs. As one of the most important fintech companies in the payment sector, PayU and Blue Media should be indicated. The PayU company is a very large entity coordinating the payment services market in the region of Central and Eastern Europe. Currently, it offers its payment services to banks and retail clients. The above companies (PayU, Blue Media) contributed significantly to the development of Poland in the finance sector through the introduction of instant transfers, pay-by-link transactions, e-wallets and social loans. The development of these companies gave the opportunity to introduce an additional access channel in banks at the early level of electronic banking development.

Quantitative research carried out by Fintech Poland gives the opportunity to determine the time of functioning of companies in the fintech sector in Poland. According to research, 37.5% of surveyed companies operate up to two years. Companies with a period of 2 to 5 years is 25%. From 6 so 10 are 18.8%, while companies with the longest seniority over 10 years are 18.7%. The above data has been presented on Figure 6.

The next chart is about defining the target group of Polish FinTechs. According to the data, most companies from the fintech sector direct their services directly to 69% business

customers. Subsequently, the recipient is a bank of 56%, retail clients in 50%, other financial institutions 31 and 6% for other recipients. figure number 2 presents the above quoted values.

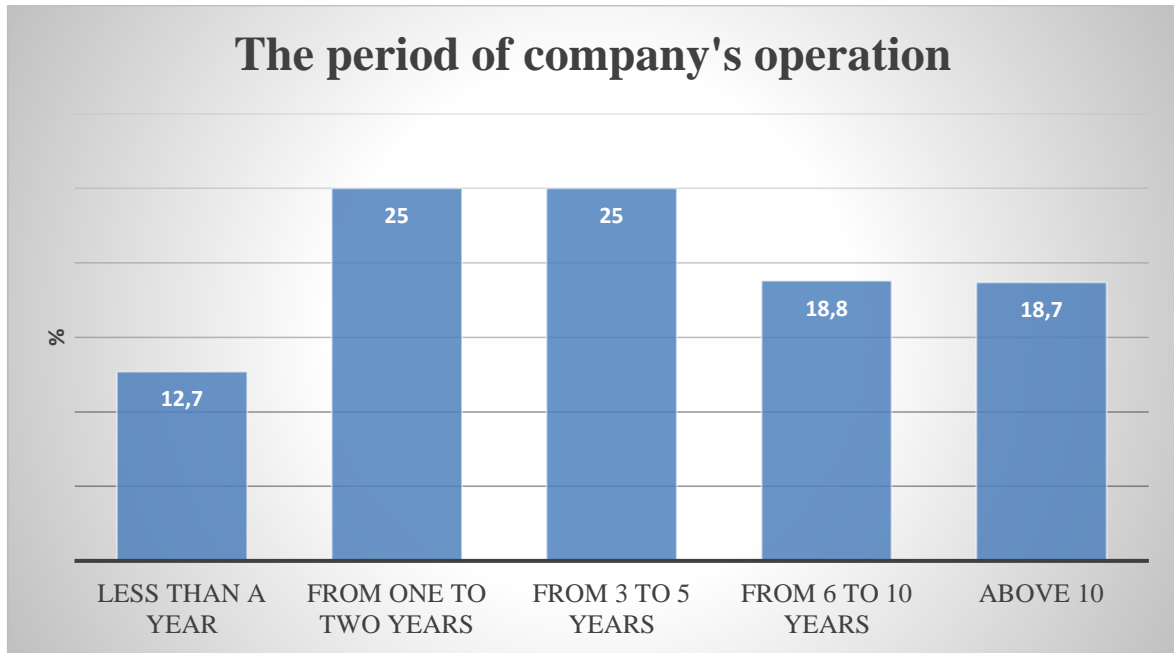


Fig. 6. FinTech's period of operation

Source: "Fintech in Poland barriers and development opportunities" [report in Google]

