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**Inna Sytnyk**

D.Sc. in Economics, Professor, Head of the Department of Economic Theory, National University of Food Technologies, Kyiv, Ukraine;  
 e-mail: [lavry@ukr.net](mailto:lavry@ukr.net)  
 ORCID: [0000-0002-3906-770X](https://orcid.org/0000-0002-3906-770X)  
 (Corresponding author)

**Mykola Pugachov**

D.Sc. in Economics, Professor, National Scientific Center "Institute of Agrarian Economy", Kyiv, Ukraine;  
 ORCID: [0000-0002-7507-5870](https://orcid.org/0000-0002-7507-5870)

**Volodymyr Pugachov**

PhD in Economics, National Scientific Center "Institute of Agrarian Economy", Kyiv, Ukraine;  
 ORCID: [0000-0002-5456-5862](https://orcid.org/0000-0002-5456-5862)

**Nataliia Kudrenko**

PhD in Economics, Associate Professor of the Department of Accounting and Auditing, National University of Food Technologies, Kyiv, Ukraine;  
 ORCID: [0000-0003-0091-8156](https://orcid.org/0000-0003-0091-8156)

**Vita Dovgaliuk**

PhD in Economics, Associate Professor of the Department of Finance and Digital Economy, Zhytomyr Polytechnic State University, Zhytomyr, Ukraine;  
 ORCID: [0000-0003-2732-8818](https://orcid.org/0000-0003-2732-8818)

**Bohdan Sytnyk**

Attorney-at-law, Law association "Shylov and partners", Ukraine;  
 ORCID: [0000-0001-6766-8628](https://orcid.org/0000-0001-6766-8628)

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# FEATURES FUNCTIONING OF THE PAYMENT SYSTEM OF UKRAINE

## ABSTRACT

In the age of the global Internet, there were changes in the life of the human community, its needs, and requirements for the provision of payment services, that, in turn, affected the development of the payment sphere. Taking into account the transformations in the field of payment systems that occur as a result of the continuous development of the digital economy and its globalization, legislative and regulatory changes in the domestic and international legislative field, research and proposals regarding the modern understanding of the concept of "payment system" and its varieties remain important.

As a result of the conducted research on the current condition of functioning of payment systems, we have proposed the author's vision of the concept of "payment system" and their varieties, which takes into account the influence of digital technology changes and globalization processes on their activity, while highlighting individual types of payment systems depending on their general economic significance, unitary position, as well as importance, significance, and functionality. In addition, the selected types of payment systems may have several variants of their interpretation, since today this concept has significantly expanded its lexical meaning.

Based on the results of the assessment of the current condition of functioning of payment systems in Ukraine, the article identifies the main stages of the formation of the country's payment system, identifies its features, and establishes the factors that influence their development (political and economic, globalization, informatization of society, digitalization of the economy, development of financial technologies, the legislative basis for payment systems, use of oversight, regulator's policy, access to the Internet, level of material support of the population, competition between payment service providers, popularization of cashless payments). The study of the main development trends and the identification of the main shortcomings in the article showed the need to reform the payment system, and interbank settlements, and determine promising directions for the development of payment systems in order to create an effective, reliable and safe payment in the system of Ukraine.

**Keywords:** payment system, banking system, cashless payments, money, digitalization, globalization, financial technologies, integration, European Union

**JEL Classification:** E580, G350

## INTRODUCTION

The payment system of Ukraine is an indicator of the condition of the national economy, one of the priority areas of development is the modernization and improvement of financial instruments, in particular payment systems. Since the state of the payment market is important for a market economy, and modern paper money cannot satisfy all the requests of economic subjects that arise during their interaction, alternative means of payments become urgent. As a result of evolution and under the influence of digitization and globalization, money continues to change its form and acquire a more perfect form - the most suitable for use in payment systems for calculations and payments. Such influence affects the state of monetary circulation.

At the same time, the rapid and irreversible digitalization of the world has become an objective process, and its essence and consequences of the impact on the world economy are subjects of research and discussions in the scientific community. The further development of the financial sphere through the use of innovative technologies, ideas, and products depends on scientific and technical progress, as one of the main driving forces of globalization.

Globalization and integration processes exert a great influence both on the world economy and on the functioning and development of global and national payment systems. The use of electronic payment systems to ensure the transfer of funds between users of the system in real-time using the Internet has become commonplace.

In the process of dynamic development of the economy, their speed, safety, convenience, availability, and cost are extremely important for settlements and money transfers. Therefore, for the improvement of monetary and credit relations and to ensure the effective functioning of the national economy, interstate currency settlements directly depend on the effective operation of the payment system of Ukraine.

Today, interest in the problems of the development of payment systems of any level is constantly growing. Transforming, technological innovations are gradually changing payment systems as well, embodying the modern needs of their users. Subjects of payment services, central banks of countries and international organizations, due to the dynamics of changes, try to interact with each other, combining different levels of cooperation (from the purely technical organization of fund transfers to the harmonization of legislation in the field of transfers), which is important for the continuous and reliable operation of payment systems as of international, as well as of domestic significance.

## LITERATURE REVIEW

The payment sphere undergoes constant changes due to the global digitalization of the economy. This factor greatly affects the development and functioning of Ukraine's payment systems. Such transformations are also reflected in various types of payment systems.

Problematic issues of payment systems, as well as their varieties, are considered in the works of scientists: T. Kovalchuk [11], V. Lukyanov [11], T. Savelko [29], Yu. Balakina [12], T. Adabashev [2, 3], O. Vovchak [37], Yu. Lupenko [14],

I. Sytnyk [32-35], O. Kolodiziev [15], T. Kokkola [10], B. Summers [31], S. Pyrig [27, 28] and other Ukrainian and foreign scientists [4-9, 29, 30, 38, 39].

Thus, T. Adabashev proposes to study payment systems based on the following criteria: according to the territory of the payment system and the location of its payment organization - domestic and international; by type of financial institution, which is the payment organization of the payment system - banking and non-banking payment systems; according to the features of participation in the payment system and access to it by participants – payment systems with mandatory participation, with voluntary participation, without the participation of other participants. The researcher singles out national non-commercial payment systems, in particular, the National System of Mass Electronic Payments (NSMEP) and the NBU Electronic Payment System (SEP NBU), and commercial payment systems, which he considers all other payment systems [2, 3].

Researcher Yu. Balakina groups payment systems according to such features as the organizational and legal form of the payment organization of the payment system, and those related to the calculations themselves in the payment system. It offers to distinguish payment systems depending on the organizational and legal form by the form of ownership, types of the owner, and residency of participants. If it concerns payments, classification features are determined by the form of payments, the scale of activity, the amount of payment, and systemically important, and other payment systems are also singled out [12].

Scientist V. Lukyanov made a conceptual gradation of payment systems as follows: intrastate payment system, National payment system, National system of mass electronic payments, interbank payment system, and interstate (international) payment system. The researcher singles out "state-significant payment systems" and emphasizes that their defining criterion is that the most voluminous and strategically important financial transfers and payments should be under the direct supervision of the National Bank of Ukraine [11].

Scientists T. Kovalchuk and V. Lukyanov combine payment systems into three groups: intrastate payment systems, state-significant payment systems, and the national payment system [11]. They include the National Bank of Ukraine's Electronic Payment System (SEP NBU), intrabank payment system, non-bank payment system, as well as single-issuer and multi-issuer payment systems of the intrastate payment system. Only the National System of Mass Electronic Payments is classified as state-significant. The researchers characterized the national payment system as an "integrative combination of

the intra-state and state-significant payment system" and included such systems as "client-bank" and "client-Internet bank".

As for the study of payment systems, such scientists as O.D. Vovchak and Ya.I. Tchaikovsky analyze payment systems operating in Ukraine – domestic and international payment systems. In turn, domestic payment systems, in their opinion, can be both banking and non-banking. To such systems as banking, researchers include interbank settlement systems, mass payment systems, and intrabank payment systems [37].

Author S.O. Pyrig in his work singles out and examines the intrastate payment system, the interbank settlement system, the intrabank payment system (IPS), the mass payment system, and the Electronic Payment System of the National Bank of Ukraine (SEP NBU) [27, 28].

