

DEVELOPMENT OF THE PAYMENT MARKET

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Reliable and efficient payment systems are a guarantee of stable functioning of the banking system and the economy as a whole. Payment systems play one of the most important roles in the economy of Ukraine. They ensure that the subjects of the economy perform calculations for obligations that appear in the process of economic activity and the transfer of funds. The rational organization of the payment system contributes to the effective functioning of the financial sphere, the improvement of monetary and credit relations, and the implementation of interstate currency settlements. Effective functioning of payment systems is a crucial component for the positive development of the financial system.

A payment system is a payment organization, members of the payment system and a set of relationships that arise between them during the transfer of funds. Transferring funds is a mandatory function that a payment system must perform. The legislation of Ukraine provides for the operation of domestic and international payment systems.

The payment system of Ukraine consists of the following components: the electronic payment system of the National Bank of Ukraine; bank automation systems; intrabank payment systems; "client-bank" systems for payments between the bank's client and the bank in electronic form (Kalmykova, O., et al., 2015).

As of the beginning of 2022, 53 payment systems and settlement systems were operating, of which: 29 - created by residents: 8 - the payment organization is a bank (1 - domestic; 7 - international); 21 - the payment organization is a non-bank institution (14 - domestic; 7 - international); 15 were created by non-residents: 6 - international card payment systems and 9 - international money transfer systems; 7 - intrabank

payment systems; 2 - state payment systems. 34 operators of payment infrastructure services worked on the payment market of Ukraine (Table 1).

Table 1 – Payment market of Ukraine (at the end of 2021)

Number of international payment systems, including:	card	Money transfer	Number of national payment systems	non-bank	banking	intrabank	state
15	6	9	38	21	8	7	2
The number of payment systems registered in 2021, of which:							7
payment systems created by residents							3
international payment systems created by non-residents							4
The number of payment systems whose registration was canceled in 2021, of which:							
payment systems created by residents							2
international payment systems created by non-residents							2
The number of operators of payment infrastructure services							34
The number of operators of payment infrastructure services registered in 2021							4
The number of operators of payment infrastructure services whose registration was canceled in 2021							4

The payment market of Ukraine was replenished with new participants. Thus, during 2021, the National Bank registered three payment systems created by residents: the international payment system "CORDPAY"; intrastate payment system "KASKAD"; the domestic payment system "PaySystems" and four payment systems created by non-residents: the international card payment system "JCB Payment System" (Japan); international card payment system "DINERS CLUB INTERNATIONAL" (United States of America); international money transfer system

"PAYSER" (Lithuania); international money transfer system "TransferGo" (Great Britain).

To fulfill the tasks defined in the Strategy for the Development of the Financial Sector of Ukraine until 2025, and with the aim of implementing the Strategy of the National Bank of Ukraine until 2025, a number of measures have been taken to improve the regulation of the payment market, namely: the requirements for opening accounts for bank clients have been simplified (presently - a passport, the criteria of which support the use of the Diya mobile application, for business entities to open current accounts for the benefit of individuals with their consent to make certain types of payments, the list of documents submitted by non-resident legal entities when opening accounts has been reduced; continued updating of the regulatory framework regulating the activity of the payment market; the issue of the procedure for the execution of settlement documents of debt collectors by banks in connection with the transition of SEP and banks to work in the 23/7 mode was settled; the procedure for issuing payment cards and carrying out operations using them was modernized [2].

Updating the regulatory framework regulating the activity of the payment market is establishing the procedure for opening United Nations accounts and escrow accounts by banks for the purpose of performing notarial actions to accept the monetary amount of the debt from debtors; issuance of savings certificates instead of savings (deposit) certificates.

Modernization of the procedure for issuing payment cards and carrying out operations with their use includes expanding the possibilities of business use of corporate payment cards (electronic means of payment), namely: the business entity was given the right to independently determine the persons who have the right to use corporate payment cards issued to its account ; demarcated the responsibility of the business entity and the holder of the corporate payment card; simplified the receipt of a payment card by a trusted person - the owner of the account.