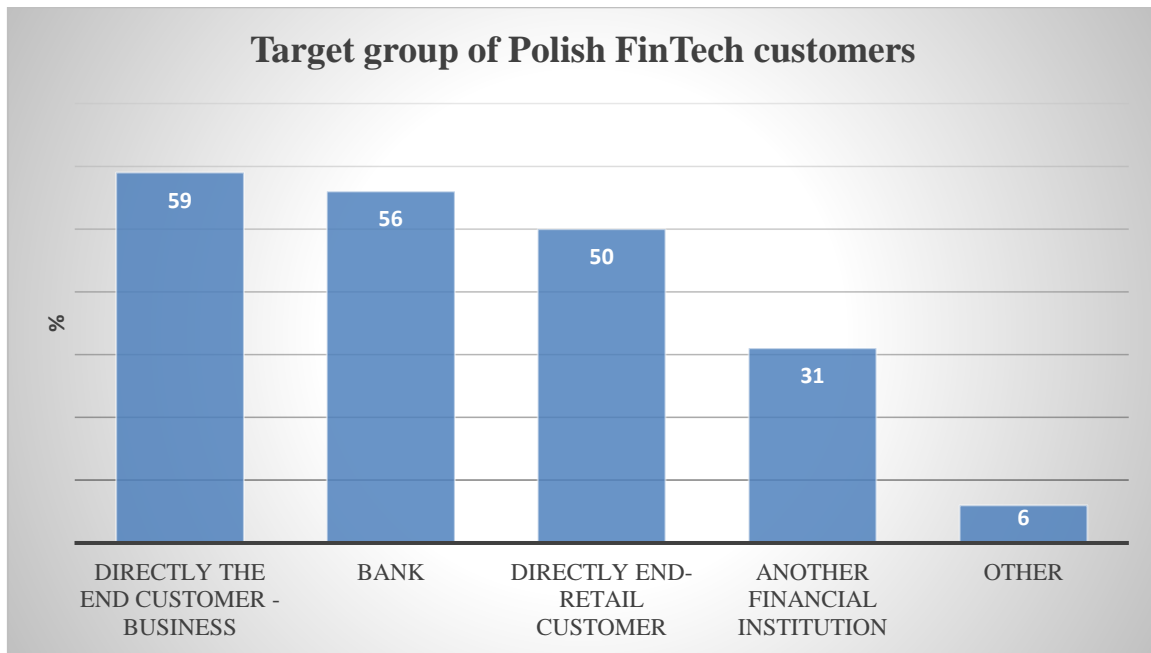


Fig. 7. Target group of clients from the Polish FinTech sector

Source: "Fintech in Poland barriers and development opportunities" [report in Google]

The next chart will present the area of activity of companies from the FinTech sector in Poland. Most entities because 25% defined their area as financial platforms. The object of Crowdfunding, electronic payments and data analysis is dealt with by 13% of the surveyed companies. After 6% of respondents FinTech deals with cryptocurrencies and Personal Finance Management. The data is presented in figure number 8.

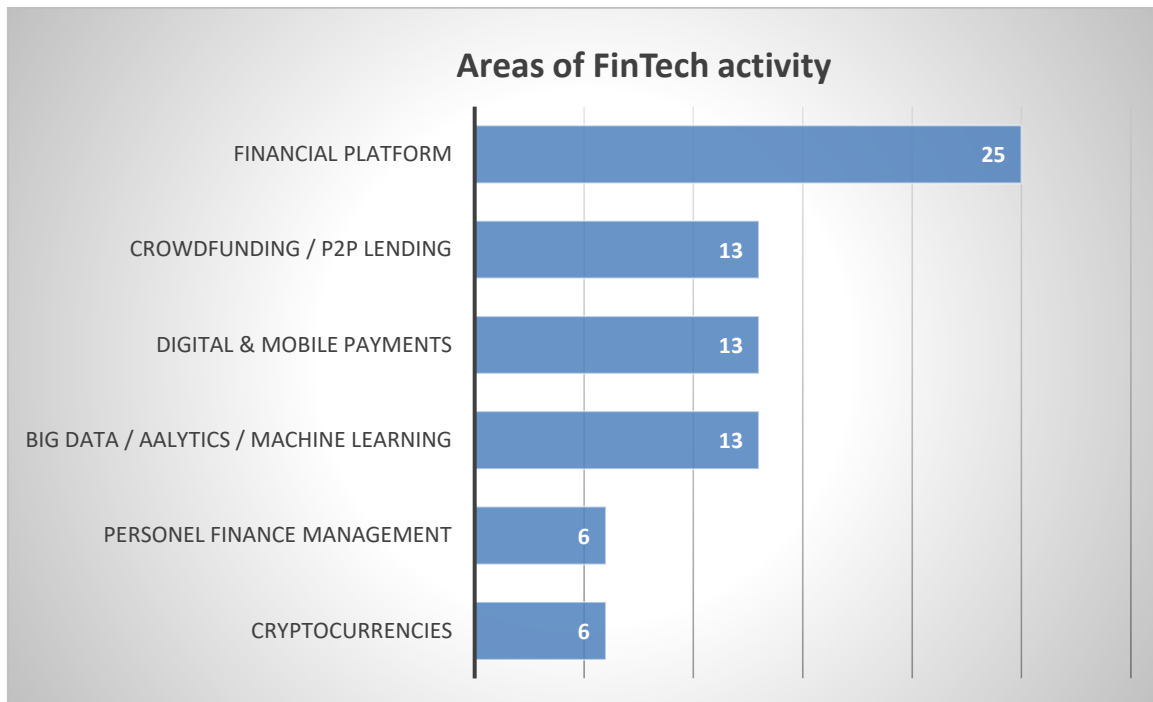


Fig. 8. Areas of FinTech activity.

Source: "Fintech in Poland barriers and development opportunities" [report in GOOGLE].

Companies from the FinTech sector in Poland are characterized by high innovative potential. These companies, mainly financial platforms, are thus somewhat in the background. The unrecognizability of the brand of these units may be due to the fact that they act as outsourcer of their services. The exceptions are two Pay-u and Blue Media companies, which are recognizable on the market despite the fact that they cooperate with banks or other financial institutions as other companies from the FinTech sector [19].

5. CONCLUSIONS

Banking conceived in a traditional way has a very strong position on the financial market. Nevertheless, its behavior is changing even over the years. The technology used is the decisive factor in this change. To a large extent, the development in the banking sector is now dictated by the emergence of so-called "parabanks" or companies operating in the banking market, but not subject to the same legal burdens. The result is a very rapid development of these units. The strength that allows for efficient competition with large banks on the market is technological

advantage as well as adaptation possibilities to the changing environment. Banks at the present time are forced to "divide" the market between themselves and the parabanks. The only rational way to develop in this situation was cooperation between them and complementing each other's services. Bill Gates said in an interview that "banking yes, banks are not necessarily".

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