Usually, Ukrainian scientists divide payment systems into domestic, international, bank, and non-bank, and also separate the National Bank of Ukraine Electronic Payment System, mass electronic payment system and intrabank systems. However, some of them are investigating other types of payment systems.

However, over time, such studies to some extent lose their relevance, as it is necessary to constantly take into account changes in the field of payment systems and, in particular, the supervisory and regulatory legal framework. An important aspect of the revision of payment systems due to their grouping proposed earlier by various scientists is the increase of varieties of payment systems depending on the needs of customers of different segments of the financial market of payment services, as well as the digitalization of society and the economy of Ukraine and the world.

It is worth emphasizing that some scientists, considering the functioning of payment systems, are focused more on economic processes, while others took the legal aspect as a basis. The Bank for International Settlements and, in particular, the Committee on Payments and Market Infrastructures [26] and the European Central Bank [8] also conducted in-depth studies on the functioning and development of payment systems, resulting in recommendations for their effective use.

In our opinion, it is advisable to analyze payment systems from both an economic and a legal point of view, since such financial transactions are carried out in accordance with the norms of domestic (or/and international) legislation.

Having researched and analyzed the views of many scientists on the types of payment systems and their functioning, in our opinion, it is appropriate to present our own vision of understanding payment systems from the standpoint of modernity, taking into account the constant dynamical changes in the field of payment services, the legal field, as well as the vector of our country's movement towards European values.

The article will provide a deeper understanding of all the innovations taking place in payment systems, which in turn will positively affect their further development, and payment system users will receive a higher quality, reliable, safe, and secure payment service, with mandatory regulation at the legislative level.

## **AIMS AND OBJECTIVES**

The article presents the results of the study of the current condition of the payment system of Ukraine with the aim of further development of theoretical, methodological, and practical provisions regarding the transformation of the country's payment system in the conditions of digitization and globalization of the modern economy.

To achieve the outlined goal, the article solved such tasks as summarizing theoretical approaches to the concept of payment systems, substantiating the impact of digitalization and globalization processes on the formation and development of payment systems and conceptual provisions for the transformation of money as the basis of payment systems.

The tasks of determining the methodological bases of activity, as well as the institutional characteristics of various types of payment systems through the assessment of the current condition of functioning of payment systems in Ukraine and the identification of their features, were also important for the present article.

In our opinion, a detailed examination of the types of payment systems will allow to obtain a deeper understanding of all the innovations taking place in payment systems, which in turn will have a positive effect on their further development, and users of the payment system will receive a higher quality, reliable, safe, secure payment service with mandatory binding regulation at the legislative level.

## METHODS

When studying the concept of "payment system" and types of payment systems, clarifying the theoretical foundations of the organization of money circulation and the emergence of payment systems as its component, as well as a number of the methods were applied in the article: theoretical and methodological aspects of the functioning of modern payment systems, such methods and scientific approaches as historical and logical, scientific abstraction, induction and deduction, analogy and comparison, systematization, grouping and generalization, analysis and synthesis, institutional and structural-functional analysis, logical-resultative approaches, etc.

To analyze the current condition of functioning of payment systems in Ukraine and the world and their impact on the digital economy in modern conditions of globalization were applied such research methods as economic and statistical methods of information collection and processing, system analysis, grouping, comparison, sample research, graphic, average and relative values, etc.

## RESULTS

The payment system is used to regulate monetary relations between entities with the help of appropriate rules, procedures, standards, technologies, and instruments at the legislative level.

General principles of the functioning of payment systems in Ukraine are regulated by the Laws of Ukraine "On the National Bank of Ukraine", "On Banks and Banking Activities", "On Payment Services" [13] and other legislative acts of the country and normative legal acts of the National Bank of Ukraine (NBU) [17].

According to the Law of Ukraine "On the National Bank of Ukraine" («Pro Natsional'nyy bank Ukrayiny»), the National Bank regulates the activity of payment systems and settlement systems in the state, ensures their uninterrupted, reliable, and efficient functioning, and also promotes the development of payment systems created by it [17]. National legislation provides for the operation of both internal and international payment systems in Ukraine.

According to the Law of Ukraine "On Payment Services", the National Bank has the right to create interbank settlement systems, retail payment systems and other types of payment systems. The Central Bank ensures continuous, reliable, and efficient functioning and development of payment systems created by it. Payment systems established by the NBU are considered state payment systems [13,17].

According to the "Register of payment systems, settlement systems, participants of these systems and operators of payment infrastructure services" (hereinafter - the Register), the following state payment systems operate in Ukraine today: payment systems created by banking institutions of Ukraine; payment systems created by non-banking institutions of Ukraine; international money transfer systems; international card payment systems; intrabank payment systems [18].

In our opinion, it is expedient to provide a comprehensive description of them and separate them into separate groups:

- internal payment systems;
- international payment systems created by residents;
- international payment systems created by non-residents;
- intrabank payment systems created by banks of Ukraine.

Consideration should begin with internal payment systems (Table 1).

Based on this information, 18 internal payment systems in Ukraine can be identified, including:

- created by the NBU: SEP and PROSTIR;
- created by banking institutions of Ukraine – 1 payment system (transfer system) - "FLASHPAY";
- created by non-banking institutions of Ukraine – 15 payment systems (10 transfer systems, 2 card payment systems and 1 settlement system): "Postal transfer", "PAYPONG", "ELEKTRUM", "YUPAY", "LIME MONEY", "Pay service", "InterPayService", "Financial world", "City24", "MONEYCOM", "CASCADE", "HERZ", "UKRKART", "PaySystems", "Settlement Fund System".

**Table 1. Internal payment systems according to the NBU data as of 01.01.2023. (Source: formed according to [18])**

No.	The name of the payment system	Type	Participants
<b>Payment system created by the NBU</b>			
1	Electronic Payment System (SEP)	State, systemically important payment system	69
2	National payment system "Ukrainian payment SPACE" (PROSTIR)	State card payment system	71
<b>Transfer systems created by banking institutions of Ukraine</b>			
3	"FLASHPAY"		40
<b>Transfer systems created by non-banking institutions of Ukraine</b>			
4	"Postal transfer" ("Poshtovyy perekaz")	Socially important payment system	
5	"PAYPONG"	-	4
6	"ELECTRUM" ("ELEKTRUM", "ЕЛЕКТРУМ")	-	6
7	"YUAPEI" ("YUAPЕY", "ЮАПЕЙ")	-	1
8	"LIME MONEY"	-	-
9	"Pay Service" ("Platyservis", "Платисервіс")	-	6
10	"InterPayService" ("InterPeyServis", "ІнтерПейСервіс")	-	2
11	"Financial World" ("Finansovyy svit", "Фінансовий світ")	An important payment system	24
12	City24	An important payment system	24
13	"MONEYCOM"	-	-
14	"CASCADE" ("KASKAD", "КАСКАД")	-	-
15	"HERZ" ("HERTS", "ГЕРЦ")	-	-
<b>Card payment systems, created by non-banking institutions of Ukraine</b>			
16	"UKRKART" ("UKRKART", "УКРКАРТ")	-	13
17	"PaySystems"	-	1
<b>Settlement payment systems</b>			
18	"Settlement Fund System" ("Rozrakhunkova Fondova Systema")	A settlement system for security agreements	2

The first payment system created by the NBU – SEP – is systemically important, the second – PROSTIR, is a card payment system that has 71 participants, which is a large number in the market of payment services.

In addition to PROSTIR, among the internal payment systems, such payment systems as "FLASHPAY" with 40 participants, "Finansovi svit" – 24, "City24" – 24, "UKRKART" – 13 participants have also a significant number of participants.

There are 3 internal state card payment systems – "UKRKART", PROSTIR and "PaySystems".

Such internal payment systems as: "Postal Transfer" operating since 2009, "InterPayService" – since 2010, have been operating in the payment market for a long time; "Financial world" – since 2009; "Settlement Fund System" – since 2009.

In 2019-2022, 6 new payment systems entered the payment market - "YUPAY", "MONEYCOM", "CASCADE", "HERZ", "LIME MONEY" and "PaySystems".