The National Bank of Ukraine is a payment organization and settlement bank for two payment systems created by it - the Electronic Payment System (ESP) and the National Payment System "Ukrainian Payment SPACE". SEP participants are legal

entities, as of January 1, 2022, their number was 71 banks of Ukraine. Work is underway to modernize the SEP by introducing the ISO 20022 international standard and transitioning this system to a 24/7 operating mode, which provides for an instant transition from the current to the next banking day without suspending the SEP for performing interbank payment transactions.

The system of mass payments in Ukraine is represented by the Ukrainian payment SPACE national system. PROSTIR is an intrastate banking multi-issuer payment system for mass payments. In the course of 2021, two banks (JSC "Bank 3/4" and JSC "BANK "UKRAINSKY CAPITAL") joined NPS "PROSTIR". At the end of 2021, the NPS "SPACE" had 56 participants. The volume of non-cash transactions using payment cards of NPS "SPACE" according to the results of 2021 has almost doubled compared to 2020.

On the way to the introduction of the instant payment system in Ukraine in 2021, work was carried out on the creation of the Concept of the instant payment system project. This work was carried out with the support of the European Union Twinning project "Strengthening the institutional and regulatory capacity of the National Bank of Ukraine for the purpose of implementing the Association Agreement between Ukraine and the EU", the World Bank and in close cooperation with representatives of the banking community. The main goal of creating a system of instant payments in Ukraine is to enable citizens of Ukraine to make fast, cheap and secure payments between accounts using convenient, modern and innovative access channels and methods of initiating payment transactions. The implementation of the system will contribute to the development of the payment infrastructure, strengthening competition in the payment market, meeting the expectations of the market and users, financial inclusion and increasing the level of cashless payments.

As part of the Twinning project "Strengthening the institutional and regulatory capacity of the National Bank of Ukraine for the purpose of implementing the Association Agreement between Ukraine and the EU", the National Bank with international experts - representatives of the member states of the European Union held an expert forum "Instant payment systems". During the forum, the participants of the

financial market of Ukraine were introduced to the vision of the National Bank regarding the system of instant payments in Ukraine, further steps and challenges on the way to its implementation. Banks, non-banking financial institutions, associations got acquainted with the European instant payment systems of Poland, Hungary, Lithuania and the instant payment solution for the SEPA Eurozone based on the SCT Inst scheme, as well as with the National Bank's work on implementing such a system in Ukraine. During the event, the National Bank received feedback from market participants for the first time. A number of working meetings were held with financial market participants and international experts to study the features and advantages of the future system of instant payments. The results of these meetings became the basis for the creation of the project Concept of the system of instant payments in Ukraine.

Payment instruments such as payment cards, smart cards and electronic money already occupy a significant segment of the market today. A special payment instrument (payment card) is a payment instrument that performs the function of a means of identification, with the help of which the holder of this instrument initiates the transfer of money from the relevant account of the payer or bank, and also carries out other operations stipulated by the relevant contract. With the help of special means of payment, documents are formed for operations using special means of payment or other services are provided to holders of special means of payment (Legkostup, I., et al., 2019).

The list of banking operations and mechanisms for cash and non-cash payments using payment cards in international and national payment card systems includes many elements: self-service bank machine (ATM), acquiring, issue of special means of payment (issue), issuer of special means of payment (issuer), imprinter, corporate special payment tool, mobile payment tool, payment card, payment scheme, payment application, payment tool, payment terminal, processing, special payment tool.

The principles of functioning of electronic means of payment in Ukraine are as follows: an electronic means of payment can exist in any form, on any medium; issuance of electronic means of payment within Ukraine is carried out exclusively by banks that have concluded an agreement with the payment organization of the

corresponding payment system; the payment organization of the corresponding payment system determines the type of electronic payment instrument issued by the bank; to initiate a transfer in Ukraine, electronic payment means of both domestic and international payment systems can be used in accordance with the procedure established by the National Bank of Ukraine (Mishchenko, V., et al., 2016).