Among the intrastate payment systems, one systemically important payment system (according to the NBU data as of 01.01.2023) is the Electronic Payment System (SEP), 1 socially important payment system is "Postal Transfer" and 3 important payment systems are "Postal transfer", "Finansovyy svit" and "City24".

It is worth noting that the "FLASHPAY" payment system was important in 2019, but lost this status in 2022 [17].

So, with regard to intrastate payment systems, we can present their landscape as follows (Table 2).

**Table 2. Types of intrastate payment systems.** (Source: formed according to [18])

No.	Type, feature	Quantity
1	Systemically important payment system	1
2	Socially important payment system	1
3	Important payment systems	2
4	Created by the NBU	2
5	Transfer systems created by banking institutions of Ukraine	1
6	Transfer systems created by non-banking institutions of Ukraine	12
7	Card payment systems	3
8	Settlement payment system	1

So, as we can see, the largest number of payment systems among intrastate payment systems are transfer systems created by non-banking institutions in Ukraine.

As for the landscape of international payment systems created by non-residents, it looks like this (Table 3).

**Table 3. International payment systems created by residents according to the NBU data as of 01.01.2023.** (Source: formed according to [18])

No.	The name of the payment system	Type	Participants
<b>Transfer systems, created by banking institutions in Ukraine</b>			
1	"IBOX MONEY TRANSFER"	-	-
2	"Welsend"	-	50
3	"GLOBUS" ("HLOBUS", "ГЛОБУС")	-	17
4	"TELEGRAF"	-	-
5	"PrivatMoney"	Important payment system	30
6	"MY TRANSFER"	-	7
7	MTBMoney	-	-
8	"CORDPAY"	-	4
<b>Transfer systems created by non-banking institutions in Ukraine</b>			
9	"MOSST Payments"	-	6
10	"LEO"	Important payment system	22
11	"PayRun"	-	1
12	"NovaPay"	Socially important payment system	2
13	"AVERS №1"	-	21
14	"Global Money" ("HlobalMani")	-	22

As you can see, today there are 14 international payment systems (transfer systems) created by residents, including:

- created by banking institutions of Ukraine – 8 payment systems: "IBOX MONEY TRANSFER", "Welsend", "GLOBUS", "TELEGRAF", "PrivatMoney", "MY TRANSFER", MTBMoney, "CORDPAY";
- created by non-banking institutions of Ukraine - 6 payment systems: "MOSST Payments", "LEO", "PayRun", "NovaPay", "AVERS №1", "GlobalMoney".

Among the above-mentioned systems, such payment systems as "Welsend" which has 50 participants, "GLOBUS" – 17, "PrivatMoney" – 30, "LEO" – 22, "AVERS No. 1" – 21, have a significant number of participants.

Such payment systems as "PrivatMoney" and "GlobalMoney" have been operating in the payment market for the longest time – since 2010; "Welsend" – since 2013. In 2019, a new payment system – "PayRun" entered the payment market.

Among international payment systems created by residents, there is one socially important payment system – "NovaPay", and "LEO" is also an important payment system (2022).

So, in relation to international payment systems created by residents, we can present their landscape as follows (Table 4).

**Table 4. Types of international payment systems created by residents.** (Source: developed according to [18])

No.	Type, feature	Quantity
1	Socially important payment system	1
2	Transfer systems created by banking institutions in Ukraine	8
3	Transfer systems created by non-banking institutions in Ukraine	6

The landscape of international payment systems created by non-residents is different (Table 5).

**Table 5. International payment systems created by non-residents according to the NBU data as of 01.01.2023.** Note: \* (JSC CB "PRIVAT-BANK"). (Source: formed according to [18])

No.	The name of the payment system	Type	Participants
<b>Transfer systems</b>			
1	"MoneyGram"	An important payment system	16
2	"Western Union"	Socially important payment system	8 (direct)
3	"MEEST"	-	3 (direct)
4	"RIA"	An important payment system	18 (direct)
5	"KHAZRI" ("XAZRI", "XAZPI")	-	5
6	"Sigue Money Transfer"	-	3
7	"CLEAR JUNCTION"	-	-
8	"INTEL EXPRESS"	-	14
9	"TRANSFAST"	-	-
10	"TransferGo"	-	-
11	"R360"	-	2
12	"PAYSERА"	-	-
<b>Card payment systems</b>			
1	"MasterCard"	Socially important payment system	53 (direct) 141 (indirect)
2	"Visa"	Socially important payment system	49 (direct) 139 (indirect)
3	"UnionPay International"	-	1*
4	"American Express"	-	7
5	"JCB Payment System"	-	1
6	"DINERS CLUB INTERNATIONAL"	-	-

Thus, there are 18 payment systems created by non-residents in Ukraine, including:

- transfer systems – 12 payment systems: "MoneyGram", "Western Union", "MEEST", "RIA", "HAZRY", "Sigue Money Transfer", "CLEAR JUNCTION", "INTEL EXPRESS", "TRANSFAST", "TransferGo", "R360", "PAYSERА";



- card payment systems – 6 payment systems: "MasterCard", "Visa", "UnionPay International", "American Express", "JCB Payment System", "DINERS CLUB INTERNATIONAL".

Among the international payment systems created by non-residents, such payment systems as "MoneyGram" has 16 participants, "RIA" – 18 (direct), "INTEL EXPRESS" – 14, and "Western Union" – 8 participants (direct).

International card payment systems created by non-residents are extremely important for the payment system of Ukraine, as they serve almost the entire retail payment sphere.

So, "MasterCard" and "Visa" are socially important payment systems, with more than 50 direct participants (there are still indirect ones), as well as the Western Union transfer system. The American Express card payment system is not as popular in comparison to the aforementioned card payment systems.

Recently, the Chinese card payment system "UnionPay International" entered the Ukrainian payment market (2018), as well as the transfer systems "TRANSFAST" (2019) and "CLEAR JUNCTION" (2020). Regarding the payment system "UnionPay International", it is worth noting that it has not yet gained wide popularity among Ukrainians and has only one participant - JSC CB "PRIVAT-BANK". In 2020 and 2021, such payment card systems as "JCB Payment System" and "DINERS CLUB INTERNATIONAL" entered the payment market.

Important payment systems among international payment systems created by non-residents are 2 systems: "MoneyGram" and "RIA".

Therefore, international payment systems created by non-residents have the following variety (Table 6).

**Table 6. Types of international payment systems created by non-residents.** (Source: formed according to [18])

No.	Type, feature	Quantity
1	Socially important payment systems	3
2	Important payment systems	2
3	Transfer systems	12
4	Card payment systems	6

In this case, we can conclude that among the international payment systems created by non-residents, there is a significant number of socially important and important payment systems.

Intrabank payment systems created by banks also play an important role in the types of payment systems in Ukraine (Table 7).

**Table 7. Intrabank funds transfer systems created by banks of Ukraine according to the NBU data as of 01.01.2023.** (Source: formed according to [18])

No.	The name of the payment system	Payment organization entered in the Register
1	"Metalkart" ("Metalkart", "Металкарт")	JSC "MetaBank" (AT "MetaBank"), 30.04.2014
2	"In a moment" ("За мит", "За мить")	JSC "UKRSIBBANK", (AT "UKRSYBBANK"), 12.11.2014
3	"Instant Transfer" ("Миттєвий переказ")	JSC "INDUSTRIALBANK", (AKB "INDUSTRIALBANK"), 30.04.2014
4	"ACORDBANK-EXPRESS" ("AKORDBANK-EXPRESS")	PJSC "CB "ACORDBANK" (PuAT "KB "AKORDBANK"), 07.06.2016
5	"FREESSEND"	PJSC "BANK KREDIT DNIPRO" (PAT "BANK KREDYT DNIPRO"), 30.04.2014
6	"Raiffeisen Express"	JSC Raiffeisen Bank (AT "Rayffayzen Bank"), 19.02.2016

Today there are 4 such systems, of which, for example, "Metalkart", "In a moment", "Instant Transfer", "FREESSEND" entered the market in 2014, and such payment systems as "ACORDBANK-EXPRESS" and "Raiffeisen Express" were introduced in 2016.

We systematized the payment systems operating in Ukraine in a certain way and listed them in Table 8.



**Table 8. Types of payment systems of Ukraine (data as of January 01, 2023).** (Source: formed according to [18])

No.	Type, feature	Quantity
1	Internal state payment systems	18
2	International payment systems created by residents	14
3	International payment systems created by non-residents	18
4	Internal bank payment systems created by banks of Ukraine	6
	<b>Payment systems in total</b>	<b>56</b>
	Including:	
1	Transfer systems:	
1.1	Transfer systems created by banking institutions in Ukraine	9
1.2	Transfer systems created by non-banking institutions in Ukraine	18
1.3	Transfer systems (international) created by non-residents	12
	<b>A total of 39 transfer systems</b>	<b>39</b>
2	Bank payment systems	6
3	Card payment systems (residents and non-residents)	9
4	Settlement payment system	1
5	System of electronic payments (SEP)	1
	<b>Total</b>	<b>56</b>
	Divided into:	
1	Systemically important payment systems	1
2	Socially important payment systems	5
3	Important payment systems	5
4	Created by the NBU	2

Summarizing the interim, we can note that the total number of payment systems in Ukraine reaches 56 (in 2019 – 49): transfer systems – 39 (31), intrabank payment systems – 6 (10), card payment systems – 9 (6), settlement payment systems – 1 (1), and electronic payment systems (SEP) – 1 (1).

The listed payment systems include intrastate payment systems; international payment systems created by residents; international payment systems created by non-residents and intrabank payment systems created by Ukrainian banks. Among them, according to international oversight standards [18]: 1 systemically important payment system (SEP),

5 socially important payment systems ("Postal transfer", "MasterCard", "Visa", "NovaPay", "Western Union"), and 5 important payment systems ("City 24", "Financial world", "MoneyGram", "RIA", "PrivatMoney"). As for operators of payment infrastructure services, there are 32 of them [18].

For comparison, at the end of 2018, there were 42 payment systems, of which 31 were created by residents and 11 by non-residents. Among the payment systems created by residents, the distribution by groups was as follows: intrabank transfer systems - 9; payment systems created by non-banking institutions - 14; payment systems created by banks - 8 [16].

Regarding the activity of payment systems in Ukraine and, in particular, money transfer systems created by residents and non-residents, in 2021 it was as follows [16,17,19,20].

The largest amounts of transfers that have passed through money transfer systems:

- to Ukraine: USA – 18,96%; Israel – 11,96%; Italy – 11,01%; Germany – 6,6%; Poland – 7%; Russia – 6,52%; other 215 countries – 44,95%;
- from Ukraine: Russia – 28,76%; Georgia – 15,03%; Turkey – 5,69%; Azerbaijan – 5,14%; Poland – 4,37 %; other 195 countries – 42%.

Regarding the volume of cross-border transfers, most of them were carried out through the transfer systems of non-residents (USA), in particular, 96% from Ukraine and 93% to Ukraine.

The volume of transfers in 2021 through the funds' transfer systems within Ukraine, created by banking and non-banking institutions, amounted to 96% (in 2020 – 95%, 2019 – 91%) and 4%, respectively (in 2020 – 5%, 2019 - 9%).

The sums of transfers in 2021 made through money transfer systems within Ukraine and created by residents were as follows: NovaPay – 40.63%, Postal transfer – 16.61%, Financial World – 16.09%, City 24 – 6.31%, FLASHPAY – 3.57%, LEO – 8.35%, ELEKTRUM – 2.96%, MONEYCOM – 1,64%, other 23 systems – 3.84%.

By the amount of transfers within the borders of Ukraine, the leader in 2018 was the "Postal Transfer" payment system (USD 1,460 million in equivalent), but in 2019 it was overtaken by NovaPay - 43.55%, Postal Transfer - 22.76%. This trend continued in 2020-2021: NovaPay - 46.29%, Postal transfer - 19.22% in 2020 and NovaPay - 40.63%, Postal transfer - 16.61% in 2021.

Regarding the activity in 2021 of money transfer systems created by non-residents in Ukraine, the amounts of cross-border transfers through these systems (compared to 2020) were as follows:

- to Ukraine: Western Union – 57,54% (60,48%), MoneyGram – 25,48% (23,95%), RIA – 11,47% (9,7%), INTEL EXPRESS – 4,72% (4,97%), other 4 (3) systems – 0,79% (0,9%);
- from Ukraine: Western Union – 67,69% (68,14%), MoneyGram – 19,14% (22,13%), INTEL EXPRESS – 7,65% (7,51%), RIA – 3,16% (1,98%), other 4 (3) systems – 2,36% (0,24%).

The comparative characteristics of the activity of transfer systems in Ukraine in 2020 and 2021 are presented in Table 9.

**Table 9. Comparative characteristics of the activity of payment systems (transfer systems) in Ukraine, USD million (in equiv.).** (Source: formed according to [20, 21])

Residency	Years		Deviation, %
	2020	2021	
<b>Residents and non-residents (except operations of banks, card payment systems, and post offices)</b>			
Within Ukraine	9490	13045	37,5
To Ukraine	2697	3157	17,1
Outside Ukraine	556	635	14,2
<b>Residents</b>			
Within Ukraine	9487	13042	37,5
To Ukraine	236,2	505,3	113,9
Outside Ukraine	13,3	16,8	26,3
<b>Non-residents</b>			
Within Ukraine	2,31	3	29,9
To Ukraine	2461,2	2651,7	7,7
Outside Ukraine	542,9	618,2	13,9

As can be seen, during 2021, the volume of transfers of payment systems of residents and non-residents of Ukraine, both inside the country and outside its borders (37.5 and 14.5%, respectively) increased significantly compared to 2020, such receipts to Ukraine increased by 17.1%.

As for residents, their transfers outside Ukraine increased by 26.3%, within Ukraine by 37.5%, and to Ukraine by 2.1 times.

Transfer systems created by non-residents to and within Ukraine increased the amount of transfers – by 7.7 and 29.9%, respectively, outside Ukraine, they increased by 13.9%.

In 2021, cashless transactions were carried out in card payment systems in the amount of UAH 3,099.1 billion (in 2020 – UAH 2,208.7 billion), and the total volume was UAH 5,091.7 billion (in 2020 – UAH 3,957.3 billion), which increased compared to the previous year by 40.3 and 28.7%, respectively. If we compare such indicators for 2020 and 2019, they

also differed significantly and amounted to 22.8% (2019 – UAH 1798.3 billion) and 10.6% (2019 – UAH 3576.7 billion), which indicates that in 2021 the rate of growth of non-cash transactions continued.

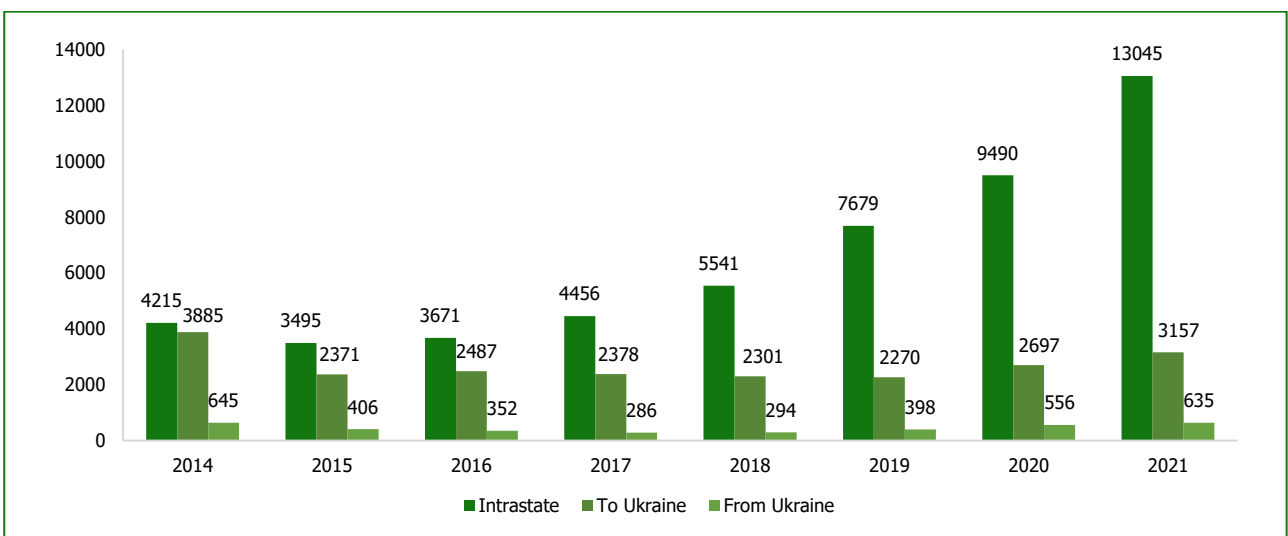
During the long-term period – from 2009 to 2021, we can observe how the leaders of the payment market of transfer systems changed according to their residency (Table 10).