As of the end of 2021, the number of cards issued by Ukrainian banks was 89.1 million, which is 21.3% more than at the end of the previous year. The number of contactless payment cards used for transactions grew, their number increased by 51.8% and amounted to 20.0 million pieces. cards In general, about half (43.2%) of the payment cards used for spending transactions are contactless cards. 2021 was the year of further digital transformation of the financial system. The number and volumes of non-cash payments using payment cards continue to grow steadily. The number of transactions using payment cards issued by banks of Ukraine reached 7,817.1 million, and their sum amounted to UAH 5,091.7 billion. The share of non-cash payments in Ukraine using payment cards increased to almost 61% by the end of 2021 from 56% at the beginning of the year. The number of contactless payment cards used for transactions grew, their number increased by 51.8% compared to the previous year.

The largest number of payment cards is issued in the international payment system MasterCard (50.7 million cards, or 56.9%). The second and third places in terms of the number of issued payment cards are occupied by the VISA international payment system (37.8 million units, or 42.4%) and the National Payment System "Ukrainian Payment Space" (0.6 million units, or 0.64%).). The share of other card systems operating on the territory of Ukraine was 0.04%. The leaders in card issuance are PrivatBank JSC (45.1% of all issued cards), Oschadbank JSC (16.6%) and Universal Bank JSC (10.6%).

Throughout 2021, the volume of transactions (non-cash and cash receipts) using payment cards continued to increase. Thus, the number of transactions using payment cards issued by banks of Ukraine reached 7,817.1 million, and their sum amounted to UAH 5,091.7 billion. This is almost a third more than in the previous year. The number of non-cash transactions using payment cards increased by 35.1% (90.1% of the total

number), and the amount - by 40.3% (60.9% of the total amount of card transactions). At the same time, the number of cash withdrawal transactions using payment cards decreased by 1.1%, and the amount of such transactions increased by 14.0% [2].

In May 2022, the number of non-cash transactions and cash receipts using payment cards issued by Ukrainian banks in Ukraine and abroad was 637 million, and their sum was 573.7 billion UAH. If compared with pre-war January 2022, the number of transactions decreased insignificantly (by 3.4%), while their amount increased by almost a third (by 31.5%). According to the results of May 2022, the total number of issued payment cards in Ukraine reached 103.6 million. This is 13% more compared to pre-war January 2022.

The infrastructure for non-cash operations is also steadily expanding. The number of payment terminals increased by 13.7% to 426.5 thousand, of which 393.6 thousand. (92.3%) – contactless terminals. The number of payment terminals has almost doubled over the past five years from 232,100 units. up to 426.5 thousand pcs.

The existing infrastructure development still does not sufficiently ensure the proper level of payment card usage and the reduction of cash payments. The number of payment terminals per 1 million people in Ukraine increased to 10.7 thousand units, which is almost 3 times lower than the average European level. The largest number of payment terminals is in PrivatBank JSC (57.2% of all payment terminals), Oschadbank JSC (18.7%) and Raiffeisen Bank JSC (9.0%).

Cashless transactions carried out by cardholders in 2021 were 70% and cash 30%, while in 2012 cashless transactions were 17% and cash 83%, the number of cashless transactions has increased significantly, which is definitely positive, so cardholders began to use payment cards more actively when paying for goods and services, which contributes to the development of the Ukrainian market of non-cash payments.

A payment card is a tool for non-cash payments. Non-cash payments are a strategic direction of the development of the banking system. Increasing the volume of non-cash payments will contribute to the strengthening of the financial system and economic development of the country. After all, about UAH 220 billion. cash is in

circulation, in addition, the population, according to various estimates, has accumulated from 40 to 70 billion US dollars. These funds can be involved in the economy and will work for its growth (Levytska T., 2018).