**Table 10. Funds transfer system – leaders of the payment market, 2009–2021.** (Source: formed according to [16, 17, 19])

Years	Created by residents	Created by non-residents
<b>2009-2011</b>	"Postal transfer", "PrivatMoney", "AVERS", "SOFT" («Poshtovyy perekaz», «PrivatMoney», «AVERS», «SOFT»)	«Western Union», "Golden Crown" («Zolotaya Korona»), «MoneyGram»
<b>2012-2013</b>	"Postal transfer", "PrivatMoney", "AVERS", "SOFT", "Aval-Express" («Aval'-Ekspres»)	«Western Union», "Golden Crown", «MoneyGram», UNISTREAM («YUNISTRIM»), «CONTACT»
<b>2014</b>	"Postal transfer", "AVERS", "SOFT", "PrivatMoney", "Welsend"	«Western Union», "Golden Crown", «CONTACT», UNISTREAM, "Blitz" («Blic»)
<b>2015</b>	"Postal transfer", "Welsend", "PrivatMoney"	«Western Union», "Golden Crown", «CONTACT», UNISTREAM, "Blitz"
<b>2016</b>	"Postal transfer", "InterPayService", "Financial world"	«Western Union», "Golden Crown", «MoneyGram», UNISTREAM, "Blitz", "Leader", «INTEL EXPRESS», "RIA"
<b>2017</b>	"TYME", "Postal transfer", "InterPayService", "FLASHPAY", "Financial world"	«Western Union», «MoneyGram» «INTEL EXPRESS»
<b>2018</b>	"Postal transfer", "TYME", "InterPayService", "FORPOST"	"Western Union", "MoneyGram", "INTEL EXPRESS", "RIA"
<b>2019</b>	"NovaPay", "Postal transfer", "Financial world", "Sity24", "FLASHPAY"	"Western Union", "MoneyGram", "INTEL EXPRESS", "RIA"
<b>2020</b>	"NovaPay", "Postal transfer", "Financial world", "Sity24", «LEO»	"Western Union", "MoneyGram", "INTEL EXPRESS", "RIA"
<b>2021</b>	"NovaPay", "Postal transfer", "Financial world", «LEO», "Sity24"	"Western Union", "MoneyGram", "INTEL EXPRESS", "RIA"

In this case, it is worth noting that the best transfer systems carried out more than 80% of payment transactions in the specified years.

So, there is a fairly large number of functioning payment systems in Ukraine. If we turn to the earlier period of their activity, which is important for a general understanding of changes in the country's payment system, its current condition and future prospects, then according to the NBU, in 2015, 47 money transfer systems operated in Ukraine, 19 of which were created by non-residents. The main transfers using payment systems created by both residents and non-residents for the period of 2014–2021 are shown in Figure 1.



**Figure 1. Dynamics of transfer amounts through money transfer systems, USD million (in equiv.).** (Source: formed according to [21-24])

The figure confirms that in 2015 the number of transfers decreased by almost half. This situation can be explained by the current political and economic situation in Ukraine, the devaluation of the national currency and the rise of the dollar rate. The main part of funds to Ukraine and its borders was received using such international payment systems as "Western Union", "Zolotaya Korona", "MoneyGram" and "Unistream".

It should be noted that in 2016, the operation of Russian payment systems was banned in Ukraine, which had an impact on the development of other international systems [23].

Transfers to and from Ukraine (international transfers) made by payment systems according to their residency in 2009–2021 are presented in Table 11.

**Table 11. Transfers to and from Ukraine (international transfers), made by payment systems (transfer systems) according to their residency, million USD (in equiv.).** (Source: formed according to [16, 19, 20])

Years	Transfers to Ukraine			Transfers from Ukraine		
	Residents	Non-residents	The total volume of transfers	Residents	Non-residents	The total volume of transfers
2009	553	2347	2900	189	311	500
2010	655	2645	3300	217	383	600
2011	758	3156	3914	219	440	659
2012	698	3599	4297	230	507	737
2013	750	4165	4915	246	590	836
2014	439	3446	3885	146	499	645
2015	2	2369	2371	6	400	406
2016	2	2485	2487	1	351	352
2017	114	2264	2378	3	283	286
2018	222	2079	2301	2	292	294
2019	143	2127	2270	6	392	398
2020	236,2	2461,2	2697,4	13,3	542,9	556,2
2021	505,3	2651,7	3157	16,8	618,2	635
<b>Deviation, %</b>						
2013/2009	35,62	77,46	69,48	30,16	89,71	67,2
2014/2013	-41,47	-17,26	-20,97	-40,650	-15,42	-22,85
2019/2013	-80,93	-48,93	-53,81	-97,56	-33,56	-52,39
2019/2014	-67,43	-38,28	-41,57	-95,89	-21,44	-38,29
2019/2017	25,44	-6,05	-4,54	100	38,52	39,16
2019/2018	-35,59	2,31	-1,35	200	34,25	35,37
2020/2019	65,2	15,7	18,8	121,7	38,5	39,8
2021/2020	113,9	7,7	17,1	26,3	13,9	14,2
2021/2013	-32,6	-36,3	-35,8	-93,2	4,8	-24,0

As it is presented in Table 11, the volumes of transfers to Ukraine made by payment systems (transfer systems) created by residents and non-residents changed during 2009–2021. Thus, until 2013, such transfers grew and in the same year reached a maximum of USD 4,915 million. Since 2014, the volume of transfers to Ukraine began to decrease and already in 2019, they decreased by almost 50% compared to 2013 and amounted to USD 2,270 million.

At the same time, it should be noted the increase in the volume of transfers to Ukraine made by payment systems (transfer systems) created by both residents and non-residents in 2020–2021. Larger volumes of transfers went through payment systems created by non-residents compared to payment systems created by residents. In 2019, transactions were carried out more than 4 times through transfer systems created by non-residents. This trend was observed in subsequent years as well, and in 2019, such a gap between the indicated payment systems increased up to 15 times, however, in 2021 the gap between such payment systems decreased, and through transfer systems created by non-residents, transactions have already been carried out more than 5 times and approached the level of 2014.

As for the volume of transfers from Ukraine made by payment systems (transfer systems) created by both residents and non-residents during the specified period, they also decreased from USD 500 million in 2009 to 398 million USD in 2019. As in the case of transfers to Ukraine, the largest increase in the volume of transactions occurred in 2013 – 836 million USD. In 2014, there was a sharp decline of 22.9% – 645 million USD, which lasted until 2017. From 2018, the volume of transfers began to grow slightly, and in 2019 amounted to 398 million USD. However, these indicators did not reach the values of the pre-crisis period and, compared to 2013, were lower by more than 50% (398 million USD). However, these indicators did not reach the values of the pre-crisis period and in 2021, compared to 2013, they were 24% lower (USD 201 million).

In the overall structure of transfers from Ukraine in 2013, the volume of transfers made through payment systems created by residents accounted for almost 30%, but in 2021 this figure was only 2.6%, and the volume of transactions through these systems decreased from USD 246 million up to USD 16.8 million in accordance.

During 2009–2021, the volumes of transfers from Ukraine made through the payment systems of non-residents were always higher compared to the volumes of transfers made through the payment systems of residents. Thus, in 2009 they accounted for 62.2% of the total amount of transactions (USD 311 million), in 2013 – 70.6% (USD 590 million), in 2014 – 77.4% (USD 499 million), and already in 2015 – 98.5% (USD 400 million), reaching in 2016 – 99.3% (USD 351 million). This trend has persisted during the last 2020-2021 years.

The total volume of transfers (internal and international) made through payment systems (residents and non-residents) in 2009 – 2021 is shown in Table 12.

**Table 12. The total volume of intra-state and international transfers made through the payment systems of residents and non-residents, USD million (in equiv.).** (Source: formed according to [16, 19, 20])

Years	Transfers				Structure of transfers		
	Within Ukraine	To Ukraine	Outside Ukraine	The total amount of transfers	Within Ukraine	To Ukraine	Outside Ukraine
2009	1470	2900	500	4870,0	30,2	59,5	10,3
2010	1846	3300	600	5746,0	32,1	57,4	10,4
2011	2533	3914	659	7106,0	35,6	55,1	9,3
2012	2711	4297	737	7745,0	35,0	55,5	9,5
2013	5363	4915	836	11114,0	48,3	44,2	7,5
2014	4215	3885	645	8745,0	48,2	44,4	7,4
2015	3495	2371	406	6272,0	55,7	37,8	6,5
2016	3671	2487	352	6510,0	56,4	38,2	5,4
2017	4456	2378	286	7120,0	62,6	33,4	4,0
2018	5541	2301	294	8136,0	68,1	28,3	3,6
2019	7679	2270	398	10347,0	74,2	21,9	3,8
2020	9490	2697	556	12743,0	74,5	21,1	4,4
2021	13045,1	3157,1	635	16837,2	77,48	18,75	3,77
<b>Deviation, %</b>							
2013/2009	264,83	69,48	67,2	128,21	18,1	-15,3	-2,7
2014/2013	-21,41	-20,96	-22,85	-21,31	-0,1	0,2	-0,1
2019/2009	422,4	-21,7	-20,4	112,5	44,0	-37,6	-6,4
2019/2013	43,18	-53,81	-52,39	-6,9	26,0	-22,3	-3,7
2019/2014	82,18	-41,57	-38,29	18,32	26,0	-22,5	-3,5
2019/2017	72,33	-4,54	39,16	45,32	11,6	-11,5	-0,2
2019/2018	38,59	-1,35	35,37	27,18	6,1	-6,3	0,2
2020/2019	23,6	18,8	39,7	23,2	0,04	-3,7	15,8
2021/2020	37,5	17,1	14,2	32,1	4,0	-11,1	-14,3
2021/2013	143,2	35,8	24,0	51,5	-29,18	25,45	3,73

In the process of analyzing the volumes of internal and international transfers made through the payment systems of residents and non-residents in 2009–2021, their growth until 2013 was revealed – USD 11.114 million, the beginning of the decline in 2014 – USD 8.745 million, which continued in 2015 – USD 6.272 million, and their gradual recovery from 2016 – USD 6.510 million. However, the total indicators of the volume of transfers through payment systems created by both residents and non-residents of the pre-crisis period (until 2014) were not reached even in 2021, which amounted to USD 16.837 million during the next 6 years (in 2019, they amounted to only USD 10.347 million). However, the total volume of domestic and international transfers made through the payment systems of residents and non-residents in 2021 compared to 2013 increased by more than 51% (USD 16.837 million), due to an increase in the volume of transfers within Ukraine by almost 2.5 times (USD 13.045 million) compared to the volume of such payments in 2013.

The structure of the total volume of internal and international transfers through the payment systems of residents and non-residents has changed significantly for the period of 2009–2021. Thus, in 2009, transfers within Ukraine accounted for 30.2% (USD 1.470 million) of the total number of transfers to Ukraine – 59.5% (USD 2.900 million), from Ukraine – 10.3% (USD 500 million).

Over the following years, the general structure of transfers changed and in 2021, transfers within Ukraine accounted for 77.48% (USD 13.045 million) of the total volume, and the volume of transfers to and from Ukraine decreased to 18.75% (USD 3.157 million) and 3.77% (USD 635 million), respectively.

It is also worth mentioning the electronic money market in Ukraine, which has also expanded significantly. Thus, banks, aware of the broad perspective of this direction and the constant growth in demand for this type of money and its popularity, which is growing every year, and taking care of their own rating on the market of banking services, actively cooperate with payment systems that serve and carry out transactions with such money. This can be confirmed by relying on the information of the NBU that in 2021 banks carried out the issuance and other operations with the following electronic money: "PROSTIR" (AB "UKRGAZBANK", JSC "ALFA-BANK", JSC "UNEX BANK", JSC " PRAVEKS BANK"), Visa (JSC CB "PRIVATBANK", JSC "Oschadbank", JSC "PUMB", JSC "INDUSTRIALBANK"); MasterCard (PJSC BANK "VOSTOK", JSC "ALFA-BANK", JSC "TASKOMBANK", JSC KB "PRIVATBANK", JSC "PUMB", JSC "OSHCADBANK"); FORPOST (JSC "ALFA-BANK"); "Maxi " (JSC TASKOMBANK); "GlobalMoney" (JSC CB "GLOBUS"); XPAY (JSC "BANK SYCH"); "ELECTRUM" (JSC "UKRGAS-BANK"); ALFA-MONEY (JSC "ALFA-BANK").

From the conducted research, we can conclude that the largest card payment systems such as MasterCard, Visa and PROSTIR are the payment systems that cooperate mostly with banks and, accordingly, serve a significant amount of electronic money. It is also worth noting that Ukrainian legislation in the field of electronic money needs changes, as it is currently outdated, irrelevant, and does not meet modern requirements. Proposals for such changes will be outlined by us in the following sections of the article.

Thus, having analyzed the functioning of the payment systems of Ukraine, we can systematize the obtained results and propose their varieties (Figure 2).

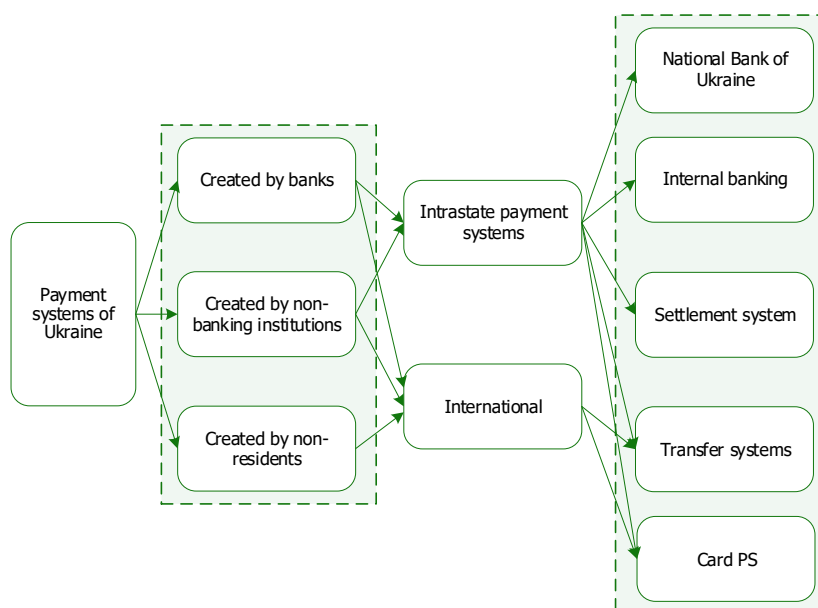


Figure 2. Types of payment systems in Ukraine.

In our opinion, the proposed types of payment systems and their hierarchical structure will help for a better understanding of the payment space of Ukraine.

Therefore, payment systems of Ukraine can primarily be created by banks of our country, non-banking institutions of Ukraine, and non-residents. In turn, payment systems created by banks and non-banking institutions of Ukraine can be both international and internal, and created by non-residents – only international, namely transfer systems and card payment systems [17, 18]. Internal payment systems have a much wider list of varieties: intrabank payment systems, transfer systems, settlement systems, card payment systems, and payment systems created by the NBU.