A necessary condition for the spread of the use of payment cards in Ukraine is the domestic market's mastery of global innovations in this field. In difficult crisis conditions, domestic banks are betting mainly not on the quantitative distribution of payment cards in circulation, but on improving the qualitative component of their use to increase the number of transactions with already issued cards.

In 2021, banks issued electronic money, such as "Maxi" (JSC "TASCOMBANK"); "GlobalMoney" (JSC "BANK ALLIANCE"); "ELECTRUM" (JSC "UKRGASBANK"); "ALFA-MONEY" (JSC "ALFA-BANK"); MasterCard (VOSTOK BANK PJSC, ALFA-BANK PJSC, TASKOMBANK JSC, OSHCHADBANK JSC); Visa (Oshchadbank JSC, INDUSTRIALBANK JSC, CONCORD JSC JSC, MEGABANK JSC, RAIFFEISEN BANK JSC); "PROSTIR" (JSC "UKRGAZBANK", JSC "BANK VOSTOK"). Compared to 2020, issuing banks reduced the volume of transactions with electronic money by almost half, from UAH 19,304 million to UAH 10,163 million; the number of electronic wallets increased by 3.5 times - from 79 million pcs. up to 23 million units; the volume of issued electronic money increased 1.6 times - from UAH 60 million to UAH 37.3 million [2].

The decrease in the volume of transactions with electronic money is caused by a decrease in market participants. This is due to the introduction of requirements regarding the obligation of the issuer to carry out proper verification of users of electronic money in accordance with the requirements of the Law of Ukraine "On prevention and countermeasures against legalization of proceeds obtained through crime, financing of terrorism and financing of the proliferation of weapons of mass destruction" and normative legal acts of the National bank, adopted to fulfill the requirements of the specified law.

As of January 1, 2022, banks of Ukraine served 72.2 million clients, in particular: economic entities - 2.9 million clients (4%), of which 1.8 million clients are private enterprises; natural persons – 69.3 million customers (96%); budgetary institutions -

0.005 million clients (0.01%). 142 million accounts have been opened for bank clients. 5.6 million accounts have been opened for business entities. Almost all of them (5.6 million) are current accounts and only a small part (0.07 million) are savings accounts. More than 2.3 million business entities are serviced remotely (79%), which enables bank clients to quickly monitor account balances and make payment transactions on these accounts.

An increase in the number of bank clients in 2021 was observed by 13%, business entities – by 6%, individuals – by 13%, budgetary institutions decreased by 5%; increase in the number of open accounts by 14%, business entities – by 7%, individuals – by 14%; escrow accounts were used more often, by 82%: by business entities - by 143%, as of 01.01.2022, 1,058 accounts were opened, by individuals - by 2%, 336 accounts; increase in the number of clients served remotely: among business entities - by 3%, among individuals - by 6%.

The National Bank's efforts aimed at implementing the Second European Payment Directive and updating the legislative regulation of the payment services market have achieved their goal thanks to the adoption by the Verkhovna Rada of Ukraine of the Law of Ukraine dated June 30, 2021 "On Payment Services". The law entered into force on August 1, 2022. This law will contribute to the transformation of the payment market and the expansion of the circle of its participants. The Law of Ukraine "On Payment Services" defines nine categories of providers of financial payment services. In addition to banks, they include payment institutions, postal operators, electronic money institutions, branches of foreign payment institutions, state authorities and local governments. The Law of Ukraine "On Payment Services" also enables non-banking financial institutions that have received the appropriate authorization from the regulator to open payment accounts for the following services: crediting cash to user accounts, withdrawing cash, and performing payment operations with the user's own funds.

The Law of Ukraine "On Payment Services" provides for the creation of open banking in 2025. In addition, the Law of Ukraine "On Payment Services" provides for the right of the central bank to issue digital money of the National Bank. The main

advantage of the new regulation of the payment market is that fintech companies will be able to establish mutually beneficial cooperation with banks and get more opportunities for business development.