As of 2023, there are two payment systems operating in Ukraine, the National Bank of Ukraine is the payment organization and settlement bank. Such two payment systems are the Electronic Payment System of the NBU (SEP) and the National Payment System "Ukrainian Payment SPACE" (formerly NSMEP - National System of Mass Electronic Payments) [17, 18].

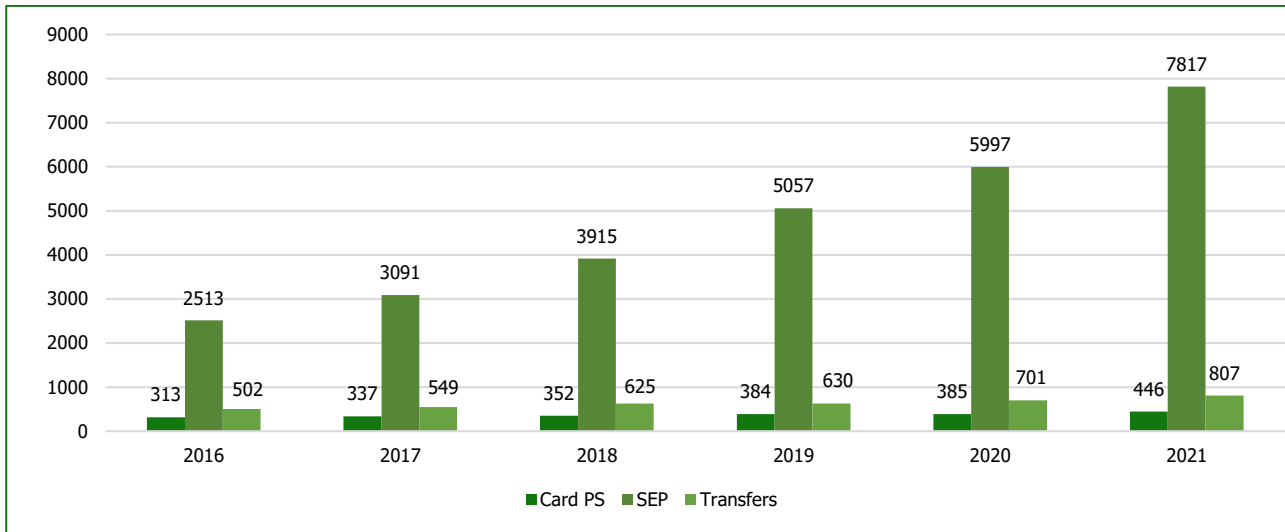
According to the National Bank of Ukraine, it is known that in Ukraine all payments are made through the NBU Electronic Payment System, funds transfer systems and card payment systems such as MasterCard, VISA, PROSTIR, etc. It should be noted that for now, the indicators of the functioning of the internal payment system of NPS "PROSTIR" are significantly lower than the corresponding indicators of the international payment systems MasterCard and VISA. PROSTIR's market share decreased from 2% (0.8 million pcs) in 2016 to 1.2% (0.5 million pcs) in 2021, both in terms of the number of transactions conducted using payment cards and their value. At the same time, Visa had a 28.5% market share (10.5 million units), and MasterCard – 70.3% (26 million pcs). In 2021, the situation for the system did not change, despite the fact that their number increased and was as follows compared to the other largest retail card systems operating in Ukraine: Visa – 42.4% share (37.8 million pcs) on the market, MasterCard – 56.9% (50.7 million pcs) PROSTIR – 0.64% (0.6 million pcs). The share of other card systems operating on the territory of Ukraine in 2021 was 0.04%. The given indicators indicate that it is quite difficult for the "SPACE" payment system to compete with international payment systems. Therefore, its modernization and the creation of new projects are necessary [21-25].

The volumes of payments and transfers made in 2010–2021 by payment systems, namely SEP, transfer systems and card payment systems are presented in Table 13.

**Table 13. Volumes of payments and transfers made by payment systems in 2010–2021, UAH billion.** (Source: calculated according to [21-25])

Years	Payment systems				Structure, %		
	Card PS	SEP	Transfers	Total	Card PS	SEP	Transfers
2010	451,0	7909,0	11,8	8371,8	5,4	94,5	0,1
2011	576,0	10319,7	14,7	10910,4	5,3	94,6	0,1
2012	741,0	11723,0	20,2	12484,2	5,9	93,9	0,2
2013	916,0	12685,4	21,7	13623,1	6,7	93,1	0,2
2014	1019,0	14409,8	42,9	15471,7	6,6	93,1	0,3
2015	1233,0	17750,0	81,1	19064,1	6,5	93,1	0,4
2016	1610,0	19521,0	83,9	21214,9	7,6	92,0	0,4
2017	2125,0	20937,0	94,0	23156,0	9,2	90,4	0,4
2018	2876,0	25348,0	119,0	28343,0	10,1	89,4	0,4
2019	3576,0	32427,0	151,0	36154,0	9,9	89,7	0,4
2020	3957	44838	255,2	49050,2	8,1	91,4	0,5
2021	5091,7	57270	355,4	62717,1	8,1	91,3	0,6
<b>Deviation, %</b>							
2013/2010	103,1	60,4	83,9	62,7	1,3	-1,4	0,0
2014/2010	125,9	82,2	263,6	84,8	1,2	-1,3	0,1
2014/2013	11,2	13,6	97,7	13,6	-0,1	0,0	0,1
2019/2010	692,9	310,0	1179,7	331,9	4,5	-4,8	0,3
2019/2013	290,4	155,6	595,9	165,4	3,2	-3,4	0,3
2019/2014	250,9	125,0	252,0	133,7	3,3	-3,4	0,1
2019/2017	68,3	54,9	60,6	56,1	0,7	-0,7	0,0
2019/2018	24,3	27,9	26,9	27,6	-0,3	0,3	0,0
2020/2019	10,7	38,3	28,9	35,5	1,8	-1,8	0,0
2021/2020	28,7	27,7	39,3	27,9	0,0	-0,1	0,1





**Figure 4. Dynamics of the number of payments and transfers within Ukraine made by payment systems.** (Source: formed according to the [16, 19, 20-25])

So, among all retail payments in Ukraine, the largest number of transactions are carried out through card payment systems. Today, a large number of payments are made with the help of bank cards (cashless). Thus, in 2018, P2P transfers (transfer of funds from card to card) became even more widespread, and quite quickly a large number of Ukrainians began to use contactless payments (via smartphone, Google Pay). Such non-cash payment has gained popularity in Ukraine as it is quite convenient to use. There is an annual increase in the number of payments using card systems.

The second place in terms of the number of payments and transfers is the market of intrastate transfers, and most of them fall on systems created by non-banking institutions.

The smallest share in terms of the number of payments made is the NBU Electronic Payment System, which is a wholesale payment system. This explains the lowest number of completed transactions, although in this case, we are observing an increase in the number of payments made through the SEP of the NBU [17, 18].

Today, the Electronic Payments System of the National Bank has certain advantages, but also disadvantages, including the imperfection of the current legislation of Ukraine and the level of information and regulatory support for its participants. However, it is worth noting that the process of the development and improvement of the SEP is underway, which undoubtedly needs to be updated to international standards for the exchange of financial messages, as well as the introduction of the latest innovative tools for transferring funds.

## DISCUSSION

We can confidently confirm the fact that over the last decades, the role of payment systems in our society has changed and will continue to change, which certainly affects their transformation, as well as the semantic load of concepts and terms.