Modern life encourages legal entities and individuals to adapt to the use of electronic payments. The latest events related to military actions in the country and the related active campaign of the banking system to support online operations contributed to the growth of the volume of non-cash payments (Shilvinska O., et al., 2021).

In the conditions of war, Ukrainians continue to prefer cashless operations with payment cards. Thus, in May 2022, the share of non-cash transactions using payment cards amounted to almost 69% of the total volume of transactions with payment cards (in January 2022, this figure was 63%, in 2020 – 86%). At the same time, the share by quantity remained almost unchanged - 92% (as of January 2022 - 91%). That is, 92 out of 100 card transactions were cashless.

In general, the war led to the transition to contactless payments, the increase in the penetration of electronic wallets and the wider use of automation of B2B, P2P, A2A payments. Renunciation of cash has been in the plans of the NBU and the Ministry of Finance for many years, but the war gave a powerful impetus to this process.

Despite the reduction in the total number of contactless and tokenized payment cards (by 6% and 15%, respectively), their popularity among Ukrainians is very high. The total share of contactless and tokenized payment cards among all active cards is 60%. In general, today approximately every sixth active payment card is tokenized (at the beginning of 2022 – approximately every seventh); contactless - approximately every second, as at the beginning of January [7].

Contactless and tokenized cards are innovative technologies. The technologies are similar, but also different from each other. The main difference that will be clear to the user is that the tokenized card does not need to be carried. It is enough to digitize it in the payment application and have a payment tool (smartphone, watch, ring, etc.) with the NFC function. At the same time, you will still have to allocate space in your wallet for a contactless card. So today, more than a quarter of active payment cards are contactless and tokenized cards (26.5% or 11.2 million cards).

The convenience of non-cash payments allows you to use banking services around the clock and make payments remotely not only with a payment card, but also with a smartphone, paying for goods and services without necessarily visiting a bank branch. Payment for goods and services on the Internet in May 2022 accounted for slightly more than a quarter in terms of quantity (27%) and a sixth in terms of amount (16.2%) of all non-cash transactions with payment cards, that is almost UAH 64 billion. The volume of transactions using non-cash payments in 2021 amounted to almost UAH 1.1 trillion, which is 18.3% more than in 2020. There are 41 million people in Ukraine, of which 24 million are aged 16 to 59. Since the popularity of non-cash payments is more characteristic of the young population, such statistics show that only about 50% of Ukrainians use non-cash payments (Bitner I., et al., 2022).

In Ukraine, there is still a significant "gap" between the older generation and the youth, urban and rural residents in the use of digital technologies, 53% of the population aged 17 to 70 have "below average" digital skills, and 15% of the population do not have digital skills. Achieving progress in the transition to cashless payments is also hindered by the insufficient level of Internet coverage, especially in rural areas [9].

The trends of recent years indicate a significant increase in both the number and volume of transactions using cashless payments, which are convenient, fast and safe today, which leads to their spread. The development of cashless payments is influenced by the ease of use of payment means, although it requires knowledge of the technology of their use, and the convenience of payments on the Internet forces buyers and sellers to make a choice in favor of using a cashless payment system.

Necessary measures that will stimulate the cashless market include improving the protection of payment cards against fraud, increasing financial literacy in order to inform not only about the possibilities of using payment cards, but also about the advantages of cashless payments, ensuring the development of payment infrastructure.

The latest trends are capable of significantly modernizing the regulation of the Ukrainian payment market. New legislative trends will create conditions for the further development of payment products, services and services, which will become the basis

for the introduction of "open banking" in the payment infrastructure of Ukraine. Fintech companies will be able to establish mutually beneficial cooperation with banks and get more opportunities for business. The market of payment services will become more competitive, as a result consumers will be able to receive competitive and higher quality payment services.

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