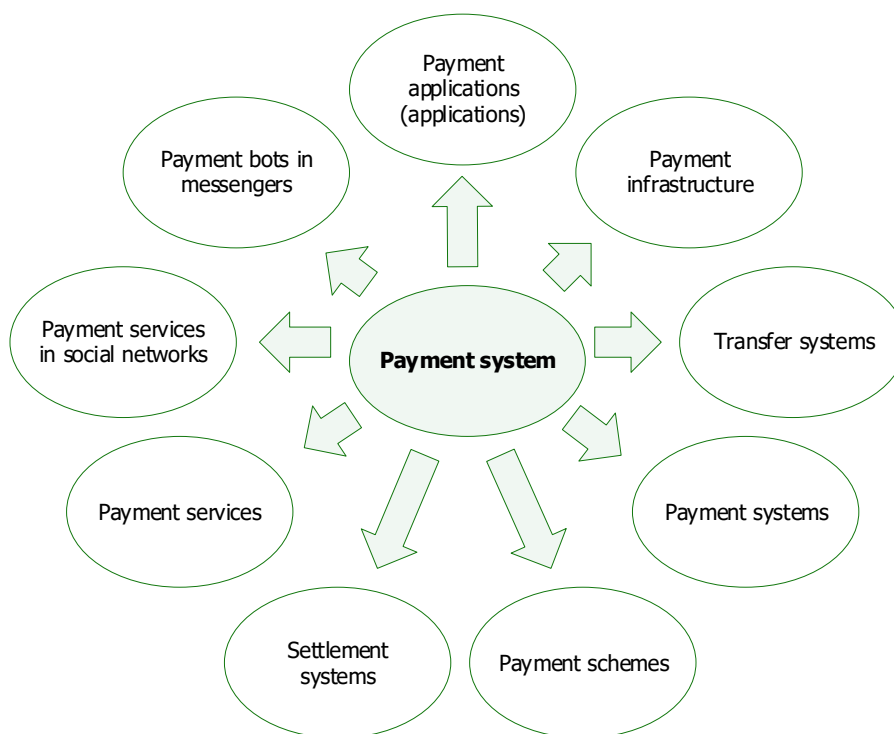
If earlier the term "payment system" meant a technical model for transferring payment information, for now, in today's digitalized world, it means payment systems, transfer systems, settlement systems and various payment services offered today by fintech companies, which we can use through computer devices quickly, conveniently and, what is very important, remotely, without wasting time visiting the bank (Figure 2).

Modern people, in addition to the traditional understanding of what a payment system is, mean a transfer system as a settlement system, payment service or application, etc. This historical transformation led to the fact that, for example, in Europe, payment systems are understood as payment infrastructure, which is the Financial Market Infrastructure (FMI), which is also reflected at the legislative level [7, 8, 26].

The concept of "payment services" arose simultaneously with the concept of "financial technologies" ("fintech"), which offer their startups (developments) to simplify payments and settlements. These technologies contribute to improving the payment landscape of any country, making payment services more accessible.

However, fintech companies today cannot independently enter the payment market of Ukraine and become its full-fledged subject. This issue is extremely urgent and needs to be resolved as soon as possible at the legislative level. Accordingly, the NBU shall submit its proposals for changes in the functioning of the country's payment system, as well as be responsible for the implementation of this reform in the sphere of payments.

In the modern world, at the household level of users (clients), payment systems are called payment systems, as well as transfer systems, settlement systems, payment schemes, payment infrastructure, payment applications, payment services, payment services in social networks, payment bots in messengers and other new digital products for the payment sphere [13] (Figure 5).



**Figure 5. The payment system in the context of modern technological transformation and globalization.**

As we can see, the concept of "payment system" has acquired a large-scale meaning and today generalizes many other modern fintech developments that are a consequence of the global digitalization of the world. In modern realities, a payment system in its classical sense can perform not only the generally accepted role of transferring payments or carrying out calculations, as before but also can be an active intermediary between a bank and a fintech institution (company, organization).

Therefore, taking into account the transformational processes in the global and national payment spheres, we emphasize that the modern payment system is very different from the payment system of ten years ago, not only in the technical and technological aspect but also, what is important, in the essential aspect.

## CONCLUSIONS

It should be concluded that in our country such a term as "National Payment System of Ukraine" is not prescribed at the legislative level, although, in our opinion, giving importance to the existence and functioning of various payment systems in the State it would be appropriate to have such a term in the context of a unifying position.

It is worth emphasizing that the state-wide payment system shall be considered a state-scale economic entity with a clear understanding of the connections and interactions between the entities of the payment system inside and outside it, with mandatory legal regulation based on uniform principles, norms, and rules, as well as with the provision of payment services at the State level. The main function of the national payment system shall be to ensure the safety, efficiency, reliability, and uninterrupted passage of payments in the country with the help of special tools and methods.

The payment system of the country is designed to fulfil its main function – reliable and uninterrupted provision of payments through the functioning of the payment systems of the state, as an institutional mechanism and a complete system consisting of payment market entities, which are payment organizations and their participants.

In our opinion, payment systems need to be clearly demarcated, which will be reflected in three proposed types of payment systems depending on the overall economic importance, unifying position, as well as importance and functionality. These main types are the National Payment System, the Payment System of the country and the Payment System.

The National payment system is a type of organization and legally regulated payment relations that characterize the State of the payment system of Ukraine (the country) as a whole, its monetary circulation, where money is used in both cash and non-cash forms, and reflects its national features.

The country's payment system is an interconnected institutional set of payment market entities that are participants of the financial market and payment infrastructure, which function according to the established principles, rules and norms are fixed at the legislative level, and is a reliable mechanism that ensures uninterrupted money circulation in the country.

A payment system is a complex organizational, technical and technological structure that is a component of the country's payment market, created for the purpose of transferring funds, making payments or settlements, which may include participants of the payment system and providers of payment services, the activity of which is regulated by law, the main purpose of which is to ensure the circulation (movement of funds), as well as the needs of clients (users) in the market of payment services. A payment system under modern conditions and technological changes can be called a settlement system, a transfer system, a payment scheme or a digital payment service. A payment system is a system for transferring payment information in the form of transactions, the founder of which is a payment organization that is legally responsible for making payments, transfers and settlements to its customers (users).

In selected types of payment systems simplified or other variants of the interpretation of "payment system" also can be used in the payment sphere.

Consequently, the field of financial services is undergoing constant changes as a result of the global digitalization of the economy. This factor has a significant impact on the development and functioning of payment systems of Ukraine, where the corresponding transformations affect the modern understanding of the concept of "payment system".

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Ситник І., Пугачов М., Пугачов В., Кудренко Н., Довгалюк В., Ситник Б.

## ОСОБЛИВОСТІ ФУНКЦІОНУВАННЯ ПЛАТІЖНОЇ СИСТЕМИ УКРАЇНИ

В епоху глобальної мережі Інтернет відбулися зміни в житті людської спільноти, її потребах, вимогах до надання платіжних послуг, що, у свою чергу, позначилося на розвитку платіжної сфери. Ураховуючи трансформації у сфері платіжних систем, що відбуваються внаслідок безперервного розвитку цифрової економіки та її глобалізації, законодавчих та нормативних змін у вітчизняному й міжнародному законодавчому полі, важливими залишаються дослідження та пропозиції щодо сучасного розуміння поняття «платіжна система» та його різновидів.

У результаті проведеного дослідження сучасного стану функціонування платіжних систем запропоноване авторське бачення поняття «платіжна система» та її різновидів, що враховує вплив змін цифрових технологій і процесів глобалізації на їхню діяльність, виділяючи при цьому окремі типи платіжних систем залежно від їхнього загального економічного значення, унітарного становища, а також важливості, значущості й функціональності.

Крім того, обрані види платіжних систем можуть мати кілька варіантів тлумачення, оскільки сьогодні це поняття значно розширило своє лексичне значення. За результатами оцінки сучасного стану функціонування платіжних систем в Україні в статті визначено основні етапи становлення платіжної системи країни, визначено її особливості,

установлено чинники, що впливають на їхній розвиток (політико-економічний, глобалізація, інформатизація суспільства, цифровізація економіки, розвиток фінансових технологій, законодавча база платіжних систем, використання оверсайту, політика регулятора, доступ до мережі Інтернет, рівень матеріального забезпечення населення, конкуренція між провайдерами платіжних послуг, популяризація безготівкових розрахунків). Вивчення основних тенденцій розвитку та виявлення основних недоліків показало необхідність реформування платіжної системи, міжбанківських розрахунків, визначення перспективних напрямів розвитку платіжних систем із метою створення ефективної, надійної та безпечної оплати в платіжній системі України.

**Ключові слова:** платіжна система, банківська система, безготівкові розрахунки, гроші, диджиталізація, глобалізація, фінансові технології, інтеграція, Європейський Союз

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